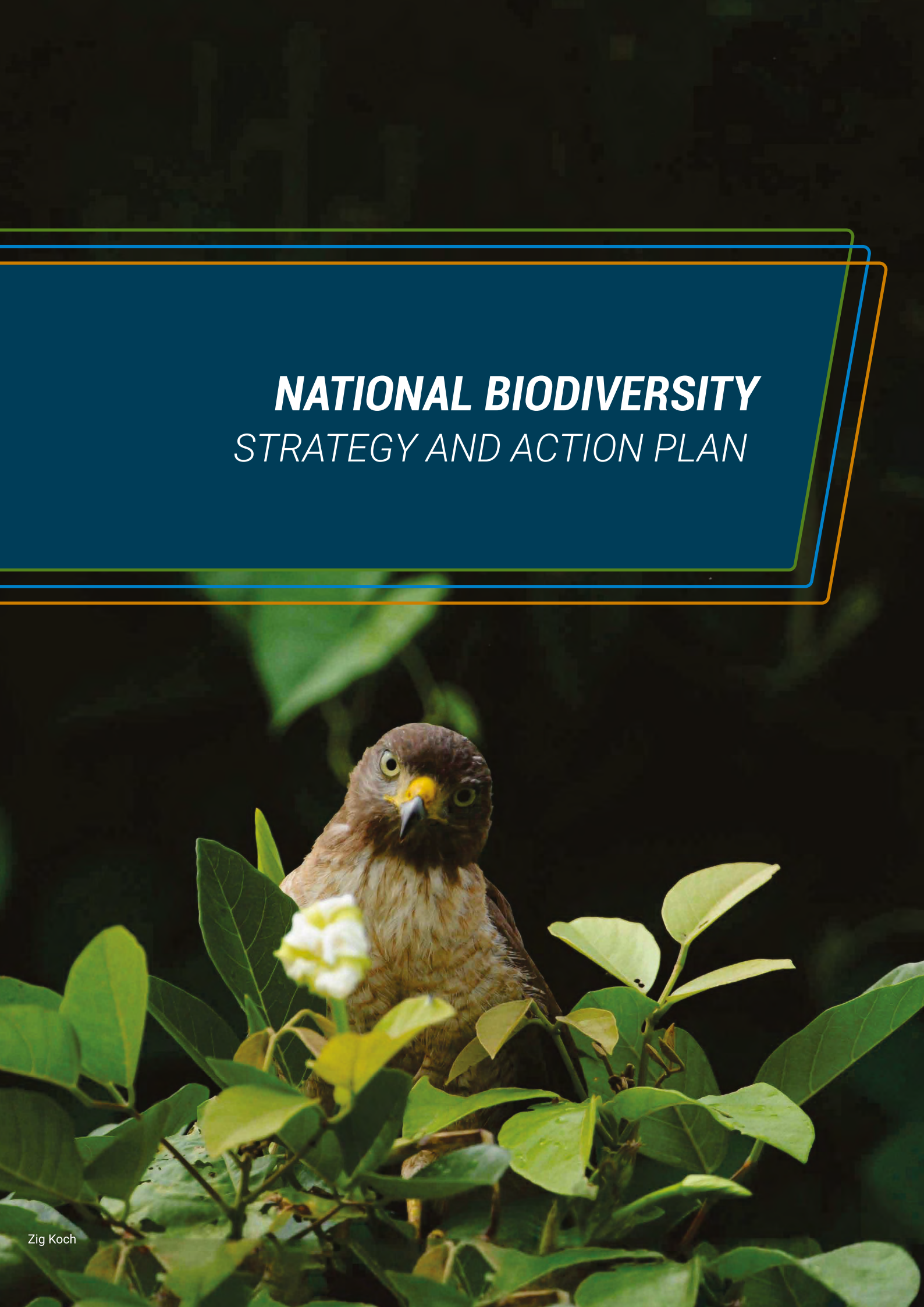
NATIONAL BIODIVERSITY
STRATEGY AND ACTION PLAN



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NATIONAL BIODIVERSITY
STRATEGY AND ACTION PLAN

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NATIONAL BIODIVERSITY
STRATEGY AND ACTION PLAN

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Executive Summary

Brazil is a megadiverse country with such exuberant fauna and flora in its continental-size territory as to historically attract scientific curiosity and become a target for records made by artists and naturalists from various parts of the world. This richness and diversity reflect on the culture and identity of Brazilian people, and represent the undeniable potential for new discoveries on the use of biodiversity to everyone's benefit.

As the fifth largest country in the world according to the United Nations – UN, both in terms of territory and population size, Brazil currently represents one of the ten largest economies in the world, and faces numerous socio-environmental opportunities and challenges in the path to sustainable development. Deserving particular notice in this context is the evolution, in the national scenario, of economic mechanisms and incentives to recognize and promote ecosystem services, which contribute to the economic and environmental sustainability. Albeit young as a nation, Brazil is conscious of its relevant role in the environmental balance of the planet, and has strengthened its position in the international arena through the adherence to multilateral agreements, and seeking to fulfill commitments adopted under conventions ratified by the national government.

In 2015, at the United Nations Sustainable Development Summit, the 2030 Sustainable Development Agenda was adopted by 193 UN member countries, Brazil among them. The 2030 Agenda is comprised of 17 Sustainable Development Goals (SDG) and their 169 targets, which were built on the three dimensions of sustainable development – economic, social and environmental, and strongly support the eradication of poverty, gender equality, and social inclusion.

Among the international conventions and agreements to which Brazil is Party, special emphasis is placed on the Convention on Biological Diversity – CBD, which targets the conservation and sustainable use of biodiversity, and the fair and equitable sharing of benefits arising out of the use of genetic resources and of associated traditional knowledge. The CBD established the Convention of the Parties – COP as its governance body for the implementation of the commitments and decisions under the Convention, which are agreed upon by the member countries at periodic meetings.

This richness and diversity reflect on the culture and identity of Brazilian people, and represent the undeniable potential for new discoveries on the use of biodiversity to everyone's benefit.

This new version of the NBSAP reinforces the participatory and collaborative characteristic of the process to prepare and implement the strategy through the adherence of the various sectors of society.

After becoming a Party to the CBD in 1992, Brazil followed up on its conservation efforts by creating, in 1994, the National Biological Diversity Program (*Programa Nacional da Diversidade Biológica – Pronabio*). The program was adjusted in 2003 with the creation of the National Biodiversity Commission (*Comissão Nacional da Biodiversidade – Conabio*), with the mission of promoting the implementation of the commitments undertaken by Brazil under the CBD. These commitments include the 2011-2020 Strategic Plan, which established 20 Global Targets, known as the Aichi Targets, set during COP-10, which was held in 2010 in Nagoya, Japan.

After the approval of the 2011-2020 Strategic Plan for Biodiversity under the CBD, Brazil initiated in 2011 the process of internalizing the Aichi Targets and defining the National Biodiversity Targets for 2020. This process generated significant milestones of representative participation, such as the Dialogues on Biodiversity, the Multi-sectoral Inputs to the Governmental Action Plan for the Conservation and Sustainable Use of Biodiversity, and the creation of the Brazilian Panel on Biodiversity (*Painel Brasileiro de Biodiversidade – PainelBio*), a fundamental partner in the process of mobilization, multi-sectoral engagement and strategic dialogue for strengthening social participation in the effort to achieve the National Biodiversity Targets.

Throughout this process, important documents were generated and knowledge was aggregated, and opportunities for synergy were created among the various sectors and governmental levels.

Thus substantiated by processes tailored to strengthen governance in countries such as Brazil, this document of the National Biodiversity Strategy and Action Plan – NBSAP presents the Brazilian contribution towards the achievement of the Aichi Target 17, which established that each Party should develop, adopt as a political instrument and begin implementing an effective, participatory and up-to-date national biodiversity strategy and action plan.

This new version of the NBSAP reinforces the participatory and collaborative characteristic of the process to prepare and implement the strategy through the adherence of the various sectors of society (MMA and its agencies; other ministries and their agencies; state and local governments; representatives from academia, civil society and private sector). The institutions engaged in the NBSAP contributed to the construction of the text and preparation of the action plan, thus materializing the commitment to the implementation of actions that contribute to the conservation and sustainable use of biodiversity, considering the equitable sharing of benefits arising from the use of biological resources, socio-cultural aspects, gender equality and valuation of traditional knowledge.

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Abbreviations and Acronyms

ABS	Access and Benefit Sharing
ANA	National Water Agency (*Agência Nacional de Águas*)
APP	Permanent Preservation Areas (*Área de Preservação Permanente*)
ARPA	Amazon Region Protected Areas
ATK	Associated Traditional Knowledge
BAP	Upper Paraguai River Watershed (*Bacia Hidrográfica do Alto Paraguai*)
CAR	Rural Environmental Cadastre (*Cadastro Ambiental Rural*)
CAPES	Coordination for Professional Improvement of Higher Education Graduates (*Coordenação de Aperfeiçoamento de Pessoal de Nível Superior*)
CBD	Convention on Biological Diversity
CEBDS	Brazilian Corporate Council for Sustainable Development (*Conselho Empresarial Brasileiro para o Desenvolvimento Sustentável*)
CGen	*Genetic Heritage Management Council (Conselho de Gestão do Patrimônio Genético)*
CIF	Climate Investment Fund
CIRM	Inter-Ministerial Commission for Sea Resources *(Comissão Interministerial para os Recursos do Mar)*
CMS	Convention on the Conservation of Migratory Species of Wild Animals
CNCFlora	National Center for Plant Conservation (*Centro Nacional de Conservação da Flora*)
CNI	National Confederation of Industries (*Confederação Nacional das Indústrias*)
CNPCT	National Council for the Sustainable Development of Traditional Peoples and Communities (*Conselho Nacional de Desenvolvimento Sustentável de Povos e Comunidades Tradicionais*)
CNPq	National Scientific and Technological Development Council (*Conselho Nacional de Desenvolvimento Científico e Tecnológico*)
CNUC	National Cadastre of Protected Areas (*Cadastro Nacional de Unidades de Conservação*)
Conabio	National Biodiversity Commission (*Comissão Nacional de Biodiversidade*)
Conaflor	National Commission on Forests (*Comissão Nacional de Florestas*)
ConaREDD	National Commission for Reducing the Emission of Greenhouse Gases from Deforestation and Forest Degradation (*Comissão Nacional para a Redução da Emissão de Gases de Efeito Estufa Provenientes do Desmatamento e da Degradação Florestal*)
Condraf	*National Council for Sustainable Rural Development (Conselho Nacional de Desenvolvimento Rural Sustentável)*
COP	Convention of the Parties
CPG	Permanent Committee for the Management and Sustainable Use of Fisheries Resources (*Comitê Permanente de Gestão e Uso Sustentável de Recursos Pesqueiros*)
CURB	Contract for the Use of Genetic Heritage and Benefit Sharing (*Contrato de Utilização do Patrimônio Genético e de Repartição de Benefícios*)
DAP	Department of Protected Areas (*Departamento de Áreas Protegidas*)
DECO	Department of Ecosystems (*Departamento de Ecossistemas*)
Defra	Department for Environment, Food and Rural Affairs – UK
Degrad/Detex	Mapping of Forest Degradation in the Brazilian Amazon (*Mapeamento de Degradação Florestal na Amazônia Brasileira*)
DESP	Department of Species Conservation and Management (*Departamento de Conservação e Manejo de Espécies*)
Deter	Real-Time Deforestation Detection System of the Legal Amazon (*Sistema de Detecção do Desmatamento na Amazônia Legal em Tempo Real*)
DPG	Department of Genetic Heritage (*Departamento de Patrimônio Genético*)
Embrapa	Brazilian Agricultural Research Corporation (*Empresa Brasileira de Pesquisa Agropecuária*)
ENREDD+	National REDD+ Strategy (*Estratégia Nacional de REDD+*)
Epusp	Polytechnic School of São Paulo University (*Escola Politécnica da Universidade de São Paulo*)
FAP	Research Support Foundation (*Fundação de Amparo à Pesquisa*)

FBDS	Brasilian Foundation for Sustainable Development (*Fundação Brasileira para o Desenvolvimento Sustentável*)
Fiesp	São Paulo State Federation of Industries (*Federação das Indústrias do Estado de São Paulo*)
Fiocruz	Oswaldo Cruz Foundation (*Fundação Oswaldo Cruz*)
FNDCT	National Fund for Scientific and Technological Development (*Fundo Nacional de Desenvolvimento Científico e Tecnológico*)
FNRB	National Fund for Benefit Sharing (*Fundo Nacional para a Repartição de Benefícios*)
Funai	National Indigenous Peoples Foundation (*Fundação Nacional do Índio*)
Funasa	National Health Foundation (*Fundação Nacional de Saúde*)
Funbio	Brazilian Fund for Biodiversity (*Fundo Brasileiro para a Biodiversidade*)
GEF	Global Environment Facility
GIZ	German Cooperation Agency for Sustainable Development
GPFLR	Global Partnership on Forest Landscape Restoration
IAS	Invasive Alien Species
IBÁ	Brazilian Tree Industry *(Indústria Brasileira de Árvores)*
Ibama	Brazilian Institute of the Environment and Renewable Natural Resources (*Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis*)
IBDF	Brazilian Institute of Forestry Development (*Instituto Brasileiro de Desenvolvimento Florestal*)
IBGE	Brazilian Institute of Geography and Statistics (*Instituto Brasileiro de Geografia e Estatística*)
ICMBio	Chico Mendes Institute for Biodiversity Conservation (*Instituto Chico Mentes de Conservação da Biodiversidade*)
ICMS	Value Added Tax on Merchandise and Services (*Imposto sobre Circulação de Mercadorias e Serviços*)
Icone	Institute of Trade Studies and International Negotiations (*Instituto de Estudos do Comércio e Negociações Internacionais*)
IIS	International Sustainability Institute (Instituto Internacional de Sustentabilidade)
Incra	National Institute of Colonization and Agrarian Reform (*Instituto Nacional da Colonização e da Reforma Agrária*)
IPBES	Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services
INPE	National Space Research Institute (*Instituto Nacional de Pesquisas Espaciais*)
IPÊ	Ecological Research Institute (Instituto de Pesquisas Ecológicas)
Iphan	Institute of the National Historical and Artistic Heritage (*Instituto do Patrimônio Histórico e Artístico Nacional*)
ISA	Socio-environmental Institute (*Instituto Socioambiental*)
IUCN	International Union for the Conservation of Nature
JBRJ	Rio de Janeiro Botanical Garden (*Jardim Botânico do Rio de Janeiro*)
LC	Complementary Law (*Lei Complementar*)
MAPA	Ministry of Agriculture, Livestock and Supply (*Ministério da Agricultura, Pecuária e Abastecimento*)
MCidades	Ministry of Cities (*Ministério das Cidades*)
MCTIC	Ministry of Science, Technology, Innovation and Communication (*Ministério da Ciência, Tecnologia, Inovações e Comunicações*)
MD	Ministry of Defense (*Ministério da Defesa*)
MDSA	Ministry of Social and Agrarian Development (*Ministério do Desenvolvimento Social e Agrário*)
MEA	Multilateral Environmental Agreements
MF	Ministry of Finance (*Ministério da Fazenda*)
MI	Ministry of National Integration (*Ministério da Integração Nacional*)
MMA	Ministry of the Environment (*Ministério do Meio Ambiente*)
MME	Ministry of Mines and Energy (*Ministério de Minas e Energia*)
MP	Provisional Measure (*Medida Provisória*)
MPA	Ministry of Fisheries and Aquaculture (Ministério da Pesca e Aquicultura)
MPOG	Ministry of Planning, Development and Administration (*Ministério do Planejamento, Desenvolvimento e Gestão*)
MRE	Ministry of Foreign Affairs (*Ministério das Relações Exteriores*)

MT	Ministry of Transports (*Ministério dos Transportes*)
NBSAP	*National Biodiversity Strategy and Action Plan*
NDC	*Nationally Determined Contribution*
OECD	Organisation for Economic Cooperation and Development
OGU	Federal Budget (*Orçamento Geral da União*)
PA	Protected Area
PainelBio	Brazilian Panel on Biodiversity (*Painel Brasileiro de Biodiversidade*)
PAN	National Action Plan (*Plano de Ação Nacional*)
PAN-Bio	National Biodiversity Action Plan (*Plano de Ação Nacional de Biodiversidade*)
PC	Community Protocol (*Protocolo Comunitário*)
PELD	Long Term Ecological Research Program (*Programa de Pesquisa Ecológica de Longa Duração*)
PES	Payment for Ecosystem Services
PG	Genetic Heritage (*Patrimônio Genético*)
Planaveg	National Plan for the Recuperation of Native Vegetation (*Plano Nacional para Recuperação da Vegetação Nativa*)
PMABB	Program on the Environmental Monitoring of Brazilian Biomes (*Programa de Monitoramento Ambiental dos Biomas Brasileiros*)
PMDBBS	Project on the Satellite Monitoring of Brazilian Biomes (*Projeto de Monitoramento dos Biomas Brasileiros por Satélite*)
PNB	National Biodiversity Policy (*Política Nacional de Biodiversidade*)
PNGATI	Territorial and Environmental Management of Indigenous Lands (*Gestão Territorial e Ambiental em Terras Indígenas*)
PNMA	National Environment Policy (*Política Nacional do Meio Ambiente*)
PNMC	National Policy on Climate Change (*Política Nacional de Mudança do Clima*)
PNRB	National Program on Benefit Sharing (*Programa Nacional de Repartição de Benefícios*)
PPA	Federal Multi-Year Plan (*Plano Plurianual*)
PPCDam	Action Plan for the Prevention and Control of Deforestation in the Amazon (*Plano de Ação para a Prevenção e Controle do Desmatamento na Amazônia*)
PPCerrado	Action Plan for the Prevention and Control of Deforestation and Fire Occurrences in the Cerrado (*Plano de Ação para a Prevenção e Controle do Desmatamento e das Queimadas no Cerrado*)
PR	Presidency of the Republic (*Presidência da República*)
PRA	Environmental Recuperation Plan (*Plano de Recuperação Ambiental*)
Probio I	National Biodiversity Project (*Projeto de Conservação e Utilização Sustentável da Diversidade Biológica Brasileira*)
Probio II	National Biodiversity Mainstreaming and Institutional Consolidation Project (*Projeto Nacional de Ações Integradas Público-Privadas para Biodiversidade*)
Prodes	Project on the Satellite Monitoring of the Brazilian Amazon Forest (*Projeto de Monitoramento da Floresta Amazônica Brasileira por Satélite*)
Pró-Espécies	National Program for the Conservation of Threatened Species (*Programa Nacional de Conservação das Espécies Ameaçadas de Extinção*)
Prohidro	State Program on the Conservation and Revitalization of Water Resources (*Programa Estadual de Conservação e Revitalização dos Recursos Hídricos*)
Pronabio	National Biological Diversity Program (*Programa Nacional da Diversidade Biológica*)
Pro-PSA	Program on Payment for Ecosystem Services (*Programa de Pagamento por Serviços Ambientais*)
PROTAX	Capacity Building Program on Taxonomy (*Programa de Capacitação em Taxonomia*)
PUC-Rio	Rio de Janeiro Catholic University (*Pontifícia Universidade Católica do Rio de Janeiro*)
Queimadas	Monitoring Fire Occurrencies and Forest Fires (*Monitoramento de Queimadas e Incêndios*)
REDD+	Reducing Emission of Greenhouse Gases from Deforestation and Forest Degradation
REFLORA	Brazil Plants Program: Historical Recovery and Virtual Herbarium for the Knowledge and Conservation of Brazilian Flora (*Programa Plantas do Brasil: Resgate Histórico e Herbário Virtual para o Conhecimento e Conservação da Flora Brasileira*)
RPPN	Private Reserve of the Natural Heritage (*Reserva Particular do Patrimônio Natural*)

RL	Legal Reserve (*Reserva Legal*)
SAE	Secretariat of Strategic Affairs (*Secretaria de Assuntos Estratégicos*)
SBio	Secretariat of Biodiversity (*Secretaria de Biodiversidade*)
SEAD	Special Secretariat of Family Agriculture and Agrarian Development (*Secretaria Especial de Agricultura Familiar e o Desenvolvimento Agrário*)
Secom	Secretariat of Social Communication (*Secretaria de Comunicação Social*)
Seped	Secretariat of Research and Development Policies and Programs (*Secretaria de Políticas e Programas de Pesquisa e Desenvolvimento*)
SEPLAN	Secretariat of Planning and Economic Affairs (*Secretaria de Planejamento e Assuntos Econômicos*)
SFB	Brazilian Forest Service (*Serviço Florestal Brasileiro*)
SiBBr	Information System on Brazilian Biodiversity (*Sistema de Informação sobre a Biodiversidade Brasileira*)
SiCAR	Rural Environmental Cadastre System (*Sistema de Cadastro Ambiental Rural*)
SISBIOTA Brasil	National Biodiversity Research System (Sistema Nacional de Pesquisa em Biodiversidade)
SisGen	National System for Managing Genetic Heritage and Associated Traditional Knowledge (*Sistema Nacional de Gestão do Patrimônio Genético e do Conhecimento Tradicional Associado*)
Sisnama	National Environment System (*Sistema Nacional de Meio Ambiente*)
SPM	Special Secretariat of Policies for Women (*Secretaria Especial de Políticas para as Mulheres*)
SNUC	National Protected Areas System (*Sistema Nacional de Unidades de Conservação*)
TEEB	The Economics of Ecosystem and Biodiversity
TerraClass	Inventory of Information on Land Use and Cover (*Levantamento de Informações de Uso e Cobertura da Terra*)
TI	*Indigenous Land (Terra Indígena)*
UC	Protected Area (*Unidade de Conservação*)
UFG	Federal University of Goiás (*Universidade Federal de Goiás*)
UFU	Federal University of Uberlândia (*Universidade Federal de Uberlândia*)
UN	United Nations
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
USP	University of São Paulo (*Universidade de São Paulo*)
WRI	World Resources Institute
WWF	World Wide Fund for Nature

FOREWORD

This National Biodiversity Strategy and Action Plan (NBSAP) defines the Brazilian long term vision to achieve the conservation and sustainable use of biodiversity which, through the provision of benefits to people, including ecosystem services, supports and ensures resilience to social and economic systems.

Until 2016, the country had never consolidated management projections and tools into a single document to represent the national strategy for the conservation of biodiversity and ecosystems. This strategy was previously comprised of the sum of the various legal instruments created along time for the protection and sustainable use of biodiversity and the natural resources, many of which are globally recognized as pioneer, exemplary and inspiring initiatives.

In yet another innovative approach, Brazil established dialogues with society for constructing this unifying strategic vision. Solid steps were taken, such as: (i) the definition of new national targets for the 2011-2020 cycle through the participatory process of the Dialogues on Biodiversity; (ii) the construction of multi-sectoral contributions for a Governmental Action Plan for the Conservation and Sustainable Use of Biodiversity; (iii) the creation of the Brazilian Panel on Biodiversity – PainelBio; (iv) the definition of indicators for the national targets and strengthening of the NBSAP, under PainelBio; and (v) the structuring of the NBSAP and the process for its development.

Thus, in August 2016, the first version of the NBSAP was delivered to the CBD, containing in its action plan, firstly, the information, actions and projects under the coordination of the MMA Secretariat of Biodiversity. Right after this, the process of expanding the NBSAP focus was initiated, encompassing other governmental agencies and the other sectors of society. Over 231 institutions were invited to join the NBSAP. Of these, 66 accepted the challenge of contributing to the strategy. In total, 721 actions were systematized, distributed among the 20 National Biodiversity Targets.

Our main challenge is to confer a dynamic character to the NBSAP, to allow periodic updating resulting from a constant monitoring process. Additionally, the document has a multi-sectoral scope, based on the assumption that everyone's efforts (society, private sector and all governmental sectors) are necessary to ensure the conservation of biodiversity, and the improvement and recuperation of environmental quality. Thus, one of the objectives of this effort was to consolidate processes and mechanisms for communication, coordination and cooperation involving a plethora of actors interested in nature conservation in Brazil.

The NBSAP seeks to provide guiding directives to harmonize and integrate actions targeting biodiversity, as planned and implemented by the various sectors of society. Thus, the NBSAP represents a means to interconnect subnational and national efforts and initiatives, organized and presented under the Convention on Biological Diversity.

José Pedro de Oliveira Costa
Secretary of Biodiversity

"The Brazilian Ministry of the Environment hereby reaffirms its commitments under the Convention on Biological Diversity (CBD) and presents, with great satisfaction, the current stage of the National Biodiversity Strategy and Action Plan."

Sarney Filho
Minister of the Environment

This National Biodiversity Strategy and Action Plan – NBSAP is organized

in three parts: Part 1 – Context and Background, Part 2 – Strategic Components, and Part 3 – Action Plan.

Part 1 provides an overview on Biodiversity in Brazil and presents the legal and institutional frameworks under the National Biodiversity Policy – PNB, as well as the actions targeting biodiversity conservation and sustainable use which are already underway in Brazil. This section also describes the NBSAP construction process, with special note to the roles of Conabio and PainelBio and the participatory character of the process, as well as the importance of the engagement of the various sectors of society, considering socio-cultural aspects, gender equality and the valuation of the knowledge held by traditional communities and indigenous peoples.

Part 2 presents the NBSAP strategic components, aligned with the National Biodiversity Policy and with the Brazilian commitments under the Convention on Biological Diversity: strategic framework – mission, vision and guiding principles, the strategic objectives, and the National Targets and respective indicators to measure Target achievement. The mobilization of resources and external communication aspects are also presented here, particularly the strategic lines of communication and the priority groups to be engaged.

Part 3 presents the Action Plan, with actions under the Secretariat of Biodiversity – Sbio/MMA and actions carried out by the institutions invited to engage and contribute to the NBSAP: other secretariats and agencies under MMA; other ministries and their agencies; state and local governments; representatives from academia, civil society and private sector. Part 3 also addresses the monitoring of Action Plan implementation, as well as the indicators to monitor the status of execution of each action. Elements of internal communication are also described, targeting institutions adherent to the NBSAP.

The monitoring of Action Plan implementation, as well as the indicators to monitor the status of execution of each action.


Rui Faquini

1. Biodiversity in Brazil and the NBSAP Construction Process

Brazil is the most biodiverse country in the world, recognized as one of the megadiverse countries[1]. With continental dimensions and an enormous variety of terrestrial and aquatic habitats, Brazil is the country with the largest number of plant species, over half of which are endemic[2], amphibians[3] and primates[4] in the entire world; the 2nd in mammals[5] and reptiles[6]; and the 3rd in birds[4]. Brazil is also the 6th in the world in endemic vertebrates[1], where reptiles and amphibians hold the highest rates: 37% of reptile species and 57% of amphibian species are endemic. It is estimated that the country is home to 20% of the planet's biodiversity.

The creation and consolidation of protected areas, the monitoring of habitats and species, and the combat to the illegal removal of native vegetation are among the most important Brazilian efforts to conserve the country's biodiversity and ensure the promotion of ecosystem services in its various biomes[7].

High socio-diversity is also found in all Brazilian biomes (Amazon, Cerrado, Atlantic Forest, Caatinga, Pantanal, Pampas), which are home to hundreds of indigenous ethnic groups living in at least 700 Indigenous Lands[8], and which speak approximately 180 different languages considered to be among the most threatened in the world[9], in addition to thousands of quilombo communities and other traditional communities.

Threats to biodiversity and to traditional knowledge, however, are present in all biomes, in a global context of biodiversity decline which is associated, among other factors, to habitat degradation, biological invasion, over exploitation, pollution and environmental contamination, and public policies that counteract environmental conservation[10].

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1 Mittermeier R.A., Robles G. P, Mittermeier C.G. Megadiversity. Mexico City (Mexico): CEMEX, 1997.

2 Forzza, R.C.; Baumgratz, J.F.A.; Bicudo, C.E.M.; Canhos, D.; Carvalho Jr., A.A.; Nadruz-Coelho, M.A.; Costa, A.F.; Costa, D.P.; Hopkins, M.; Leitman, P.M.; Lohmann, L.G.; Lughadha, E.N.; Maia, L.C.; Martinelli, G.; Menezes, M.; Morim, M.P.; Peixoto, A.L.; Pirani, J.R.; Prado, J.; Queiroz, L.P.; Souza, S.; Souza, V.C.; Stehmann, J.R.; Sylvestre, L.S.; Walter, B.M.T. & Zappi, D.C. New Brazilian floristic list highlights conservation challenges. BioScience 62: 39-45, 2012.

3 Vié, J.-C., Hilton-Taylor, C. and Stuart, S.N. (eds.) Wildlife in a Changing World – An Analysis of the 2008 IUCN Red List of Threatened Species. Gland, Switzerland: IUCN. 180 pp, 2009.

4 Nowak, Ronald M. Walker's mammals of the world. Vol. 1. JHU Press, 1999.

5 Vié, J.C., Hilton-taylor, C. & Stuart, S.N. Wildlife in a changing world – an analysis of the 2008 IUCN Red List of threatened species. IUCN, Gland, Switzerland, 2009.

6 Bérnils, R. S. e H. C. Costa (org.) Répteis brasileiros: Lista de espécies [Brazilian reptiles: Species list], 2012. Available at: http://www.sbherpetologia.org.br/. Sociedade Brasileira de Herpetologia.

7 In Brazil, the term biome is frequently used as a synonym to morphoclimatic and phytogeographical domain.As the latter two terms refer to geographical regions that may contain a variety of ecosystems and biomes, according to Coutinho (Coutinho, L.M., 2006. O conceito de bioma. Acta Bot. Bras. 20(1):1-11), these would be the most adequate terms to designate the regions of the Amazon, Atlantic Forest, Caatinga, Cerrado, Pampas and Pantanal. However, as the word biome is usually employed in official documents in Brazil, and responding to a CONABIO request, this term was maintained in this document.

8 ISA. Instituto Socioambiental. População indígena no Brasil [Indigenous population in Brazil]. Available at: <https://pib.socioambiental.org/pt/c/0/1/2/populacao-indigena-no-brasil> . Accessed on: 01 Feb 2017.

IBGE – Instituto Brasileiro de Geografia e Estatítica. Censo Demográfico 2010. Características da população e dos domicílios: resultados do universo [Demographic Census 2010. Characteristics of the population and households: universe results]. Rio de Janeiro: IBGE, 2011. CD-ROM.

9 Seki, L. A linguística indígena no Brasil [Indigenous linguistics in Brazil]. D.E.L.T.A., v. 15, n. esp. p. 257-290, 1999. Available at: <http://www.scielo.br/pdf/delta/v15nspe/4019.pdf >. Accessed on: 01 Feb 2017.

10 State of the Planet Declaration. Planet under pressure: new knowledge towards solutions. Londres, 2012. Secretariat of the Convention on Biological Diversity. Global Biodiversity Outlook 4. Montreal, 155 p. 2014.Scarano, Fabio Rubio, Silva, José Maria Cardoso da, Guimarães, André Loubet, Raik, Daniela, & Boltz, Frederick. Brazil on the spot: Rio+20, sustainability and a role for science. Brazilian Journal of Botany, 35(2), 233-239. https://dx.doi.org/10.1590/S0100-84042012000200010, 2012.

1.1. Legal framework and institutional arrangement

1.1.1. Sisnama – National Environment System

The National Environment Policy – PNMA, its structure, formulation and application were established by Law nº 6.938, of 31 August 1981, regulated by Decree nº 99.274, of 06 June 1990, which also created the National Environment System – Sisnama.

The PNMA has the objective of preserving, enhancing and recuperating the environmental quality that enables life, seeking to ensure the necessary conditions in Brazil for the socioeconomic development, the national security interests and the protection of human life dignity.

Sisnama[11] is comprised by agencies and entities of the three levels of government that hold responsibilities and jurisdiction over the protection, enhancement and recuperation of environmental quality in Brazil. Its objective is to establish a coordinated and decentralized set of actions for environmental management in the country, integrating and harmonizing specific rules and practices which complement each other at the federal, state and municipal levels (Figure 1).

Sisnama holds a variety of committees, councils, commissions and other institutional arrangements comprised by representatives of various sectors, with the purpose to inform, monitor and support the work of governmental environmental institutions.

Figure 1: Composition and levels of governance of the National Environment System - Sisnama.

Within Sisnama's structure, the Governmental Council has the function of advising the President of Brazil in the formulation of national policies and governmental directives for the environment and natural resources.

Conama has the purpose of advising, studying and proposing to the Governmental Council the directives of governmental policies for the environment and natural resources, and deliberating, within its jurisdiction, on rules and standards that are compatible with the ecologically balanced environment that is essential to maintain a healthy quality of life. The following structures comprise the Conama: I – Plenary; II – Special Resort Chamber; III – Committee on the Integration of Environmental Policies; IV – Technical Chambers; V – Working Groups; and VI – Advisory Groups.

11 http://www.mma.gov.br/governanca-ambiental/sistema-nacional-do-meio-ambiente

The states, Federal District and municipalities are responsible for regionalizing the measures issued by Sisnama, creating supplementary and complementary rules and standards.

The regional and local agencies will provide Information on their action plans and programs under implementation, documented in annual reports, which will be consolidated by the Ministry of the Environment in one annual report on the country's environmental state, to be published and submitted to Conama's consideration at its second meeting of the following year.

1.1.2. National Biodiversity Policy

The MMA is the Sisnama actor responsible for the elaboration and monitoring of the National Biodiversity Policy – PNB, and for its synergy with the various sectors and governmental levels. The PNB principles, directives and objectives were defined under Decree nº 4.339, of 22 August 2002.

PNB's overall objective is to "promote, in an integrated manner, the conservation of biodiversity and the sustainable use of its components, with the fair and equitable sharing of the benefits arising from the use of genetic resources, of components of the genetic heritage and of the traditional knowledge associated to these resources". To that end, the PNB is structured in components (thematic pillars) which guide its implementation (Box 1).

Box 1: Objective and components of the National Biodiversity Policy – PNB (Decree nº 4.339/2002).

Overall PNB objective: to promote, in an integrated manner, the conservation of biodiversity and the sustainable use of its components, with the fair and equitable sharing of the benefits arising from the use of genetic resources, of components of the genetic heritage, and of the traditional knowledge associated to these resources.

PNB Components:

- Component 1: Knowledge on Biodiversity;
- Component 2: Conservation of Biodiversity;
- Component 3: Sustainable Use of Biodiversity Components;
- Component 4: Monitoring, Evaluation, Prevention and Mitigation of Impacts on Biodiversity;
- Component 5: Access to Genetic Resources and to Associated Traditional Knowledge and Benefit Sharing;
- Component 6: Education, Public Awareness, Information and Dissemination on Biodiversity;
- Component 7: Legal and Institutional Strengthening for Biodiversity Management.

1.1.3. Pronabio and Conabio

In 1994, the Brazilian government created the National Biological Diversity Program – Pronabio (Box 2), established by Decree nº 1.354, of 29 December 1994, with the purpose of coordinating the implementation of national commitments under the CBD. In 2002, Decree nº 4.339 ruled that MMA, through Pronabio, should coordinate the implementation of PNB principles and directives.

In 2003, Decree nº 4.703 altered Pronabio to adjust the Program to the principles and directives of the PNB, and established the National Biodiversity Commission – Conabio (Box 3), which is responsible for coordinating, monitoring and assessing Pronabio actions. Conabio is responsible for promoting the implementation of Brazilian commitments under the CBD, as well as for identifying and proposing priority areas and actions for research, conservation and sustainable use of biodiversity components.

Box 2: Summary of the objectives of the National Biological Diversity Program – Pronabio (Decree 4.703/2003).

- Guide the elaboration and implementation of the PNB;
- Promote the implementation of national commitments under the CBD;
- Coordinate actions to implement PNB principles and directives;
- Develop and implement programs and projects;
- Promote interinstitutional and international cooperation under the CBD;
- Promote the preparation of proposals for the creation or modification of instruments necessary to the appropriate implementation of actions;
- Promote the integration of sectoral policies to increase synergy in the implementation of actions;
- Promote actions, projects, research and studies to produce and disseminate Information and knowledge on biodiversity;
- Promote the training of human resources, institutional strengthening and public awareness for the conservation and sustainable use of biodiversity;
- Guide actions for monitoring and evaluating the execution of the thematic components to comply with the principles and directives for PNB implementation; and
- Guide the monitoring of progress of planned actions for the implementation of PNB principles and directives, including through the definition of adequate indicators.

Box 3: Summary of the National Biodiversity Commission – Conabio responsibilities (Decree 4.703/2003).

- Coordinate PNB elaboration, based on the principles and directives established by Decree 4.339/2002;
- Promote the implementation of national commitments under the CBD;
- Approve the methodology for preparing the final text of the national reports to the CBD;
- Propose measures for federal government compliance with the principles and directives for PNB implementation, promoting decentralization of action implementation and ensuring the participation of interested sectors;
- Provide technical assistance to public and private agents responsible for PNB implementation within the national territory to ensure that its principles, directives and objectives are fulfilled;
- Promote the coordination among programs, projects and activities related to the implementation of PNB principles and directives, and promote the integration of relevant sectoral policies;
- Propose the overall Pronabio directives to support the implementation of actions planned for the implementation of PNB principles and directives, and identify financial demands and funding sources;
- Identify needs and propose the creation or modification of instruments necessary to the adequate execution of principles and directives for PNB implementation;
- Promote interinstitutional and international cooperation for the national implementation of PNB and CBD principles and directives;
- Identify and propose priority areas and actions for research, conservation, sustainable use, monitoring, evaluation, prevention and mitigation of impacts, and sharing of benefits arising from the use of biodiversity;
- Identify, propose and promote actions for training human resources, institutional strengthening and public awareness;
- Establish general criteria for accepting and selecting projects, and select projects under programs related to biodiversity protection, when specifically appointed to this function;
- Promote debates and public consultation on themes related to the preparation of proposals connected to the PNB;
- Create and coordinate technical chambers to promote discussion and coordination on themes relevant to the implementation of PNB principles and directives; and
- Monitor and evaluate the execution of the thematic components and actions for the implementation of PNB principles and directives and coordinate the preparation of national reports on biodiversity.

1.2. Thematic aspects and status of knowledge on biodiversity

1.2.1. Conservation of genetic heritage and protection of associated traditional knowledge

Brazil holds significant socio-diversity[12]. Over 300 indigenous ethnic groups and various traditional peoples and communities, as well as family rural producers hold important traditional knowledge associated to Brazilian biodiversity. The national genetic heritage (GH) and its associated traditional knowledge (ATK) have lately greatly contributed to the development of new products, many of which are patented for commercial use. However, before the CBD, the GH and ATK were often appropriated by developed countries with no previous request for access, no previous informed consent, nor any form of benefit sharing with the countries of origin of biodiversity or with the traditional communities that held the relevant knowledge.

12 http://www.mma.gov.br/patrimonio-genetico/conselho-de-gestao-do-patrimonio-genetico

CBD requires countries to regulate, through national legislation, the access and benefit sharing, as well as the prior informed consent, related to genetic resources and traditional knowledge. Regulation of access and benefit sharing, together with the promotion of the sustainable use of biodiversity, represent strategic actions for the conservation of biodiversity and an opportunity to affirm the sovereign rights over biodiversity and the rights of those who hold the associated traditional knowledge.

The first piece of Brazilian legislation that regulated these CBD provisions entered into force on the 30th of June, 2000 and established the rights and obligations related to the access to genetic heritage, to the protection and access to associated traditional knowledge, and to benefit sharing. This legal framework was revised until the entry into force of Provisional Measure (MP) nº 2.186-16, of 23 August 2001, which remained in force until 16 November 2015. This legislation appointed a management collegiate body as the national authority with jurisdiction over the management of access and benefit sharing in Brazil: the Genetic Heritage Management Council (CGen), created through MP nº 2.186-16/2001 and composed by different agencies and institutions of the Federal Government and associated to MMA, which is the agency that chairs CGen.

During 2015 alone, CGen and accredited institutions issued 686 deliberations, among access and transport permits, sentences on notifications of misdemeanor, and accreditation of institutions as trustees. Between 2004 and 2015, 261 contracts were signed for sharing benefits from research and development activities with economic potential.

The experience gained from the Contracts for the Use of Genetic Heritage and Benefit Sharing (Contratos de Utilização do Patrimônio Genético e de Repartição de Benefícios – CURBs) signed under MP nº 2.186-16/2001 identified the potential of production chains that use biodiversity products to reduce poverty and improve the quality of life of local communities. The experience accumulated from projects to strengthen productive chains implemented by private entities in different municipalities resulted in a noted increase in the average monthly income and in the diversification of income composition in target populations. The income increase resulting from the use of local biodiversity partly replaced other activities with high potential for harming the environment, such as timber extraction in priority areas for conservation.

In this scenario, MMA is engaged in promoting the replacement of predatory activities with economic sectors that use biodiversity in a sustainable manner through projects to be implemented in collaboration with various governmental and private entities, as observed in actions proposed for the achievement of Aichi Target 18[13], and which also contribute to the achievement of other targets, such as Target 2[14].

One of the objectives of such actions is the engagement of indigenous peoples, traditional communities and family rural producers as key actors within the "standing forest" productive sectors, generating income and reducing pressure on the environment, together with the valuation and protection of the associated traditional knowledge.

The valuation and protection of associated traditional knowledge occurs through actions that recognize the protagonist role of indigenous peoples, traditional communities and family rural producers in the conservation of genetic heritage within their territories. This strategy includes, for example, the promotion of Community Protocols, a tool recognized by CBD and by the Nagoya Protocol, in which each community can state its identity, organization and the customary rules for biodiversity management..

Legal framework on access and benefit sharing

Brazilian legislation on this theme promotes the integration of policies for the conservation of the national genetic heritage with strategies for reducing poverty and improving public health by facilitating the responsible use of biodiversity for technological development and innovation in biotechnology.

Management of genetic heritage and its associated traditional knowledge under MP nº 2.186-16, of 23 August 2001, allowed the implementation of instruments and tools for the centralized management of Access and Benefit Sharing – ABS by the Genetic Heritage Management Council – CGen.

MP nº 2.186-16/2001 was an important milestone in the combat to biopiracy in Brazil. However, this legal instrument placed strict and bureaucratic requirements for accessing genetic heritage and associated traditional

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13 Aichi Target 18: By 2020, the traditional knowledge, innovations and practices of indigenous and local communities relevant for the conservation and sustainable use of biodiversity, and their customary use of biological resources, are respected, subject to national legislation and relevant international obligations, and fully integrated and reflected in the implementation of the Convention with the full and effective participation of indigenous and local communities, at all relevant levels.

14 Aichi Target 2: By 2020, at the latest, biodiversity values have been integrated into national and local development and poverty reduction strategies and planning processes and are being incorporated into national accounting, as appropriate, and reporting systems.

knowledge, which inspired criticism by the sectors applying such requirements due to the high transaction cost, and by the traditional peoples and communities, who have always requested stronger participation in the decision-making process.

Aware of the difficulties and backed by the experience gathered on ABS management, the governmental Executive body proactively proposed alternatives for those difficulties through the preparation of a Bill, which was submitted to the National Congress. This Bill also took into account the future prospects for the development of this agenda in the international sphere under the Nagoya Protocol. The Bill was approved by the National Congress and sanctioned by the Office of the President on the 20th of May 2015, thus originating Law nº 13.123, which entered into force in November 2015. The regulation process of this new law involved the participation of indigenous peoples, traditional communities and family rural producers, all of which were engaged in the regulation process through regional and national workshops held in July, August, September and October of 2015 to discuss the new law.

The workshops were planned by a Working Group created under the National Council for the Sustainable Development of Traditional Peoples and Communities (*Conselho Nacional de Desenvolvimento Sustentável de Povos e Comunidades Tradicionais – CNPCT*). Together with the contributions from governmental agencies and institutions, the President's Office consolidated all suggestions received into a draft document, which was disclosed for public consultation between March 06 and 02 May, 2016. The revised version resulting from this process was sanctioned by the Office of the President on the 11th of May, 2016 through Decree nº 8.772, which regulates Law nº 13.123/2015.

This legal instrument responds to the demands presented by industry and the scientific community, as it reduces the economic and compliance cost of carrying out research and technological development activities based on Brazilian biodiversity and is coherent with industrial policies on incentives to research and innovation. This legal rule features various improvements regarding governmental management of this agenda, reduction of transaction cost for user sectors, and protection of the rights of indigenous peoples, traditional communities and family rural producers. Management was mainstreamed through the creation of two electronic systems specifically assigned to managing and tracking activities resulting from access to biodiversity and associated traditional knowledge

Law nº 13.123/2015 also created the National Program on Benefit Sharing (*Programa Nacional de Repartição de Benefícios – PNRB*), which will be implemented through the National Fund for Benefit Sharing (*Fundo Nacional de Repartição de Benefícios – FNRB*). This Fund will apply resources on various initiatives such as the implementation of Sustainable Development Plans for Traditional Peoples and Communities to promote and strengthen the traditional practices of these peoples and communities that are relevant for the conservation of biodiversity. The Brazilian law complies with the commitments under international treaties and foresees both monetary and non-monetary sharing of benefits, in accordance with mutually agreed terms. When the monetary benefit-sharing option is selected, the Law sets the amount equivalent to 1% (one percent) of the annual net revenue obtained from the economic use of a finished product or reproductive material originated from access to genetic heritage. In the case of finished products resulting from access to ATK of identifiable origin, the sharing option and amounts are negotiated with those providing the accessed ATK. Additionally, the user must pay a share to the FNRB with the purpose of benefitting eventual contenders of the knowledge. It is estimated that the definition of clearer rules and parameters for the sharing of benefits will generate a reduction in transaction costs for all actors involved (researchers, manufacturers, State, indigenous peoples and traditional communities). Thus, a reduction is also expected for the cost of compliance and for the uncertainty associated to economic activities resulting or depending on access.

Law nº 13.123/2015 ensures to indigenous peoples, traditional communities and traditional rural producers the protection of their knowledge, the right to participate in decision making at the national level on matters related to the conservation and sustainable use of their traditional knowledge, and the free interchange and dissemination of the genetic heritage and associated traditional knowledge practiced among themselves and for their own benefit, and based on their uses, customs and traditions. This law establishes the participation of representatives from these groups in the Genetic Heritage Management Council – CGen, which is the national competent authority for ABS, and in the Management Council of the National Fund for Benefit Sharing, which was also created under this law.

The new management regime for access and benefit sharing being implemented in Brazil represents the combination of the cutting-edge mechanisms under international treaties on access and benefit sharing, particularly the CBD and the Nagoya Protocol, and under the regulation instruments, with technology support.

The new ABS regulation was built on the contributions from different user sectors and to strengthen the access and benefit sharing agenda in a simplified and facilitated manner, with traceability of activities, reduction of transaction costs, and the planned and targeted application of benefit sharing with the purpose of increasing efficiency in resource execution.

In addition to contributing to the achievement of National Targets 16 and 18, Law nº 13.123/2015 may collaborate with the implementation of international rules and instruments for ABS management, as well as inform the preparation and implementation of national legislation on ABS in other countries.

The NBSAP Action Plan establishes that governmental representative bodies and the organized civil society will be involved in the preparation and implementation of capacity building programs on ABS and Community Protocols, and for training multipliers on this theme.

Community Protocols (*Protocolos Comunitários – PCs*) are documents generated from the participatory processes of discussion and deliberation, where the members of involved communities define and agree to an entire set of community rules addressing the use and management of their territories, the use of their natural resources, and the safeguards for their traditional knowledge.

Experiences with the Bio-cultural Community Protocol of the Raizeiras do Cerrado[15], organized by the NGO Articulação Pacari, and with the Community Protocol of the Bailique Archipelago, organized by the NGO Grupo de Trabalho Amazônico, as well as with other initiatives to promote Community Protocols, are examples demonstrating that the support provided by Brazilian regulations and public management institutions to initiatives from the civil society to implement Community Protocols promotes respect to traditional knowledge, innovation and practices, and to the customary use of biological resources by indigenous peoples, family rural producers and traditional communities, which are relevant to the conservation and sustainable use of biodiversity.

In addition, it is fitting to note the civil society's initiatives for the self-assertion of the right to practice traditional medicine and for the incorporation of the use of phytotherapics in the public health care network. Governmental support has great potential for promoting the strengthening of the phytotherapics production chains with access to genetic heritage and to the associated traditional knowledge, as well as for fostering research and clinical studies that enable the inclusion of new species in the compendiums of the Brazilian pharmacopoeia. These initiatives add value to traditional knowledge, promote innovation and may result in the sharing of benefits both for those who hold traditional knowledge and for the entire society through the improvement of life and health quality.

1.2.2. Species conservation

According to published scientific data, 46,220 valid plant species[16] and 116,692 animal species[17] are known to Brazil (Table 1). Efforts to assess the entire Brazilian biodiversity are shared between the Rio de Janeiro Botanical Garden – JBRJ, in charge of assessing flora, and the Chico Mendes Institute for Biodiversity Conservation – ICMBio, in charge of assessing fauna.

The collective effort of over 700 Botany experts to develop and publish the Brazilian Flora 2020 project, which is part of the Reflora Program[18], represents the first update in over 100 years of the original work that first catalogued the Brazilian flora (Flora Brasiliensis), initiated by naturalist von Martius in 1840 and concluded in 1906.

The Taxonomic Catalogue of the Brazilian Fauna, published in 2015, allows to verify that Brazil holds the greatest biodiversity on the Planet. This initiative represents the first list of Brazilian fauna and was developed with the participation of over 500 Zoology experts.

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15 Raizeiras do Cerrado are women from traditional communities in the Cerrado biome who are knowledgeable on native medicinal plants and their uses.

16 Source: Flora do Brasil 2020 [Brazilian Flora 2020], in prep. Jardim Botânico do Rio de Janeiro. Available at: < http://floradobrasil.jbrj.gov.br/ >. Accessed in: Nov/2016

17 Source: Catálogo Taxonômico da Fauna do Brasil (CTFB) [Taxonomic Catalogue of Brazilian Fauna]. Available at: < http://fauna.jbrj.gov.br/ >. Accessed in Nov/2016.

18 The Reflora Program/CNPq is an initiative by the Brazilian govenment which seeks to recover images of the specimens of Brazilian flora and the associated information, deposited at foreign herbaria to build the Virtual Herbarium Reflora. (http://reflora.jbrj.gov.br)

Table 1: Number of species known in Brazil.

Group		Nº of species
Flora[19]	Algae	4,749
	Angiosperms	32,886
	Bryophytes	1,534
	Gymnosperms	30
	Ferns and Lycophytes	1,299
	Fungi	5,722
Fauna[20]	Mammals	720
	Birds	1,924
	Reptiles	773
	Amphibians	1,080
	Fish	4,509 Freshwater: 3,133 Marine: 1,376
	Invertebrates	100,000 to 105,000 (estimate)

Sources: Brazilian Flora System 2020 and Taxonomic Catalogue of Brazilian Fauna.

The National Center for Plant Conservation – CNCFlora, under JBRJ, is coordinating a broad effort to assess the conservation status of Brazilian plant species. The first result of this assessment was published in 2013, as a red book[21], which contains an indicative list of the Brazilian plant species considered threatened with extinction. In 2014, CNCFlora published a new red book focusing on rare species of the Cerrado, which resulted in another indicative list of threatened species[22].

The process carried out by ICMBio has the directive of assessing all vertebrate species and some selected invertebrates, considering their ecological, economic and social importance. The species are assessed at five-year cycles in order to maintain information up-to-date and allow the identification of species facing conservation problems.

The executive summary of the Red Book of the Brazilian Threatened Fauna was launched in December 2016, during the 13th Conference of the Parties (COP-13) to the Convention on Biological Diversity in Cancun, Mexico. This inventory was carried out between 2010 and 2014, and represents the greatest effort ever endeavored on the theme in the world[23]. The preservation of threatened species complies with the provisions of the Federal Constitution, PNMA, PNB, and the MMA mandate according to legal instruments presented in Box 4.

19 Zappi, D.C., Forzza, R.C., Souza, V.C., Mansano, V.F. & Morim, M.P. 2015. Epilogue. Rodriguesia 66(4). http://rodriguesia.jbrj.gov.br DOI: 10.1590/2175-7860201566417

20 Catálogo Taxonômico da Fauna do Brasil [Taxonomic Catalogue of Brazilian Fauna]. http://fauna.jbrj.gov.br/.

21 Martinelli, G. & Moraes, M.A. 2013. Livro vermelho da flora do Brasil [Red book of Brazilian flora]. Andrea Jakobsson: Instituto de Pesquisas Jardim Botânico do Rio de Janeiro, 1100p. Available on-line at: cncflora.jbrj.gov.br/LivroVermelho.pdf

22 Martinelli G., Messina T., & Filho L. dos S. 2014. Livro Vermelho da Flora do Brasil - Plantas Raras do Cerrado [Red Book of Brazilian Flora – Rare Plants of the Cerrado]. Andrea Jakobsson Estúdio: Instituto de Pesquisas Jardim Botânico do Rio de Janeiro, Rio de Janeiro.

23 Sumário Executivo. Livro Vermelho da Fauna Brasileira Ameaçada de Extinção [Executive Sumary. Red Book of the Brazilian Threatened Fauna] http://www.icmbio.gov.br/portal/images/stories/comunicacao/publicacoes/publicacoes-diversas/dcom_sumario_executivo_livro_vermelho_da_fauna_brasileira_ameacada_de_extincao_2016.pdf

Box 4: Legal framework on the conservation of native species and prevention of invasive species.

- Law nº 10.683, of 28 May 2003: rules on the organization of the President's Office and of the Ministries, and rules about other subjects;
- Decree nº 6.101, of 26 April 2007: rules on the structure and responsibilities of the MMA, among which the following are particularly related to species: (i) the protection and recuperation of species of flora, fauna, and micro-organisms threatened with extinction; (ii) the prevention of the introduction, eradication and control of invasive alien species that threaten ecosystems, habitats or species; (iii) the promotion of biosafety regarding genetically modified organisms; (iv) determine the rules, criteria and standards for the use of species which are overexploited or threatened with overexploitation; (v) the promotion of the sustainable use of native species of current or potential economic importance, particularly those that are valuable as food or for nutrition.
- Administrative Ruling MMA nº 43, of 31 January 2014: establishes the National Program for the Conservation of Threatened Species – Pro-Species, to adopt preventive, conservation and management actions with the objective of minimizing threats and the species' extinction risk.

1.2.2.1. Threatened Species – Pro-Species Program

The National Program for the Conservation of Threatened Species – **Pro-Species** was established in 2014 with the objective of adopting preventive, conservation and management actions to minimize threats to, and the risk of extinction of, fauna and flora species.

Pro-Species relies on the following instruments:

(i) Official National Lists of Threatened Species[24], which have the role of recognizing threatened species within the national territory, on the continental shelf and within the Brazilian exclusive economic zone, with the purpose of restricting their use, prioritizing conservation actions and the recuperation of populations;

(ii) National Action Plans for the Conservation of Threatened Species – PAN, prepared with the objective of defining in-situ and ex-situ actions for the conservation and recuperation of threatened and almost threatened species; and

(iii) Databases and Information systems that inform the extinction risk assessments and the process of planning conservation actions, and which identify the areas of greatest biological importance for threatened species, as well as the areas with the highest occurrence of human activities that place their survival at risk.

The method applied for assessing the species' extinction risk is compatible with the standards defined by IUCN[25] and is broadly employed by global assessments of the conservation status of species (Box 5). This method has already been adopted by several countries, by the UN and under international agreements.

24 Brazil's first list of threatened species was prepared in 1968, featuring 44 species of fauna and 13 plant species (Administrative Ruling IBDF nº 303, 1968). Already then, it was recognized that there was a need to implement the continuous monitoring of the species' conservation status in order to update the list.

25 Evaluated criteria: population size; habitat (size and quality); and variation over the last 10 years or 3 generations.

Box 5: Method for assessing species' extinction risk.

Under the method applied for assessing the extinction risk of species, which is compatible with standards defined by IUCN, species are evaluated in regards to their population size and variation, life cycle characteristics, distribution area, habitat quality and fragmentation, current and future threats, and existing conservation measures, among other aspects. Based on this information and according to standardized and objective technical criteria, the threat status of each species is defined.

Quantitative criteria for labeling a taxon as threatened

- Reduction of the species' total population (as it is observed, estimated and/or projected);
- Geographical distribution of the species being restricted and presenting fragmentation, decline or fluctuations;
- Small population size and presenting fragmentation, large fluctuations or decline (as it is observed, estimated and/or projected);
- Very small population or very restricted distribution;
- Quantitative analyses of the probability of extinction (for example, Population Viability Analysis).

The published lists divide the species that are considered threatened into 4 categories defined under the Pro-Species Program and which represent the degree of the extinction threat: Extinct in the Wild – EW; Critically Endangered – CR; Endangered – EN; and Vulnerable – VU (Table 2 and Figure 2).

On the 18th of December, 2014 the administrative rulings that contained the Lists of Threatened Species of the Brazilian Flora and Fauna were published on the Federal Official Gazette (Administrative Rulings MMA nº 443, 444 and 445)[26]. The list of threatened Brazilian plant species recognized and protected 2,113 species, and the list of threatened Brazilian animal species contained 1,173 species. The main threats were identified as: habitat loss due to agriculture expansion and large infrastructure works, overexploitation and traffic, and invasive alien species.

Table 2: Number of threatened species by threat category.

Extinction risk category	Flora	Fauna	Total
Extinct in the wild (EW)	0	1	1
Critically endangered (CR)	467	318	785
Endangered (EN)	1,147	406	1,553
Vulnerable (VU)	499	448	947
Species total	2,113	1,173	3,286

Source: Administrative Rulings MMA nº 443, 444 and 445, of 18 December 2014.

26 Information on the adopted criteria and technical-scientific assessment of the conservation status of species included on the lists is available online at:
Administrative Ruling nº 443/2014 - Threatened Flora: http://pesquisa.in.gov.br/imprensa/jsp/visualiza/index.jsp?data=18/12/2014&jornal=1&pagina=110&totalArquivos=144
Administrative Ruling nº 444/2014 - Threatened Fauna: http://pesquisa.in.gov.br/imprensa/jsp/visualiza/index.jsp?jornal=1&pagina=121&data=18/12/2014
Administrative Ruling nº 445/2014 – Threatened Fish and Aquatic Invertebrates: http://pesquisa.in.gov.br/imprensa/jsp/visualiza/index.jsp?jornal=1&pagina=126&data=18/12/2014
Criteria for flora: http://cncflora.jbrj.gov.br/portal/pt-br/listavermelha
Criteria for fauna: http://www.icmbio.gov.br/portal/biodiversidade/fauna-brasileira/lista-de-especies.html

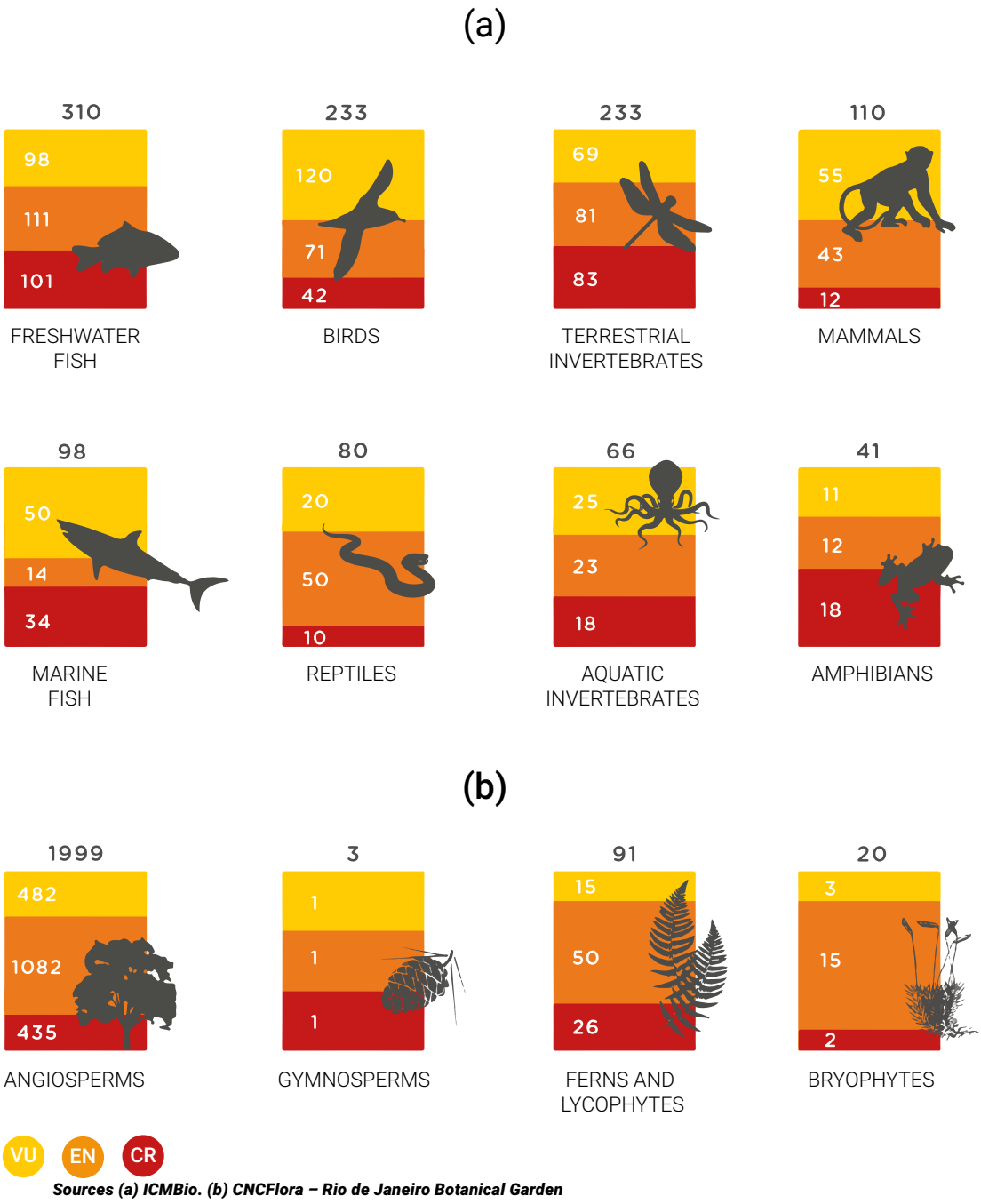


Figure 2: Number of threatened species which are considered: Critically endangered (CR), Endangered (EN), and Vulnerable (VU) in each taxonomic group. (a) Fauna. (b) Flora.

National Action Plans for the Recuperation and Conservation of Threatened Species

The assessments carried out during the process of constructing the lists inform the preparation of National Action Plans for the Recuperation and Conservation of Threatened Species – PANs, which define, through a participatory process, the strategies to improve the conservation status of threatened species and establish agreements with various stakeholders for their implementation.

Up to 2015, 58 PANs were developed addressing 1001 individual species, groups of species (under a taxonomic approach), or specific territories (watershed, ecosystem or region), encompassing 30% of the threatened species[27]. In 2015, in addition to PANs the MMA promoted, together with the former Ministry of Fisheries and Aquaculture[16], the creation of nine Permanent Committees for the Management and Sustainable

27 The PANs can be accessed at the ICMBio and JBRJ webpages: http://www.icmbio.gov.br/portal/faunabrasileira/planos-de-acao-nacional and http://www.cncflora.jbrj.gov.br/portal.

Use of Fisheries Resources – CPGs (Box 6). In 2016, priority was given to the development and implementation of Recuperation Plans for threatened species affected by fisheries and the development of a national strategy for implementing the Pro-Species Program, as determined by Administrative Ruling MMA nº 162, of 11 May 2016. Brazil is party to the international Agreement on the Conservation of Albatrosses and Petrels – ACAP (Box 6) and to the Memorandum of Understanding on the Conservation of South American Grassland Migratory Species and their Habitats (Box 7).

Box 6: The Pro-Species Program and the Committees for the Sustainable Use of Fisheries Resources.

To conserve aquatic biodiversity, in 2015 the MPA and MMA created the Permanent Committees for the Management and Sustainable Use of Fisheries Resources (*CPGs – Comitês Permanentes de Gestão e Uso Sustentável de Recursos Pesqueiros*), with the objective of establishing forums for discussing and reaching agreements among the fisheries sector, the federal government and civil society on the management measures recommended by experts.

In total, nine CPGs were created (six for the marine environment and three for freshwater environments), which integrate the Shared Management System for the Sustainable Use of Fisheries Resources (*SGC – Sistema de Gestão Compartilhada para Uso Sustentável dos Recursos Pesqueiros*). These committees developed the Inter-ministerial Administrative Rulings nº 13 and nº 14/2015, which maintain the moratorium, for the following eight years, of the targeted fisheries, retention on board and trans-shipment of the Atlantic goliath grouper (Epinephelus itajara) and, for an unlimited period of time, of the wreckfish (Polyprion americanus) in Brazilian jurisdictional waters, protecting these threatened species.

Box 7: Convention on the Conservation of Migratory Species.

On October 1st, 2015 Brazil became party to the Convention on the Conservation of Migratory Species of Wild Animals – CMS, which is an inter-governmental treaty focusing on the conservation of wildlife and habitats at a global scale, addressing terrestrial, aquatic and flying migratory species. Among the numerous animals that migrate to Brazil listed under CMS as threatened are the eskimo curlew (*Numenius borealis*), the marine manatee (*Trichechus manatus*), the sperm whale (*Physeter macrocephalus*), the Franciscana dolphin (*Pontoporia blainvillei*), and the whale shark (*Rhincodon typus*). UNEP is responsible for the Convention's Secretariat. South American countries that participate in the convention in addition to Brazil are: Argentina, Bolivia, Chile, Ecuador, Paraguay, Peru and Uruguay.

The National Congress approved the CMS text as signed in Bonn on 23 June 1979, through Legislative Decree n° 387, of 15 October 2013. The Convention was promulgated through Decree n° 9080, of 16 June 2017.

Strategic Plan for Migratory Species 2015-2023

In 2011, the 11th Conference of the Parties to the Convention on Migratory Species adopted the Strategic Plan for Migratory Species 2015-2023, which is based on the Strategic Plan for Biodiversity and its Aichi Targets. This approach was adopted to ensure compatibility of the plan with the resolutions of the UN General Assembly on biodiversity, to link migratory species priorities with the Aichi Targets and to enable logical and effective means to integrate migratory species targets into NBSAPs.

Following the National Strategy's example, some Brazilian states published action plans for the conservation of endangered species within their territories, with actions that can contribute to the reduction of threat factors, thus improving the status of threatened species at the national level, or preventing new species from becoming threatened. In 2009, Paraná state published the following action plans for the conservation of threatened species: Birds and Mammals – Complete Plans; Birds; Mammals; Social Stingless Native Bees; Ichthyofauna; Marine Tetrapods; and Large Predators.

1.2.2.2. Brazilian Alliance for Zero Extinction – BAZE

Administrative Ruling MMA nº 182, of 22 May 2006 incorporated the Brazilian Alliance for Zero Extinction[28] - BAZE to the conservation agenda, thus replicating at the national level the same objectives of the global initiative Alliance for Zero Extinction (AZE). AZE was originally launched by non-governmental conservation organizations from various parts of the world, and is now increasingly being adopted also by governments. The Alliance aims at preventing the extinction of species through the identification and safeguard of key areas for one or more threatened or critically endangered species. In Brazil, BAZE has the objective of facilitating participation and promoting the congregation of technical, scientific, financial and political capacity of both governmental and non-governmental, national and international organizations for the conservation and recuperation of species featured on the Official National Lists of Threatened Brazilian Fauna and Flora.

In 2010, the first map of BAZE sites was published. BAZE sites are areas with the occurrence of one or more species classified under the "Critically Endangered" (CR) and "Endangered" (EN) categories, and whose distribution is restricted to a single site. According to the study, 32 sites were identified (Figure 3), which aim to protect 36 target species of vertebrates (12 species of fish, nine amphibians, two reptiles, eight birds and five mammals). The Atlantic Forest and the Cerrado concentrate the largest number of BAZE sites, where 16 are located in the Atlantic Forest and eight in the Cerrado, while four of these sites are located in the Caatinga, two in the Amazon and two in the Pampas. Of the 32 sites, 15 are located within public or private protected areas.

The identification of priority sites follows three principles:

- **Endangerment:** An AZE site must contain at least one Critically Endangered (CR) or Endangered (EN) species, according to the most recent official red list;
- **Irreplaceability:** An AZE site should be designated if it is the sole area of significant occurrence of the known population of a CR or EN species, or contains a life history segment of the target species, such as nesting grounds or migratory site for the significant majority of the known population of the CR or EN species; and
- **Discretenes:** The area must have a definable boundary within which the character of habitats (land use and vegetation cover), biological communities and/or management aspects have more in common with each other than they do with those in adjacent areas.

Site mapping is carried out based on the overlap and/or comparison of data layers on vegetation, hydrography, land use, infrastructure and other natural or non-natural components that may support the definition of manageable landscape units. This differentiation is important, as the spatialization of sites allows the developed strategies to be tailored to the local conditions, which potentially leads to greater efficiency. The BAZE sites map thus represents an important tool to inform decision making, targeting of investments and legal incentives, and public policies in regards to landscapes and priority areas for the conservation of species facing critical conservation status. With site identification as a starting point, it is possible to locate areas where protection gaps exist and that need special attention in the discussion of action plans for protected areas.

28 The Protocol of Intentions for the national implementaiton of the Brazilian Alliance for Zero Extinction is available at: http://mma.gov.br/estruturas/179/_arquivos/179_05122008034606.pdf

The map of sites is the technical basis for the creation and/or enlargement of new protected areas at the municipal, state or federal level, as well as for optimizing the use of resources available for the implementation of environmental protection policies in general. It is relevant to note that AZE sites were recognized by the Convention on Biological Diversity (CBD) as indicators for Aichi Targets 11 and 12. By protecting sites that are not included within protected areas systems, it is possible to ensure a sufficiently effective and encompassing global coverage of protected areas to prevent the loss of the most threatened species. Furthermore, AZE sites are highly valuable for climate balance, for the availability of environmental services and, eventually, for the preservation of cultural heritage, thus supporting also other Aichi targets. Brazil is assessing the possibility and suitability of accounting these sites as other effective area-based conservation measures (OECM) for the achievement of National Target 11.

The new map of BAZE sites, under preparation, will be developed based on the assessment of all threatened taxa classified under the target categories of the Alliance and that were included in the official lists in Administrative Rulings MMA 443, 444 and 445, of 18 December 2014. Future updates of this sites map should occur upon each updating of the red lists and should be linked to the assessment of protection gaps and action plan gaps. It is also necessary to put in place long term protection mechanisms for these sites, including the permanent strengthening of institutional alliances.

Figure 3: Action sites of the BAZE initiative.

1.2.2.3. Invasive alien species

The first diagnosis carried out in Brazil of the Invasive Alien Species – IAS was conducted by MMA in 2006[29] and revealed the presence of approximately 400 potentially invasive alien species in the country, of which 58 were classified as invasive (Table 3). In 2014, ICMBio published an inventory of the invasive alien species present in federal protected areas[30]. The inventory assessed 313 protected areas (PAs) and identified the presence of 144 invasive alien species, of which 106 vascular plants, 11 fish, 11 mammals, 5 mollusks, 3 reptiles, 3 insects, 2 cnidarians, 1 amphibian, 1 crustacean, and 1 isopod. The species mentioned for the greatest number of protected areas were: *Canis familiaris* – domestic dog (53 PAs); *Felis catus* – cat (34 PAs); *Apis mellifera* – African bee (33 PAs); *Mangifera indica* – mango tree (31 PAs); *Urochloa maxima* – Guinea grass (28 PAs); *Melinis minutiflora* – molasses grass (26 PAs).

The assessment of the extinction risk of Brazilian species indicated that invasive alien species are a threat to 88 animal species (7.5% of threatened animals) and 163 plants (7.7% of threatened plants). The assessment considered over 16,000 species, and also indicated that invasive alien species are a threat of greater concern for animals in oceanic islands (75% of threatened animals that live on islands) and for plants in the Pampas (25% of threatened plants). In 2016, MMA placed greater efforts on the plans for the prevention and control of alien species such as the European wild boar (*Sus scrofa*) and the orange cup coral (*Tubastraea coccinea and T. tagusensis*).

Table 3: Number of potentially invasive alien species present in the country.

Number of species		Most relevant species
Potentially invasive	Invasive	
Marine environment		
58	**9**	Orange cup coral (*Tubastraea coccinea e T. tagusensis*).
Terrestrial environment		
176 68 fauna 108 flora	**-**	- Giant African snail (*Achatina fulica*); - European wild boar (*Sus scrofa*); - Grasses, such as African love grass (*Eragrostis plana*) and Molasses grass (*Melinis minutiflora*).
Freshwater environment		
163	**49**	Golden mussel (*Limnoperna fortunei*), Fish, such as tilapia (*Oreochromis niloticus*) Aquatic macrophytes (such as *Hydrilla verticillata*).
TOTAL		
397	**58**	Species of marine, terrestrial and freshwater habitats

Source: Espécies exóticas invasoras: situação brasileira [Invasive alien species: Brazilian situation]. Secretaria de Biodiversidade.Brasília: MMA, 2006.24 p.

1.2.3. Ecosystem conservation

During the 11th COP of the UN Framework Convention on Climate Change (UNFCCC), held in 2015 in Paris, Brazil took on a voluntary commitment to reduce, by 2025, its greenhouse gas emissions by 37% below the 2005 levels. To that effect, the most important of the commitments of the Nationally Determined Contribution (NDC) are the restoration of forests and landscapes and the reforestation of 12 million hectares of multiple-use forests by 2030, and the strengthening of policies and measures to achieve, in the Brazilian Amazon, zero suppression of native vegetation by 2030 and the compensation of greenhouse gas emissions from legal vegetation suppression by 2030. Under this context, Brazil counts on a series of legal instruments and initiatives both at the federal and state levels, targeting the conservation of ecosystems (Boxes 8 to 13).

29 Espécies **e**xóticas invasoras: situação brasileira [Invasive alien species: Brazilian situation]. Secretaria de Biodiversidade. Brasília: MMA, 2006. 24 p.: il. color. ; 24 p**.**

30 Sampaio, A.B. and Schmidt, I.B., 2014. Espécies Exóticas Invasoras em Unidades de Conservação Federais do Brasil [Invasive Alien Species in Brazilian Federal Protected Areas]. Biodiversidade Brasileira – 2ª Ed., p. 32-49. Brasil: ICMBio.file:///D:/Downloads/351-1751-1-PB.pdf

Box 8: Highlights of the legal basis for ecosystem conservation .

Law on the Protection of Native Vegetation and Protected Areas

One of the most important advances brought by the implementation of the Law on the Protection of Native Vegetation, nº 12.651, of 25 May 2012 is the regulation of the protection of extensive areas of the Brazilian territory that encompass Permanent Protection Areas (*APPs – Áreas de Proteção Permanente*) and Legal Reserves (*RLs – Reservas Legais*), which represents an enormous gain for the preservation of habitats and conservation of ecosystems in all Brazilian biomes. The development of the Rural Environmental Cadaster System – SiCAR is allowing, for the first time, the diagnosis of all rural properties in the country, enabling public policy planning and execution for promoting the conservation and recuperation of protected areas.

The More Environment Brazil Program (*Programa Mais Ambiente Brasil*), created by Decree nº 8.235, of 05 May 2014, allows states to create the State Programs for Environmental Regularization, which respects the diversity, singularity and implementation capacity of each state, and allows the regularization of APPs, RLs and lands under restricted use through the implementation of recuperation and conservation actions.

The MMA Normative Ruling nº 02, of 06 May 2014, defines the general procedures of the Rural Environmental Cadaster (*CAR – Cadastro Ambiental Rural*). According to the bulletin published by the Brazilian Forest Service, up to 30 June 2016 approximately 95% of the area within rural properties susceptible to being included in the CAR had already been cadastered[31].

ENREDD+ and Forest Conservation

On 26 November 2015, Decree nº 8.576 was published establishing the National Commission for the Reduction of Greenhouse Gas Emissions from Deforestation and Forest Degradation, Conservation of Forest Carbon Stocks, Sustainable Management of Forests, and Increase of Forest Carbon Stocks – CONAREDD+[32].

Right after this, the Administrative Ruling MMA nº 370, of 02 December 2015 was published, establishing the National Strategy – ENREDD+[33], developed through a public consultation process. The strategy has the overall objective of contributing to the mitigation of climate change through the eradication of illegal suppression of native vegetation, the conservation and recuperation of forest ecosystems and the development of a low-carbon sustainable forest-based economy, generating economic, social and environmental benefits.

To achieve the overall objective, three specific objectives were defined for 2020. One of these specific objectives is to integrate the management structures of the National Plan on Climate Change and of the Action Plans in the biomes, seeking convergence and complementarity with biodiversity and forest policies at the federal, state and municipal levels. The main state level actions are shown in Boxes 9 to 13.

31 Serviço Florestal Brasileiro. Cadastro Ambiental Rural (CAR) Boletim Informativo [Bulletin on the Rural Environmental Cadastre]. Available at: http://www.florestal.gov.br/cadastro-ambiental-rural/numeros-do-cadastro-ambiental-rural

32 The deforestation term in this case is part of the definition of the National Commission for the Reduction of Greenhouse Gas Emissions from Deforestation and Forest Degradation, Conservation of Forest Carbon Stocks, Sustainable Forest Management, and Increase of Forest Carbon Stocks - CONAREDD+

33 A Estratégia Nacional para REDD+ do Brasil (ENREDD+) [The National Strategy for REDD+ in Brazil]. Avaliable at: http://redd.mma.gov.br/index.php/pt/enredd/documento-da-enredd

Box 9: Protected areas schemes in Rio de Janeiro .

These include the PES mechanism under the State Program for the Conservation and Revitalization of Water Resources (Prohidro), coordinated through the State Program on Payment for Ecosystem Services (PRO-PSA). Of particular notice are the state PES initiatives related to the Private Reserves of the Natural Heritage (RPPN), which were strengthened by the implementation of the law on the distribution of resources from the green VAT (State Law no 5.100) to reserve owners.

Box 10: Zero native vegetation suppression in Mato Grosso.

In a parallel event of the 21st UN Climate Conference (COP 21), the state took on the commitment to eradicate the suppression of native vegetation by 2020. This is a contribution towards the federal government's target for the Amazon biome defined during the COP. According to the state government, this measure will be implemented through the intensification of enforcement actions and investments in high productivity agriculture associated with rural extension actions.

Box 11: PES in the state of Paraná.

Paraná established PES through State Law nº 17.134/2012, defining four PES lines: biodiversity, water resources, protected areas, and carbon. State Decree nº 1.591/2015 defined the criteria and organized the procedures for the implementation of PES projects, and SEMA Resolution nº 80/2015 defined the rules for implementing PES in RPPNs. Three pilot projects are currently under implementation for the Conservation of Water Resources at the watersheds of the rivers Miringuava, Piraquara and São Cristóvão, in addition to a PES project in RPPN.

Box 12: More forests in Espírito Santo.

This state presents significant advancements on the regulation of Payment for Ecosystem Services – PES, having reformulated its PES Law in 2012 to expand the possibilities of remunerating rural producers adopting environmental conservation practices, including new lines for PES such as the recuperation of degraded areas. This is an important contribution to the Espírito Santo Reforestation Program, which has set the target to increase the state's forest cover by 80,000 hectares by 2018. The state invests efforts into including gender issues in PES projects through initiatives that particularly target women in cooperatives.

Box 13: São Paulo state targets.

This is a pioneer state in the development of a state plan for the implementation of the CBD, with the establishment of the São Paulo State Action Plan 2011-2020*, which groups the existing initiatives in the state that contribute to the 20 CBD targets and identifies the new actions needed to achieve them.

http://portaldabiodiversidade.sp.gov.br/plano-de-acao-de-sao-paulo-2011-2020/

1.2.3.1. Monitoring of Land Use and Cover

Amazon

Brazil is placed among the global leaders in forest monitoring through satellite images, a mechanism that has proven crucial for reducing the suppression of native vegetation. The Legal Amazon has been systematically mapped annually since 1988 by the National Institute for Space Research (INPE). Currently, INPE's Amazon monitoring program is comprised of five complementary operational systems conceived to address different objectives:

- **Prodes** – Project on the Satellite Monitoring of the Brazilian Amazon Forest (*Projeto de Monitoramento da Floresta Amazônica Brasileira por Satélite*);
- **Deter** – Real-Time Deforestation Detection System (*Sistema de Detecção do Desmatamento*)[34] in the Legal Amazon;
- **Queimadas** – Monitoring of Agricultural Burning and Fires (*Monitoramento de Queimadas e Incêndios*);
- **Degrad/Detex** – Mapping of Forest Degradation in the Brazilian Amazon (*Mapeamento da Degradação Florestal na Amazônia Brasileira*) / Monitoring of the Selective Timber Extraction (*Monitoramento da Exploração Seletiva de Madeira*); and
- **TerraClass Amazônia** – Information collection on land use and cover in the Amazon.

Data produced by Prodes inform various governmental and civil society initiatives on environmental issues and territorial management. The system also provides the official numbers of the federal government to inform the Brazilian government's stand at the UNFCCC meetings.

Prodes calculates the accumulated annual rates and extension of suppressed vegetation for all forest ecosystems of the Brazilian Legal Amazon[35], in periods ranging from August of the previous year to July of the mapping year. The calculation uses Landsat satellite images (spatial resolution of 30 meters) and considers suppressions of over 0.0625 km2 (6.25 hectares) in size, where the complete forest cover was removed (clear cut). According to Prodes data, the extension of native vegetation suppression in values accumulated until 2016 is 774,437.7 km², which represents approximately 15% of the entire Legal Amazon and approximately 20% of the region's forest areas (Figure 4).

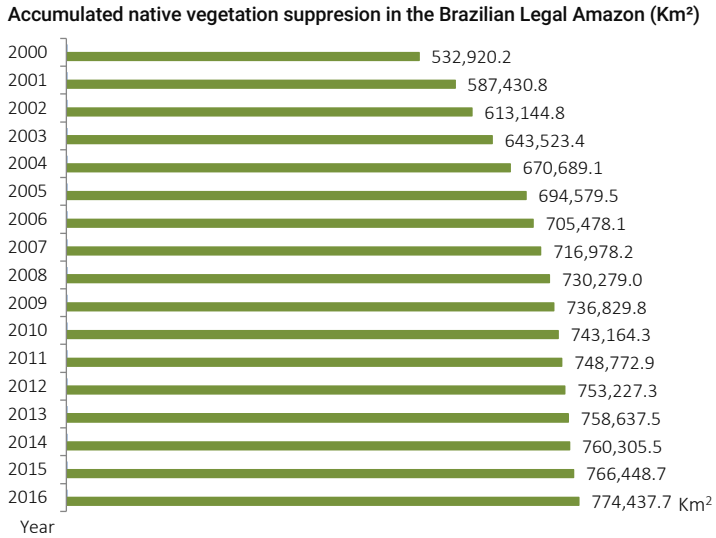


Figure 4: Evolution of native vegetation suppression in the Legal Amazon, in accumulated values (Km²) until 2016, as mapped by Prodes/INPE[36].

34 The deforestation term in this case refers to the definition of the Deter Program acronym – Deforestation Detection System, developed and coordinated by INPE. (http://www.obt.inpe.br/deter/)

35 The Brazilian Legal Amazon corresponds to the area of the states in the North Region (Acre, Amapá, Amazonas, Pará, Rondônia, Roraima and Tocantins), plus the state of Mato Grosso and the municipalities of the state of Maranhão located to the west of the 44º W meridian. Source: IBGE - http://www.ibge.gov.br/home/geociencias/geografia/amazonialegal.shtm?c=2)

36 INPE Prodes - Distribuição DESMATAMENTO 2000 a 2015 [Deforestation distribution 2000-2015]. Available at: http://www.dpi.inpe.br/prodesdigital/prodesmunicipal.php. Accessed in Nov/2016.

The value of the annual rate calculated for 2016 is 7,989 km²/year, which indicates an increase of 29% as compared to 2015, which presented a 6,207 km²/year rate (Figure 5). Nevertheless, the vegetation suppression rate of 2016 is approximately 71% lower than the 2004 rate, which indicates the effectiveness of the policies established on that year to combat illegal vegetation suppression actions.

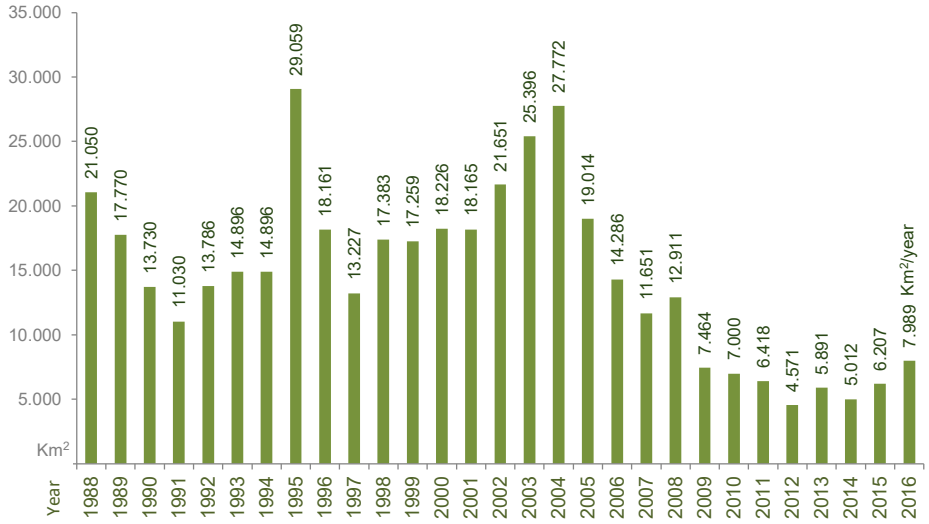


Figure 5: Illegal native vegetation suppression rates for the Legal Amazon calculated by Prodes/INPE for the period 1988-2016 (km²/year)[37].

As a complement to Prodes deforestation data, the TerraClass Project produces maps on the land use and cover of areas in the entire region of the Legal Amazon, and is capable of qualifying information on deforestation occurrences detected in previous years through the identification of the type of activity developed in the deforested areas. To-date, 5 mapping cycles were carried out (2004, 2008, 2010, 2012 and 2014), allowing an analysis of the evolution of land use and cover change along a decade, initiating from the year when the Deforestation[38] Prevention and Control Plan for the Legal Amazon (PPCDAm) became effective. TerraClass is the result of a partnership among the Regional Center for the Amazon (INPE/CRA), Embrapa Eastern Amazon, and Embrapa Computer Technology for Agriculture and Livestock Production. TerraClass data computed during the 2004-2014 period indicate that over 45% of the deforested areas are used as pastures. INPE data for the Amazon are public and accessible through the institute's website[39].

Caatinga, Cerrado, Atlantic Forest, Pampas and Pantanal

Despite the various initiatives to monitor Brazilian biomes carried out by the federal and state governments, by research institutions and by NGOs, there were still gaps to be filled given that such initiatives were punctual and sporadic, with more significant progress for the Legal Amazon region. Thus, considering the success of the satellite monitoring of the Amazon and with the purpose of providing official data to the government on the remaining vegetation cover of the other Brazilian biomes, in 2004, under the Brazilian Biodiversity Conservation and Sustainable Use Project – **Probio** I, the MMA carried out mapping initiatives based on 2002 Landsat images and adopting the Map of Brazilian Biomes (IBGE, 2004) for the biomes' outlines.

In 2008, the Project on Satellite Monitoring of Deforestation in Brazilian Biomes – **PMDBBS**, carried out through a cooperation agreement among the MMA, Ibama and UNDP, implemented a series of monitoring initiatives for the years 2008 through 2011 for the Cerrado, and 2008-2009 for the Caatinga, Pampas, Pantanal and Atlantic Forest (Table 4), using the Probio map as the comparative basis for monitoring.

37 idem.

38 The deforestation term in this case refers to the definition of the acronym of the Deforestation Prevention and Control Plan for the Legal Amazon (PPCDAm), and may not be replaced by a more suitable term; however, it is related to the suppression of native vegetation in all ecosystems.

39 http://www.obt.inpe.br/prodes/index.php

Table 4: Data on the remaining native vegetation and vegetation suppression by biome according to the PMDBBS data[40].

Biome	Base year	Biome size (km²)	Total remaining area (km²)	Percent remaining area	Total suppressed native vegetation area in accumulated values (km²)	Percent suppressed native vegetation in accumulated values
Caatinga	2011	826,411	439,493	53.2%	378,654	45.8%
Atlantic Forest	2009	1,103,961	245,411	22.2%	837,906	75.9%
Pampas	2009	177,767	63,960	36.0%	96,208	54.1%
Pantanal	2009	151,313	125,726	83.1%	23,166	15.3%

In 2013, specifically for the Cerrado and through the Sustainable Cerrado Initiative, supported by GEF, the World Bank and Funbio, the MMA promoted the coordination of a group of Brazilian governmental institutions with extensive experience in remote sensing, geoprocessing and large-scale mapping to carry out the first version of the project "Mapping of the Use and Vegetation Cover of the Cerrado – **TerraClass Cerrado**".

Under MMA coordination, the teams in Ibama, INPE, Brazilian Agricultural Research Corporation – Embrapa, Federal University of Goiás – UFG, and Federal University of Uberlândia – UFU, joined forces and expertise to produce the map covering the entire continuous Cerrado area. The results of the TerraClass Cerrado 2013 (Table 5) indicate that 54.5% of the biome maintain its native vegetation, and that the pasture class responds for 68% of the anthropic impact in the biome.

Table 5: Land use classes of the year 2013 mapped by TerraClass Cerrado.

Land use classes for 2013 mapped by TerraClass Cerrado	Area	
	km²	%
Annual agriculture	174,006	8.53%
Perennial agriculture	64,512	3.16%
Mining	247	0.01%
Mosaic of occupancy	2,326	0.11%
Pasture	**600,832**	**29.46%**
Silviculture	30,525	1.50%
Exposed soil	3,621	0.18%
Urban area	8,797	0.43%
Other	73	0.00%
Natural Forest Vegetation	**418,789**	**20.54%**
Natural Non-Forest Vegetation	**692,301**	**33.95%**
Natural non-vegetated area	2,609	0.13%
Water	15,056	0.74%
Not observed	25,549	1.25%
TOTAL	**2,039,243**	**100%**

The data on native vegetation suppression for the years 2010 and 2011 for the Caatinga were published in January 2017. The Pampas and Pantanal data, as well as the Atlantic Forest 2010 data should also be published in 2017.

Various initiatives for analyzing the dynamics of land use and remaining native vegetation cover are also being implemented by other institutions. In a study on the impact of the revision of Federal Law nº 12.651, of 25 May 2012 – Law on the Protection of Native Vegetation, Soares-Filho (2013)[41] indicates a total of 530

41 Soares-Filho, B. S. (2013). Impacto da revisão do Lei da Proteção da Vegetação Nativa: como viabilizar o grande desafio adiante [*Impact of the revision of the Law on the Protection of Native Vegetation: how to implement the great challenge ahead*]. Brasília: Secretaria de Assuntos Estratégicos.

million hectares covered with natural vegetation in the country, representing over 62% of the national territory.

The annual mapping of remaining vegetation cover in the Atlantic Forest is being carried out since 1990 by the non-governmental organization SOS Mata Atlântica, who launched the Atlas of the Remaining Forest Patches of the Atlantic Forest with data from 2013 and 2014, in collaboration with INPE. The Atlas indicates a 12.5% rate of remaining native vegetation[42], considering a total biome size of 1,309,700 km², which corresponds to the biome area as defined by the IBGE Map of Biomes (2004) plus the native forest formations and associated ecosystems defined in the Map of the Area for Application of Federal Law nº 11.428, of 22 December 2006, known as the Atlantic Forest Law.

For the Pantanal, a partnership between WWF-Brasil and Instituto SOS Pantanal, with support from Embrapa Pantanal has been monitoring the Upper Paraguai River watershed (*BAP – Bacia do Alto Paraguai*), which encompasses Cerrado and Pantanal areas. The most recent data of the study "Monitoring Land Use and Vegetation Cover Changes in the Upper Paraguai Watershed"[43], updated every two years, reveal in its latest edition (2012-2014) that 214,606 km² of native vegetation remain in the BAP area, corresponding to approximately 58% of the total watershed area (368,656 km²). This same study informs that of this total remaining native vegetation, 128,657 km² (85.1%) are located on the BAP plains, corresponding to the Pantanal borders according to the IBGE Map of Biomes (2004).

For the Pampas, the Rio Grande do Sul State Secretariat of the Environment in partnership with the Federal University of Rio Grande do Sul – UFRGS, updated the vegetation map for the Pampas biome, under the RS Biodiversity Project. The base year 2009 was used to spatialize the remaining natural vegetation formations and the transformations of the landscape resulting from anthropic use, and this information was used for monitoring the remaining natural areas (particularly grasslands, marshes and forests) and areas affected by human use in comparison to 2002. This analysis has been made available to the public[44].

Studies predict that by 2020 the demand for clearing new land for agriculture and livestock production, particularly in the Amazon and the Cerrado, should decrease sharply. The publication *Outlook Brazil 2022 – agribusiness projections*[45], prepared by the Federation of Industries of the State of São Paulo – Fiesp in partnership with the Institute for Studies on International Trade and Negotiations – Icone, calculates that the areas to be occupied by agriculture and livestock in 2020 in the Amazon and the Cerrado will be approximately 90% smaller than what was estimated by the federal government based on the illegal native vegetation suppression rates that have been observed since 2010. This prediction strongly contributes to the achievement of the 37% reduction target for greenhouse gas emissions generated by these activities in both biomes by 2025, and the 43% reduction target by 2030, as compared to levels recorded in 2005, both part of the NDC.

The deforestation rates for the Amazon and Cerrado, as well as their future estimates, are calculated based on past data on deforestation and suppression of native vegetation. However, for this reduction and suppression scenario to become true, protagonist action is needed from the federal government by those actors involved in agribusiness to achieve harmonization of the various interests connected to land use. Ultimately, considering the policies on biodiversity conservation, this strategic alignment can contribute to an increase in production on a sustainable basis, which can bring food and water security and minimize greenhouse gas emissions.

Part of this reduction should come from the use of lands that are currently degraded or underused, particularly in the Cerrado, which concentrates most of the expansion in land use for agriculture and livestock production.

1.2.3.2. Program on the Environmental Monitoring of Brazilian Biomes

The Program on the Environmental Monitoring of Brazilian Biomes – PMABB was established through the Administrative Ruling MMA nº 365, of 27 November 2015, with the objective of mapping and monitoring

42 This difference between the biome area designated by IBGE and the biome outline indicated for application of the criteria defined under the Atlantic Forest Law is the reason for the difference of the biome size taken as the basis for data analysis. The difference between the time intervals of the inventories and studies further contributes to the difference between these results and the PMDBBS (2009) results.

43 WWF Brasil; Instituto SOS Pantanal. Monitoramento das alterações da cobertura vegetal e uso do solo na Bacia do Alto Paraguai – Porção Brasileira – Período de Análise: 2012 a 2014 [Monitoring vegetation cover and land use changes in the Upper Paraguai Watershed – Brazilian portion – Analyzed period: 2012 to 2014], 66p. il. 2015.

44 UFRGS-IB-Centro de Ecologia. Mapeamento da cobertura vegetal do Bioma Pampa: Ano-base 2009 [Map of vegetation cover of the Pampas Biome. Base year 2009]. Porto Alegre: UFRGS-IB-Centro de Ecologia. 2016. https://www.ufrgs.br/labgeo/index.php/dados-espaciais/245-mapeamento-da-cobertura-vegetal-do-bioma-pampa-ano-base-2009

45 FEDERAÇÃO, D. SÃO PAULO-FIESP; ÍCONE. Outlook Brasil, 2022.

vegetation and land use dynamics. According to Article 1 of this instrument, the maps to be prepared for publication by 2020 shall focus on the following themes: native vegetation suppression, including its rate; selective timber extraction; assessment of vegetation cover and land use; fire occurrences and burnt area; and vegetation recuperation.

The preparation of these various mapping and monitoring initiatives is divided in three phases: (a) consolidation of monitoring actions for the Amazon, and implementation and consolidation for the Cerrado, covering 2016 and 2017 data; (b) implementation and consolidation of monitoring actions for the Atlantic Forest; and (c) implementation and consolidation of monitoring actions for the Caatinga, Pampas and Pantanal, covering the 2017 and 2018 data.

For the most part, these projects are funded by international cooperation or fund resources, such as from the Amazon Fund, the Climate Fund, and the Climate Investment Fund – CIF. The maps planned under the Program will be crucial as information sources on biodiversity and climate and to inform public policies on these themes. The map types planned for each biome are presented in Figure 6.

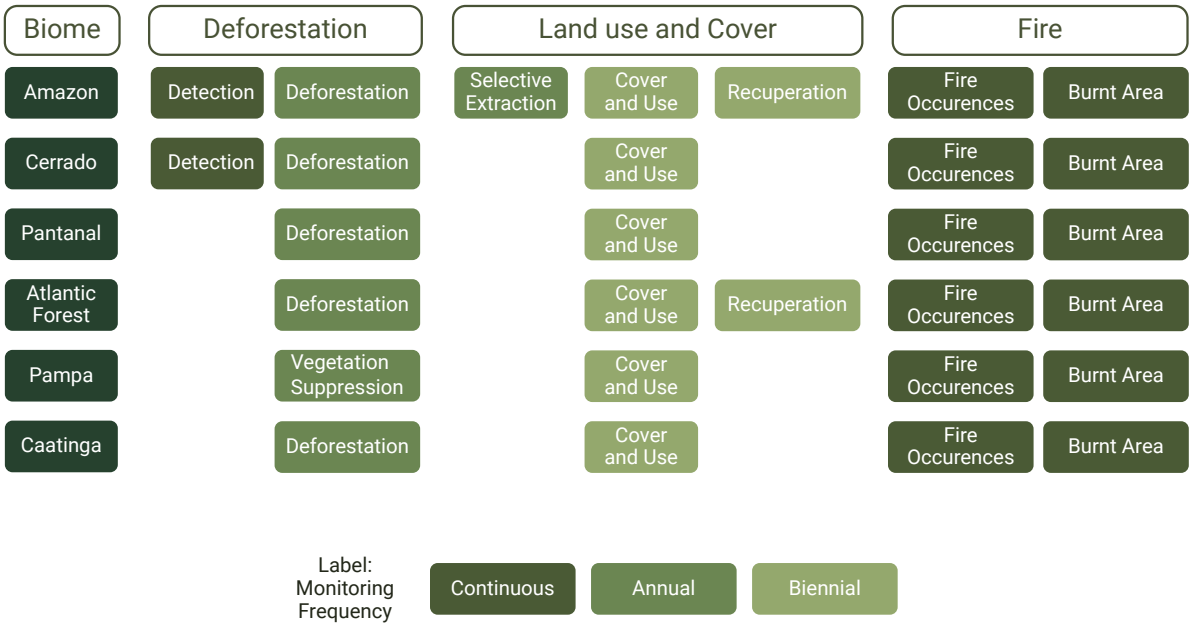


Figure 6: Maps planned under PMABB, organized by frequency and type. Frequency: continuous, annual and biennial. Types of maps: detection, deforestation , selective extraction, land use and cover, recuperation of forests and landscapes, fire occurrences and burnt area. Source: Strategy of the Program on the Environmental Monitoring of Brazilian Biomes.

Action plans for the prevention and control of native vegetation suppression

The main contributions to the reduction of the native vegetation suppression rates in the Amazon and in the Cerrado, which consequently collaborate to the reduction of greenhouse gas emissions, are the specific action plans that integrate the National Policy on Climate Change – PNMC[47]: (i) the Action Plan for Deforestation[48] Prevention and Control in the Amazon – PPCDAm, launched in 2004, and (ii) the Action Plan for Deforestation and Fire Prevention and Control in the Cerrado – PPCerrado[49], launched in 2010.

The PNMC establishes targets for reducing native vegetation suppression in both biomes by 2020, defining 80% reduction for the Amazon (as compared to the average rate for the period 1996-2005) and 40% reduction for the Cerrado (as compared to the average rate for the period 1999-2008). The plans that integrate the PNMC result from the coordinated efforts between the federal government and the state and municipal governments to consistently combat the illegal vegetation suppression activities, while stimulating production actions that

47 PNMC – National Policy on Climate Change (Política Nacional sobre Mudança do Clima), Law 12.187/2009.

48 The term deforestation in this case refers to the definition of the acronym of the Action Plan for Deforestation Prevention and Control in the Amazon – PPCDAm.

49 The term deforestation in this case refers to the definition of the acronym of the Action Plan for Deforestation and Fire Prevention and Control in the Cerrado – PPCerrado.

promote sustainable development in the region considering the social, economic and environmental aspects.

PPCDAm is currently at its fourth phase of implementation, and PPCerrado on its third phase, corresponding to the period 2016-2020, precisely coinciding with the end of the PNMC cycle. In 2020, Brazil should present a deforestation rate (as measured by the Prodes/INPE system) no greater than the 3,921 km2 target for the Amazon, and no greater than 9,421 km2 for the Cerrado. The deforestation rate for the Amazon is currently above 7,900 km2, which is far superior to the target to be achieved in approximately two years. The situation is even more alarming in the Cerrado, considering that this is a biome half the size of the Amazon, but currently presenting a native vegetation suppression rate around 9,483 km2/year, according to INPE data for the year 2015.

In this context, it is crucial to implement the priority lines of action under PPCDAm and PPCerrado to ensure the successive reduction of the native vegetation deforestation/suppression rates. It is important to note that this reduction and the conservation of natural ecosystems is a sine qua non condition for the development of agricultural activities, which depend on good soil conditions and the availability of water. Additionally, if deforestation rates rise again, the land use change and forest sector, which has already been responsible for the largest emissions of greenhouse gases in the country, will then contribute with even more emissions, requiring adjustments in other sectors such as agriculture and industry.

The expansion of agriculture and livestock over areas that have already been opened (consolidated areas), the compliance with the Forest Code (particularly the recuperation of APPs), and the implementation of sectoral agreements with the production sector for reducing deforestation are priorities for PPCDAm and PPCerrado. Through these Plans, which are coordinated by MMA and count with the participation of over 23 ministries and agencies, the federal government expects to develop partnerships with the private sector to pave the way towards the end of the illegal suppression of native vegetation and the non-expansion over remaining native areas.

Paíe Zuppani

1.2.4. Protected Areas

The entire set of protected areas in Brazil represents great potential for the national internalization of the Aichi Targets and the achievement of National Target 11. In Brazil, considering the legal instruments currently in force, the areas that are under some degree of protection can be divided into three large groups which, when added, display the enormous potential and significant portion of the territory under some protection mechanism (Table 6).

The first group is comprised of the official protected areas registered under the National System of Protected Areas (*SNUC – Sistema Nacional de Unidades de Conservação*). SNUC's objective is directly related to biodiversity conservation (Figure 9). The second group comprises the quilombola territories and indigenous lands (*TIs – Terras Indígenas*), which safeguard the social organization, uses, languages, beliefs and traditions of these peoples and communities. The third group establishes minimum percent values for biodiversity conservation in each Brazilian biome through the establishment of Legal Reserves and Permanent Preservation Areas according to the Law on the Protection of Native Vegetation (Law nº 12.651, of 25 May 2012).

Table 6: Groups of protected areas in Brazil.

Group	Type of protected area	Legislation	Percent cover of the national territory
1	Protected Areas – SNUC*	Law n. 9.985/2000	17.5 % continental area 1.5 % marine area
2	Indigenous Lands **	1988 Federal Constitution of Brazil and Law nº 6.001/1973	13,3 %
	Quilombola Territories***	1988 Federal Constitution of Brazil and Decrees nº 4.886/2003 and nº 4.887/2003	0,14%
3	Legal Reserve****	Law nº 12.651/2012	4,4%
	Permanent Protection Areas****		0,9%

Data sources:

National Cadaster of Protected Areas (Cadastro Nacional de Unidades de Conservação - CNUC), available at: http://www.mma.gov.br/areas-protegidas/cadastro-nacional-de-ucs/dados-consolidados. Accessed on 20 February 2016.

**** National Indigenous Peoples Foundation (FUNAI), availiable at www.funai.gov.br/index.php/indios-no-brasil/terras-indigenas. Accessed on 20 February 2016.***

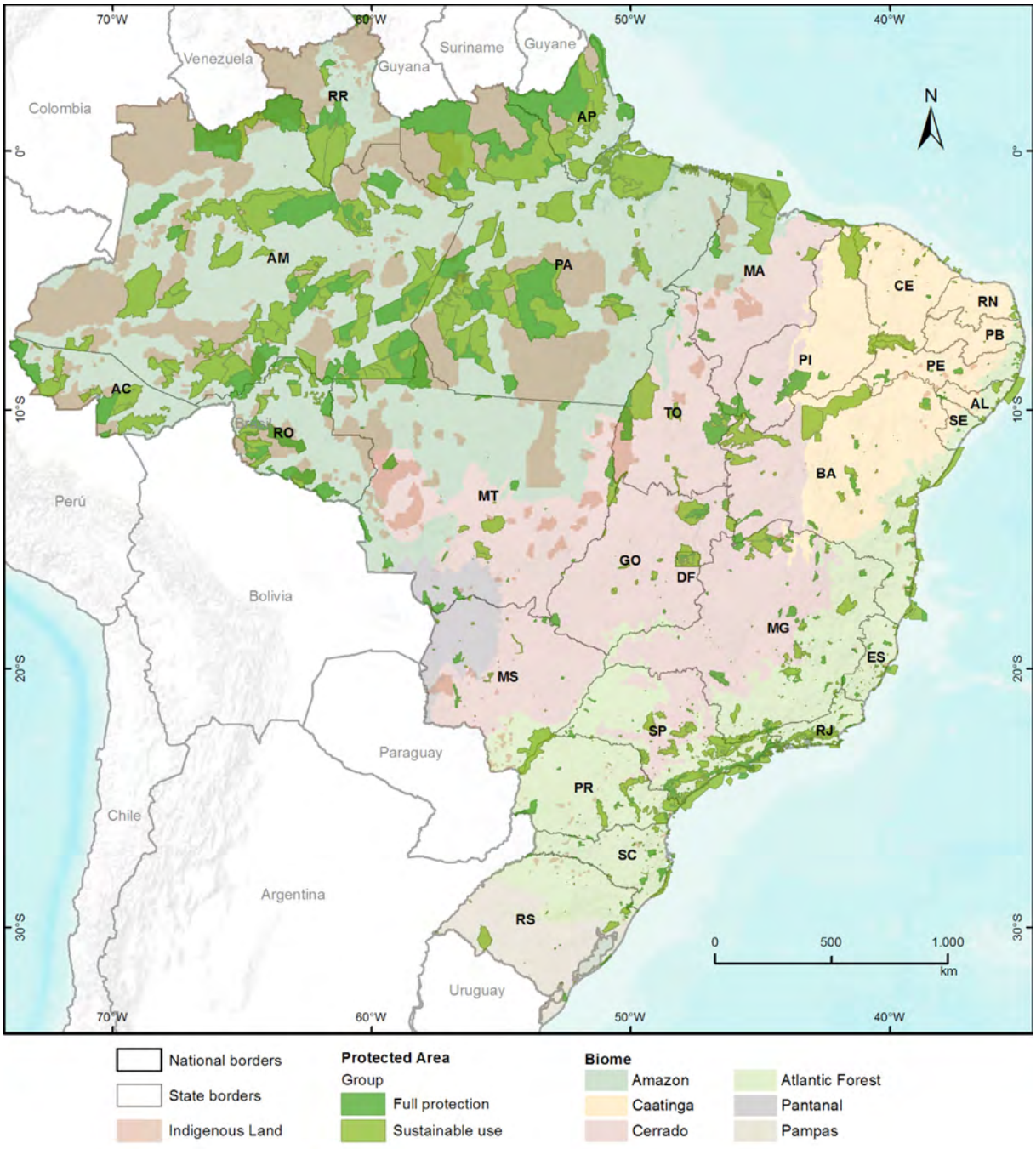
*****Calculated from the special database of the National Institute of Colonization and Agrarian Reform - INCRA of February 2016, available at www.incra.gov.br.***

******Data provided by the Brazilian Forest Service - SFB. It is important to note that these are preliminary data, as only the data entered by rural land owners are available at the Rural Environmental Cadaster, which still need to be validated by state agencies.***

1.2.4.1. National System of Protected Areas

Law nº 9.985, of 18 July 2000, established the National System of Protected Areas – SNUC, comprised of the federal, state, municipal and district protected areas (PAs), distributed among 12 categories with different specific objectives regarding the form of protection and allowed uses. The concept of the system seeks to optimize the role of PAs to enable their integrated planning and management, and to ensure that significant and ecologically viable samples of the Brazilian ecosystems are properly represented within the protected areas (Figure 7).

Law nº 9.985/2000 brought to the legal framework the following contributions related to Brazilian protected areas: (i) the unification of legal criteria and procedures, which were previously dispersed; (ii) clear guidance on the overall procedures for the creation, implementation and management of PAs; and (iii) promotion of the integrated management of protected areas at the different governmental levels (federal, state, municipal). Recent legal developments should further promote increased efforts for the conservation and recuperation of degraded areas, thus contributing for the connectivity among protected areas.



Source: Prepared by the Protected Areas Department – DAP/SBio/MMA, with geo-referenced data from CNUC[50] and Funai[51].

Figure 7: Map of Protected Areas in Brazil: SNUC Protected Areas and Indigenous Lands.

Progress of the ARPA Program

In May 2014, the third phase of the Amazon Region Protected Areas Program – ARPA was established by Administrative Ruling MMA nº 187, with the objective of completing the consolidation of supported PAs and contributing to their maintenance in the long term. In this context, the Transition Fund (*FT – Fundo de Transição*) was created as a private long-term financing mechanism, established through contracts among institutions, individuals, legal entities and donors. The objective of this Fund is to ensure the conservation of biodiversity and ecosystem services in 600,000 km^2 (60 million hectares) in the Brazilian Amazon through the effective management of PAs supported under the ARPA Program[52]. Specifically, the FT aims at providing resources and incentives so that the federal government and state governments of the Amazon may:

50 Geo-referenced data of the National Cadaster of Protected Areas. Available at: http://www.mma.gov.br/areas-protegidas/cadastro-nacional-de-ucs/dados-georreferenciados

51 Geo-referenced data on Indigenous Lands: Available at: http://www.funai.gov.br/index.php/shape

52 http://programaarpa.gov.br/fundo-de-transicao/#

- make possible the creation of 06 million hectares of new PAs;
- complete the consolidation of 60 million hectares of PAs and support these PAs, according to the Principles and Guidelines established for the ARPA Program and which comprise its Operations Manual;
- gradually increase resources provided by governments to the ARPA Program, so that after a 25-year period these governments are financing 100% of the costs of the ARPA Program, with no need for additional support from the FT or from any other donor funds.

By providing support to 18 new PAs in 2015, the Program reached 98% of its target. The Program currently supports 114 federal and state PAs distributed throughout the 9 states that comprise the Amazon Region.

1.2.4.2. Connectivity and Ecological Corridors

The creation of ecological corridors is an important tool for the conservation of biodiversity, as its objective is to allow the establishment and transit of different species between well conserved areas and protected areas, thus ensuring the gene flow among animal and plant populations and the continuity of ecological and evolutionary processes. Literature provides different approaches for the ecological corridor concept, including the official Brazilian definition provided by Law n° 9.985, of 18 July 2000, which created the National System of Nature Protection Areas and defined ecological corridors as "portions of natural or semi-natural ecosystems connecting PAs, which allow gene flow and biota movements among them, facilitating species dispersion and the recolonization of degraded areas, as well as the maintenance of populations that require, for their survival, greater area sizes than those protected in individual protected areas".

It should be noted that the ecological corridors are not political or administrative units, rather, they are areas where coordinated actions by different partners are evidenced, with the objective of protecting biological diversity at the landscape scale. Such actions involve the strengthening, expansion and linkage of protected areas located within the corridor through the implementation of various strategies, including providing incentives to low-impact uses of natural resources, such as forest management and agroforestry systems.

There are ecological corridors in Brazil that are officially recognized by the federal and state governments. Within the past several years, SBio focused activities mainly on two corridors (Central Atlantic Forest Corridor and Central Amazon Corridor) through the Ecological Corridors Project (PCE). This project was a MMA initiative in partnership with the state governments of Bahia, Espírito Santo and Amazonas, with financial support from the World Bank and the German bank KfW. The main results of this project were the reduction of illegal native vegetation suppression rates along the corridors and the increase in the protection of Atlantic Forest and Amazon ecosystems through the provision of support to the consolidation of existing PAs and the creation of approximately 30 new PAs under the three governmental levels (federal, state and municipal). This initiative is an excellent example of how the coordinated work among the federal government, states, municipalities and civil society can generate positive impacts on the achievement of the country's international commitments, as the creation of these new PAs contributes to the achievement of Aichi Target 11, which defines percent areas under protection to be achieved in each Brazilian biome.

SBio is currently initiating a new Project to establish and support the establishment of ecological corridors in Latin America, promoting connectivity among important areas for biodiversity conservation and preventing the isolation of the biota in "islands" created by habitat degradation and fragmentation. The Ecological Corridors of Latin America Project originated as an initiative of the Advanced Studies Institute of the São Paulo University (IEA/USP). Multiple authors are contributing to the preparation of this project, which is intended to be jointly implemented by various institutions and partners from civil society and governments of Latin American countries. The project under preparation will be coordinated by MMA. The idea is to develop concrete actions for strengthening existing protected areas, as well as for establishing new PAs and corridors. In addition to implementing actions on the ground in protected areas, the project intends to work on environmental agendas that interface with biodiversity conservation to integrate the climate, water and forest themes in the promotion of biodiversity conservation and the sustainable use of the region's natural resources.

1.2.5. Access to Information on Biodiversity

The access to quality information is a fundamental mandate of various public policies in the country. The principle of transparency is a basic condition to achieve broad community participation and engagement in the management and conservation of natural resources, thus ensuring access to knowledge and respect to the rationality and sustainability principles related to their use and exploitation.

1.2.5.1. Biodiversity Portal

The Biodiversity Portal[53] is a virtual platform with the mission of allowing public access to a rich scientific realm that currently counts with over 1.5 million occurrence records related to 93,442 species. This initiative results from a partnership between MMA and ICMBio with support from GIZ, as part of the Brazil-Germany Cooperation for Sustainable Development.

The Portal was developed by researchers from the Polytechnic College of the University of São Paulo – EPUSP and partners, and consolidates information from databases maintained by ICMBio and JBRJ.

This initiative values networking and combines databases to share knowledge with the society. The Portal functions as an additional tool in the process of guiding specific research, supporting action planning, and informing management strategies.

The Portal currently makes available the databases of some of the systems maintained by the Chico Mendes Institute for Biodiversity Conservation (ICMBio), particularly its Research and Conservation Centers, by the Rio de Janeiro Botanical Garden (JBRJ) and other partners. It allows access to and use of data on biodiversity through text and geo-spatial search tools (filters, spatial layers, maps and polygons), as well as the consultation and download of species occurrence records.

The Biodiversity Portal also promotes initiatives and practices among MMA and its subsidiary institutions related to the automated publication and use of data, adopting open standards and protocols of broad acceptance and use.

1.2.5.2. Information System on the Brazilian Flora

In 2010 Brazil achieved Target 1 established under the Global Strategy for Plant Conservation (GSPC-CBD) with the publication, by JBRJ, of the Catalogue of Plants and Fungi of Brazil and the launching of the first online version of the List of Brazilian Plant Species. This milestone for the Brazilian botany was made possible through the effort of over 400 Brazilian and foreign taxonomy experts, who worked through a platform where information on our flora was included and published in real time. The "Brazil List" project, as it was popularly known, closed in November 2015 with the publication of five scientific papers and their respective databases.

In 2016 the new system of the Brazilian Flora 2020 project was launched. Coordinated by JBRJ, this project has the objective of contributing to the achievement of Aichi Target 1 established by the CBD for 2020, with the dissemination of the description, identification key and illustration of all species of plants, algae and fungi known to occur in the country.

The Brazilian Flora 2020 project is part of the Reflora Program, and is being carried out with support from the Information System on Brazilian Biodiversity (SiBBr). Almost 700 researchers are currently working in a network to prepare the monographies. These researchers are also responsible for the nomenclatural information and geographical distribution (scope in Brazil, endemism and phytogeographical domains), and for including valuable data on life forms, substrate and vegetation types of the monographed species. The Brazilian Flora 2020 also offers open and free access to its entire database through download and web services.

REFLORA Virtual Herbarium of the repatriated plants

In December 2010, the Rio de Janeiro Botanical Garden (JBRJ) received from CNPq the mission to build a virtual herbarium to hold the images of Brazilian plants deposited in herbaria in other countries, thus creating in a Brazilian public institution the capacity to store and provide quality data on our flora. The first partners in this initiative were the K herbarium (Royal Botanic Gardens, Kew) and P/PC herbarium (Muséum National d'Histoire Naturelle, Paris), adding their images to those of the RB herbarium, belonging to JBRJ. Starting from 2014 and with support from SiBBr, other European and American herbaria were included in the initiative:

53 The Portal website can be accessed through the following link: https://portaldabiodiversidade.icmbio.gov.br/

Missouri Botanical Gardens (MO), The New York Botanical Garden (NY), Naturhistorisches Museum Wien (W), Naturhistoriska Riksmuseet (S), and Smithsonian Institute (US).

The REFLORA Virtual Herbarium offers its primary data for integration into the Biodiversity Portal and SiBBr.

Brazilian Flora Risk Assessment System

The National Center for Plant Conservation – CNCFLORA under JBRJ is developing and enhancing, since 2010, an information system for assessing the extinction risk of the Brazilian flora. This system allows the organization and validation of data by analysts and experts, which are necessary steps for the application of the risk assessment methodology being adopted (IUCN). The system also makes spatial calculations on the occurrence extension and area of occupation, and allows the specialists to carry out the spatial and taxonomic validation of the occurrence records. Lastly, the system also offers web services that inform the extinction risk category for the assessed species, allowing the integration with other systems such as the Brazilian Flora 2020.

JBRJ data Portal

The JBRJ data portal offers a model of institutional presence in the Internet for institutions holding data on biodiversity and conservation. Launched in June 2015, the portal offers access to information systems, databases, documents, maps and spreadsheets containing data and information on biodiversity and conservation, which were generated or are safeguarded by the institution. These information resources are managed by a set of free and open-code tools, customized to address the institutional demands, also offering access to these resources through web services.

1.2.5.3. Information System on Brazilian Biodiversity - SiBBr

The Information System on Brazilian Biodiversity is an initiative of the Ministry of Science, Technology, Innovation and Communications – MCTIC, through its Secretariat of Policies and Programs for Research and Development – Seped, with technical support from the United Nations Programme for the Environment – UNPE and financial support from the GEF.

The SiBBr[54] is an on-line platform that intends to compile the largest quantity of existing data and information on Brazilian biodiversity, in order to become a national biodiversity data and content infrastructure. Its objective is to support scientific production and the decision-making and public policies development processes associated to the conservation and sustainable use of biodiversity, through the promotion and facilitation of digitization, internet publication, integration of free access data and the use of information on Brazilian biodiversity.

In the context of SiBBr, SBio is investing in the development of a system to support decision making, together with MCTIC. The objective of this system is to automate processes and tasks whenever possible to allow greater agility and qualification, and reducing the cost of analyses that are fundamental for the implementation of public policies on biodiversity, such as the process of identification of priority areas and actions for conservation, connectivity and fragmentation analyses, assessment of threatened species, identification of potential areas for the provision of ecosystem services, and identification of areas for the recuperation of native vegetation. This analysis instrument should not be the sole reference for decision making, where qualitative and socio-cultural data that reflect the complexity of such data should also be considered, contemplating data by gender.

The system's idea is to use the process of integration of the databases from the Biodiversity Portal at MMA and from SiBBr to apply analysis tools. One important advantage of the system will be to allow the organized and accessible hosting of qualitative and quantitative data in such a way that analyses can be revised whenever new information is inserted. This tool will minimize the time and resources currently spent in the hiring of companies and consultants to assist in the production of these analyses, allowing such efforts and resources to be redirected to the effective implementation of conservation actions. With SiBBr, the Brazilian government achieves Target 19 of the National Biodiversity Targets for 2020 in relation to the integration and availability of information on biodiversity.

54 Information System on Brazilian Biodiversity. http://www.sibbr.gov.br/

1.2.5.4. The systems for managing access and benefit sharing

The National System for Managing the Genetic Heritage and Associated Traditional Knowledge – SisGen will be the interface between administrators, users and providers, and the Genetic Heritage Management Council to comply with the obligations established by Law nº 13.123, of 20 May 2015 and its regulations. All cadasters, authorizations, notifications on end products or reproductive materials, and obtaining the respective receipts and certificates will be carried out through this system. In addition, it is now possible to regularize the activities that did not previously obtained authorization for access or consignment of a genetic heritage component, as well as the conformity of activities for their economic exploitation carried out starting from 30 June 2000, date of publication of the Provisional Measure nº 2.052, which was the first legal rule on the theme.

A system for tracking activities resulting from access to genetic heritage or associated traditional knowledge is also currently planned for development, as one of the instruments created under the legal framework that increased control over the tracking of access to and shipping of genetic resources, and brought improvements to the monitoring of benefit sharing. This system will count on the collaboration of several public institutions and agencies responsible for regulating various productive sectors' activities before products are registered for trade. The legal framework also designates governmental agencies as checkpoints to ensure compliance with the law.

With the implementation of these systems it will be possible to maintain and manage a larger volume of information on the use of genetic heritage and the associated traditional knowledge. Furthermore, once these systems are connected to other databases and information systems of the federal government administration, it will be possible to implement modern high-efficiency instruments to verify information on activities resulting from the access to genetic heritage or to the associated traditional knowledge, including information on the economic use resulting from this access.

For the user, Law nº 13.123/2015 includes simplified procedures for research and development activities in the manner of a declaratory cadaster, which allows receipts and certificates to be issued to attest compliance with Brazilian law. This is all carried out through the electronic system that is accessible online. SisGen is currently undergoing the final tests of its first version and will become available soon.

Both systems are fundamental to achieve National Targets 16 and 18. They will also facilitate the achievement of Target 2, given that the new legislation requires the creation of electronic documentation systems to manage access and benefit sharing related to the use of biodiversity and the associated traditional knowledge.

1.2.5.5. National Cadaster of Protected Areas (CNUC)

The National Cadaster of Protected Areas (*CNUC – Cadastro Nacional de Unidades de Conservação*) is maintained by MMA in collaboration with its federal (ICMBio), state and municipal management agencies. Its main objective is to make a database available with official information related to the National System of Protected Areas (SNUC). Its database is comprised of information on the protected areas (PAs) managed under the three levels of government and by individuals (in the case of RPPNs). The main information provided by the cadaster is related to the physical, biological, touristic and managerial character, as well as geographical location of PAs. In addition to giving access to official information on PAs under SNUC, CNUC also provides detailed reports on PA status, thus facilitating the development of diagnoses, identification of problems and decision-making. CNUC currently holds information on approximately 2,000 PAs, which together represent approximately 1.54 million km² of the national territory under protection, corresponding to 17.5% of the country's continental area and 1.5% of the marine zone.

1.3. The construction and implementation process of the NBSAP

1.3.1. Process history

In 1993 Brazil became signatory to the Convention on Biological Diversity – CBD and its provisions came into force in 1994. In 2002 Brazil formalized, through Decree nº 4.339, the National Policy on Biodiversity – PNB, and in 2006 the Directives and Priorities of the National Biodiversity Action Plan – PAN-Bio were approved through CONABIO Decision nº 40. As Party to the CBD, at the 10th Conference of the Parties to the CBD (COP

10) held in Nagoya, Japan, Brazil made the commitment to update its National Biodiversity Strategy and Action Plan – NBSAP, in compliance with Aichi Target 17[55].

Up until then, the Brazilian strategy was represented by a combination of programs and projects carried out by environmental agencies, complemented by several legal instruments created over the years for the protection and use of the environment and biodiversity, many of which are considered pioneer initiatives and adopted as a model at the international scenario. Starting in 2010, broad participatory processes were initiated to update the NBSAP, culminating at the compilation of those various legal instruments and the consolidation of a single document gathering all initiatives, actions and other efforts for the conservation of biodiversity.

The challenge of the participatory construction of the NBSAP in a country with Brazil's characteristics resulted in a process that generated lessons learned, such as structuring the Action Plan based on different collaboration constituencies represented by institutions from various sectors – federal, state and municipal governments, civil society, academia and private sector.

Thus, the NBSAP seeks to define the course of action to achieve the conservation and sustainable use of the fundamental resources that support and ensure resilience to society and the national economy: the biodiversity, the balance among its components, and the resulting ecosystem services. The benchmarks of the NBSAP construction process are highlighted in Box 14, and the main steps of the process that were carried out after the definition of the Aichi Targets in 2010 are shown in Figure 8.

Box 14: The benchmarks of the NBSAP construction process.

- In 2006: publication of Conabio Resolution no 3, of 21 December 2006, which adopts the set of National Biodiversity Targets for 2010 and their correspondence to the Global Targets approved by the Conference of the Parties to the Convention on Biological Diversity - CBD.
- From 2010 to 2012: implementation of the participatory process known as Dialogues on Biodiversity, initiated after the definition of the Aichi Targets in 2010, in Nagoya, resulting in the first proposal of National Targets for 2020.
- From 2012 to 2014: construction of the Governmental Action Plan for the Conservation and Sustainable Use of Biodiversity, which resulted in the multi-sectoral contributions to the Governmental Action Plan and directives for the 2016-2019 governmental multi-year plan. During this process, the main causes and consequences of biodiversity loss were identified, of which the extinction of species and loss of traditional knowledge were highlighted.
- In 2013: development of the National Biodiversity Strategy and publication of Conabio Resolution no 6, of 03 September 2013, which adopts the National Biodiversity Targets for 2011-2020 and the principles for their internalization, and proposes their implementation by the Federal Government.
- In 2014: creation of the Brazilian Panel on Biodiversity – PainelBio, and signing of its Constitutive Agreement.
- From 2014 to 2015: participatory construction of the proposal of indicators for the National Targets 2011-2020 in partnership with PainelBio, resulting in the indicators table for monitoring these targets and the respective concept framework.
- In June 2016: workshop for strengthening the NBSAP, focusing on the following themes: gender as a crosscutting theme, Sustainable Development Goals – SDG, and National Targets.
- In August 2016: publication of the first version of the NBSAP by the CBD, containing the Biodiversity Action Plan focusing on actions under the responsibility of the Secretariat of Biodiversity of the Ministry of the Environment – SBio/MMA.
- In October 2016: launching of the process to develop the second version of the NBSAP through the engagement of governmental institutions at the federal, state and local levels, civil society, academia and private sector, adding new actions to the Biodiversity Action Plan.
- From December 2016 to mid-2017: PainelBio Workshop to strengthen the NBSAP and compilation of institutional contributions to the text and Action Plan of the second version of the NBSAP. Construction of the Communications Plan and the Monitoring and Resource Mobilization Plan, and Scope Analysis of the Action Plan.

55 Target 17: By 2015, each Party has developed, adopted as a policy instrument, and has commenced implementing, an effective, participatory and updated national biodiversity strategy and action plan

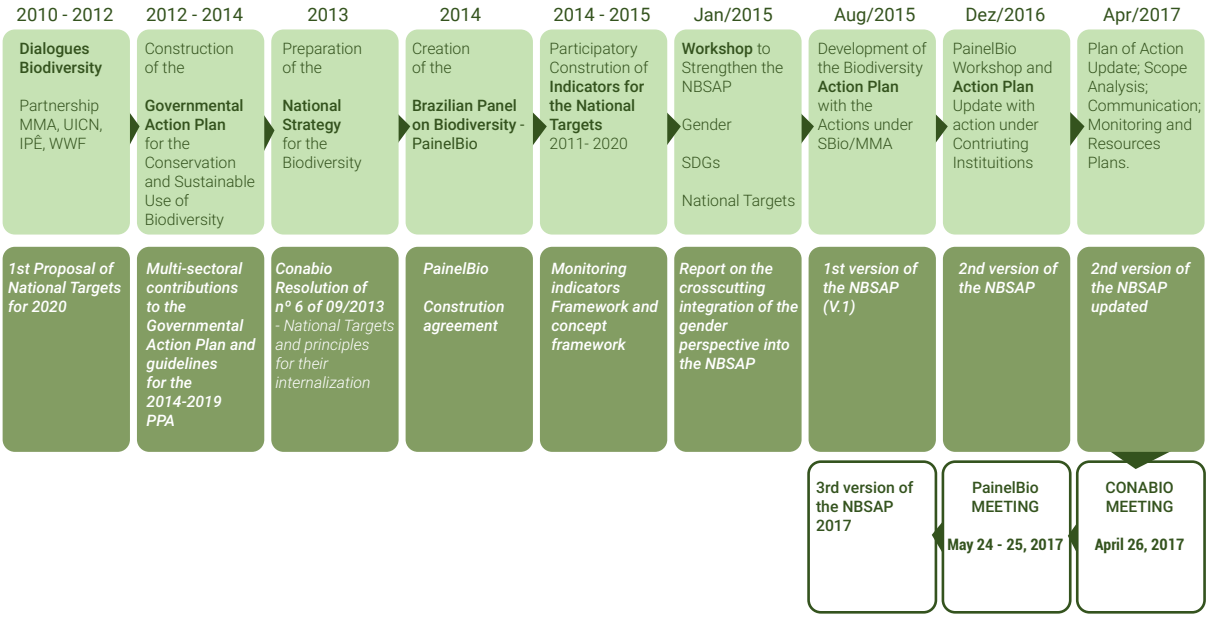


Figure 8: History of the NBSAP construction.

Among the steps of the process to construct the NBSAP, the initiative of the "**Dialogues on Biodiversity: Building the Brazilian Strategy for 2020**" (Box 15) is of particular notice. This initiative was carried out by MMA in partnership with the International Union for the Conservation of Nature – IUCN, the Ecological Research Institute – IPÊ, WWF-Brasil and the Brazilian Fund for Biodiversity – FUNBIO, and had the objective of achieving the participatory construction of national targets related to the Strategic Plan of the Convention on Biological Diversity for 2020.

Along 2011, face-to-face meetings were carried out with various sectors of society (government, academia, corporations, civil society, representatives of indigenous peoples and traditional communities) where proposals were developed for targets in line with the 20 Aichi Targets, considering the effectiveness of their achievement and monitoring. Results were consolidated into the "Base document for public consultation", and were later analyzed in specific meetings, presented at the Rio+20 conference and submitted to Conabio, which published its Conabio Resolution no 06/2013, ruling on the National Biodiversity Targets for 2020.

Palê Zuppani

Box 15: The Process of the Dialogues on Biodiversity.

After the definition of the Aichi Targets at COP-10 in 2010, in Nagoya, Brazil sought to improve the national results achieved in previous periods by initiating a broad consultation process for the collective construction of the revised National Strategy and the National Biodiversity Targets for 2020, an initiative known as "Dialogues on Biodiversity", which resulted in the definition of a concise set of 20 National Targets.

During that first cycle, a set of 51 National Targets was defined as the result of a workshop organized by Conabio. In addition to the 20 members of the Commission, the event – Workshop for the Definition of the National Biodiversity Targets for 2010 – counted with the participation of 30 speakers and other experts from academia and civil society, in addition to representatives of the various Secretariats of the MMA and connected agencies. The 51 targets were approved through Conabio Resolution no 3, of December 2006. Although important progress had been achieved until then, challenges remained to be overcome, such as: (a) the need to engage a larger number of stakeholders in the revision of the National Targets and in the process to update the NBSAP; (b) the definition of a binding legal instrument for the NBSAP; and (c) the definition of indicators and mechanisms for monitoring target achievement.

Responding to these challenges and in compliance with the new CBD strategic plan for 2011-2020, the MMA initiated in 2011, in partnership with IUCN, the IPÊ Institute and WWF-Brasil, the "Dialogues on Biodiversity" process. The Dialogues congregated the various sectors of Brazilian society to collectively build a set of National Targets based on the best means and practices in line with the CBD Vision for 2050 ("By 2050, biodiversity is valued, conserved, restored and wisely used, maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all people").

The summary of the Process of the Dialogues on Biodiversity is presented below:

Contextualization Document "Brazilian Biodiversity: Status and Opportunities Analysis" (IUCN *et al.*, 2011)	2011: Contextualization document: compiles the Set of Actions related to the conservation and use of Brazilian biodiversity and provides an outlook of the situation and opportunities by sector;
National Launching Whorkshop	National launching workshop: counted with the participation of authorities and funding institutions, promoted the approximation among sectors, and granted visibility to the process;
Pragmatic Document "Aichi Targets: current status in Brazil" (Weigand Jr. *et al.*, 2011)	Pragmatic Document: Analysis of the Brazilian status regarding the 20 Aichi Targets, including alternatives and directives for their achievement by 2020;
Preparatory Events	Four preparatory events with: indigenous peoples; raizeiros and raizeiras of the Cerrado; Amazonian communities and representatives of state agencies.
Sectoral Dialogues	Five sectoral dialogues were carried out: academia, private sector, civil society, government, traditional communities and indigenous peoples.
Systamatizacion of Documents	Systematization of documents produced in the process: each dialogue produced 5 documents containing the national targets and sub-targets for 2020, as well as sub-targets for 2013-2017.
Public Consultation 2011–2012	Public Consultation: "Base Document 2011-2012".
Final Events	Two final events for discussing the Results of the Public Consultation and Writing the Final Document with the proposal of the National Targets (20).
Presentation Rio+20	2012: Proposal for the Creation of the Brazilian Panel on Biodiversity – PainelBio with representatives from all sectors.
Submission to CONABIO	Adjustments and Publication of the National Biodiversity Targets 2011-2020 through Conabio Resolution no 06, of 03 September 2013.

1.3.2. PainelBio – Brazilian Panel on Biodiversity

A multi-sectoral collaborative platform that promotes the Convention on Biological Diversity (CBD) in Brazil.

The Aichi Targets for the 2011-2020 period were proposed during the 10th Conference of the Parties to the UN Convention on Biological Diversity. In response, Brazil initiated a broad participatory process under the leadership of civil society, known as the "Dialogues on Biodiversity: building the Brazilian strategy for 2020". Through this initiative, the National Biodiversity Commission (Conabio) established the National Biodiversity Targets for 2020, and debated that to achieve these targets a coordination among the various sectors of society would be necessary, in order to integrate and increase the impact of ongoing initiatives related to the conservation of biodiversity.

A proposal was then consolidated for the creation of a multi-sectoral collaborative platform to promote the achievement of the Aichi Targets and of the National Biodiversity Targets. Thus, the Brazilian Panel on Biodiversity – PainelBio came to be, resulting from a proposal matured through several meetings held during 2012 and 2013, including the Rio+20 conference, and formalized through its Constitutive Agreement.

With the mission to "*Contribute to the conservation and sustainable use of the Brazilian biodiversity by promoting synergy among institutions and fields of knowledge, making scientific information available to society, promoting capacity-building at various levels, and informing decision-making and public policies for the achievement of the Aichi Targets in Brazil*", the PainelBio represents an innovative initiative with the potential to catalyze significant progress in the conservation of biodiversity. This mission is implemented through a voluntary and collaborative network of institutions from the various sectors of society.

The IUCN operates as the Executive Secretariat of the PainelBio, facilitating the activities of its Board of Directors and Thematic Groups. The latter are groups of institutions organized according to the CBD Strategic Objectives, working through coordination, cooperation and communication actions (Figure 9).

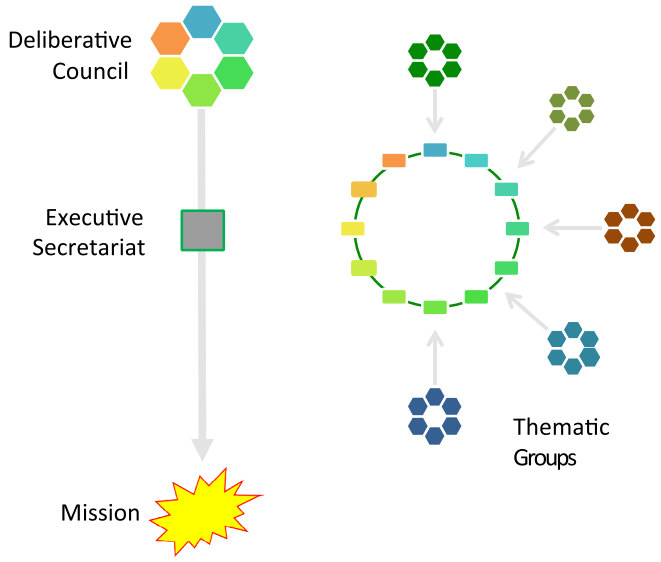


Figure 9: PainelBio governance.

PainelBio faced its first challenge – defining the set of indicators to monitor the achievement of national targets – by applying the methodology and counting with the support of the Biodiversity Indicators Partnership of the World Conservation Monitoring Center (BIP-WCMC), and promoting a series of workshops. Specific conceptual debates were held for each national biodiversity target under the thematic groups, resulting in a detailed Concept Framework for the operation and communication of the proposed indicators. All resulting materials were systematized and presented to the Secretariat of Biodiversity of the Ministry of the Environment (SBio/MMA), and now integrate the National Biodiversity Strategy and Action Plan (NBSAP).

The NBSAP is the main instrument for the implementation of the Convention on Biological Diversity (CDB), to which Brazil is Party. The NBSAP represents the Brazilian contribution to the achievement of Aichi Target 17, which committed each country to develop, adopt and implement an effective, participatory and updated

national biodiversity strategy and action plan.

The Ministry of the Environment (MMA), institution responsible for coordinating the process of developing, monitoring and implementing the NBSAP, developed a first version of the NBSAP, which was presented to PainelBio in 2016. PainelBio discussed the ways and means to strengthen the strategy so that it could represent the different initiatives that work for biodiversity in Brazil, promoting specific debates on the interface with the Sustainable Development Goals and the need to integrate gender issues in the NBSAP.

Over 200 institutions and programs were invited to engage in the process to develop the NBSAP, contributing their institutional actions. Each participant was requested to fill out a standard spreadsheet of the Action Plan, considering the 20 National Targets. Adherence was voluntary and the information collected for the Plan was systematized and organized by Target.

The current challenge is to ensure the participatory implementation of the NBSAP. And the opportunity to act through this community of interest can facilitate the collective construction of pragmatic solutions for the implementation of actions and, consequently, for the achievement of the Aichi Targets in Brazil. Any organization working for the conservation of biodiversity may become part of this initiative.

1.3.3. Governance for NBSAP implementation

The governance of the process to implement the NBSAP may strengthen the historical collaborative and participatory process that characterized the construction of the National Biodiversity Strategy and Action Plan, seeking to improve even further the engagement of civil society.

To face the challenge to implement the strategy and action plan, which involves multiple actors at the different governmental levels, academia, private sector and civil society organizations, among others, it is necessary to promote an environment that allows the collaborative and participatory debate, making the coordinated implementation of proposed actions possible.

Figure 10 below shows the governance structure for NBSAP implementation.

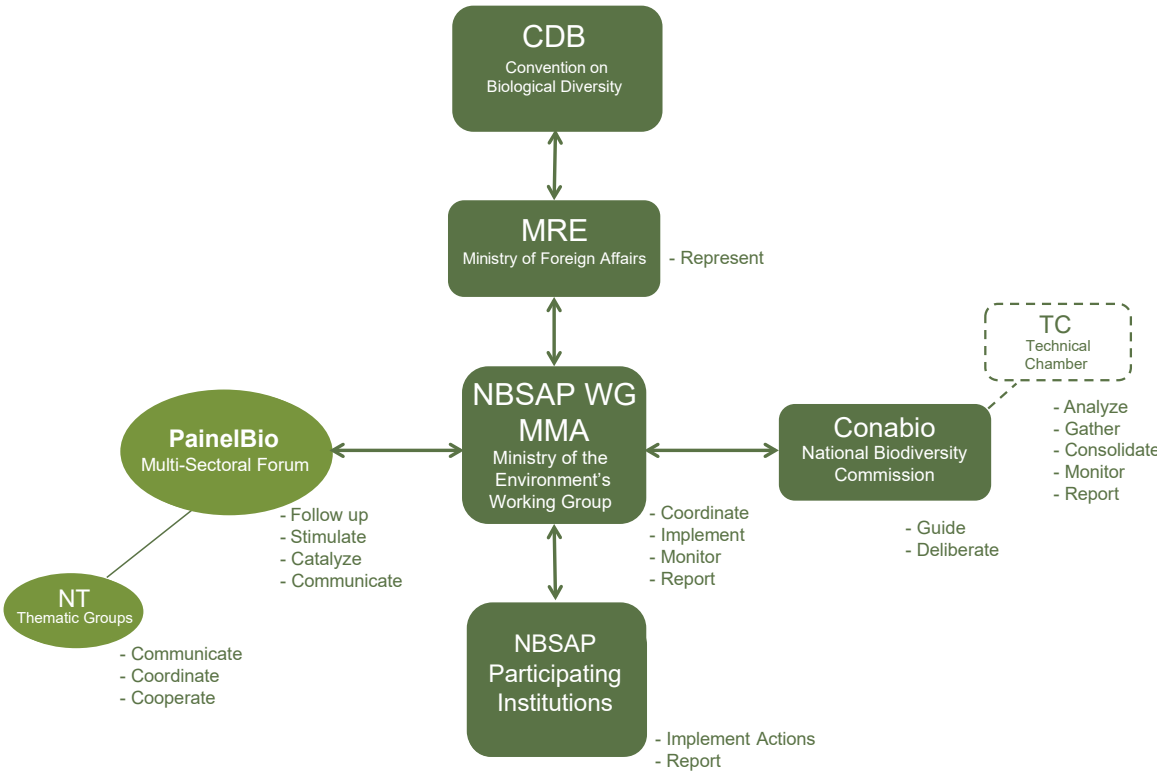


Figure 10: Diagram of the Governance Structure for NBSAP Implementation.

According to the diagram of the Governance Structure, the actors involved in the NBSAP implementation process will have the following responsibilities:

At the governmental coordination level:

- **Ministry of Foreign Affairs (MRE)**: Represents the Brazilian State before the Convention on Biological Diversity (CDB) and, together with MMA, presents to the Convention the results of the implementation of the National Biodiversity Strategy and Action Plan.

- **National Biodiversity Commission (Conabio)**: Created by Decree no 4.703/2003, the Commission defined the principles for the internalization and implementation of the National Biodiversity Targets 2011-2020. This representative advisory commission provides guidance, monitors and deliberates on the reports on the achievement of the National Biodiversity Targets 2011-2020.

- **NBSAP Working Group of the Ministry of the Environment**: Coordinates the implementation of the National Biodiversity Strategy and Action Plan, and monitors and reports to the Participating Institutions, to the Conabio and its Technical Chamber, to MRE and to society, on the progress of NBSAP implementation and the achievement of the National Biodiversity Targets 2011-2020.

- **NBSAP Participating Institutions**: This group is comprised by the 66 institutions that joined the NBSAP implementation, of which 52 directly contributed to the Action Plan. These institutions implement actions related to their field of activity, voluntarily proposed in the National Action Plan, and report on their progress to the NBSAP Working Group under MMA (GT EPANB MMA).

At the social participation level:

- **PainelBio**: This multi-sectoral forum monitors the implementation of the Action Plan, providing incentives and catalyzing efforts for its implementation while seeking to expand social participation, particularly of traditional communities and indigenous peoples, acting as catalyst and facilitator of communication with society on themes related to biodiversity.
- **PainelBio Thematic Groups**: The PainelBio Thematic Groups are divided according to the five strategic biodiversity objectives, in addition to a cross-cutting group on gender issues. The proposal is that the Thematic Groups shall gather the institutions participating in the Action Plan according to the affinity of their actions with the strategic objectives. The Thematic Groups may function as a collaborative forum and with the purpose of promoting cooperation among participating institutions, discussing solutions, coordinating joint actions, and facilitating communication for the implementation of the Action Plan, as well as informing society on the progress of actions.

1.3.4. The importance of the various sectors of society in the conservation and sustainable use of biodiversity

1.3.4.1. Federal, State and Municipal Governments

Federal Government

The involvement of actors such as the Ministry of Planning, Development and Management, the Ministry of Finance and the President's Office is of great relevance to achieve the actual mainstreaming of the theme throughout all governmental sectors. The main objective of the Brazilian government is to build an environment of trust and cooperation with the academia and business sectors and with civil society, particularly with those holding associated traditional knowledge, in order to promote the sustainable use of the genetic heritage and the valuation of knowledge held by indigenous peoples, traditional communities and traditional rural producers, and generate opportunities for Brazil to strengthen and develop economic sectors where the conservation of biodiversity is the key element.

The participatory process and efforts for engagement initiated at the governmental sector during the construction of the Contributions to a Governmental Action Plan for the Conservation and Sustainable Use of Biodiversity. Through this process, an inventory was carried out of the actions implemented by other ministries

and governmental institutions that are related to the protection of biodiversity and that contribute to the achievement of the National Targets. The NBSAP Action Plan requires the coordination and joint action with other governmental sectors which are fundamental for the achievement of the National Targets.

State and Municipal Governments

Strengthening coordination with all parts of the federation must be one of the priorities under the NBSAP, and should allow the agreement of subnational and local targets. Particularly regarding Targets 1, 2, 3, 4, 5, 7, 11, 14, 15 and 17, coordination should be strengthened with states, so that they can also mobilize and promote the implementation of municipal actions in line with the National Targets. Examples of the importance of this coordination are the processes to expand and create protected areas at the state and municipal levels, and the identification of partnership opportunities between MMA and the states, which will support municipalities in the expansion and consolidation of SNUC, in addition to the processes to implement the Rural Environmental Cadaster – CAR regarding the Permanent Preservation Areas – APP and Legal Reserves – RL.

1.3.4.2. Civil Society

The participation of civil society in the development and implementation of Brazilian governmental actions is important for the actual achievement of the National Biodiversity Targets and the Aichi Targets, and contributes to the long-term persistence of the social and environmental transformations provoked in the process.

The very conception of the National Biodiversity Strategy in Brazil initiated with the process of the Dialogues on Biodiversity and continues with collaborative processes supported by PainelBio. The civil society also plays a fundamental role in the support to monitoring the targets, as in the case of the Atlantic Forest Yearbook Program, carried out by the Friends of the Atlantic Forest Biosphere Reserve Institute, which prepares a periodic balance on the achievement of targets specifically for the biome, analyzing the main successes and challenges for their fulfillment.

One of the examples of the importance of civil society engagement was the sanction of Law nº 13.123, of 20 May 2015, which increased the demand and favorable environment for the ratification of the Nagoya Protocol (Target 16). Seeking the adequate involvement of those holding traditional knowledge, regional workshops and a national workshop were held under the new law on access and benefit sharing and its regulation process. These workshops included family rural producers through the National Council on Sustainable Rural Development – Condraf, indigenous peoples through the Technical Chamber on Genetic Heritage and Intellectual Property of the National Policy of Territorial and Environmental Management of Indigenous Lands – PNGATI and APIB, and the traditional communities and peoples through the National Council of Traditional Peoples and Communities – CNPCT.

1.3.4.3. Traditional Communities and Indigenous Peoples

The peoples living off the land, forests and waters, the indigenous peoples and the rural and urban traditional communities have played a leading role along history on the conservation of biodiversity and promotion of food sovereignty and safety through the sustainable use and management of natural resources, based on their specific knowledge and ways of life. For this reason, the CBD highlights in its foreword that the conservation and sustainable use of biological diversity is of absolute importance to supply the needs for nutrition and health of the growing world population, and that for this, the access to and sharing of genetic resources and technology are essential.

The dependence of indigenous peoples and traditional communities on biological resources is highlighted by the CBD, as well as the importance of the equitable sharing of benefits arising from the use of traditional knowledge, innovation and practices relevant to the conservation of biological diversity and the sustainable use of its components.

A notable characteristic of Brazil is the diversity of its population and cultures, both directly associated to territory, ways of life, and the relation these populations maintain with nature.

On numerous occasions, traditional knowledge is the result of co-evolution between society and its natural environments, which allowed the conservation of balance between them. A relevant aspect of the definition of these traditional cultures is the existence of a natural resource management system characterized by the respect to natural cycles, and for the use within the recovery capacity of the used plant and animal species. These traditional management systems are not only forms of economic exploitation

of natural resources, but also reveal the existence of complex knowledge acquired through tradition inherited from the elders, through myths and symbols that lead to the maintenance and sustainable use of natural ecosystems (Diegues, 2000)[56].

Within the Brazilian Legal Framework, Decree nº 6.040/2007[57], which established the National Policy on the Sustainable Development of Traditional Peoples and Communities (PNPCT), defines traditional peoples and communities as *"grupos culturalmente diferenciados e que se reconhecem como tais, que possuem formas próprias de organização social, que ocupam e usam territórios e recursos naturais como condição para sua reprodução cultural, social, religiosa, ancestral e econômica, utilizando conhecimentos, inovações e práticas gerados e transmitidos pela tradição"*.

The traditional territories are defined under the same decree as *"culturally differentiated groups who recognize themselves as such, who possess their own forms of social organization, who occupy and use territories and natural resources as a condition for their cultural, social, religious, ancestral and economic reproduction, applying knowledge, innovation and practices generated and transmitted through tradition"*.

The traditional peoples and communities mentioned in the composition of the National Council of Traditional Peoples and Communities (CNPCT), established by Decree no 8.750/2016[58], are:

- Indigenous Peoples
- Quilombola communities
- Terreiro peoples and communities/peoples and communities of African origin
- Gypsy peoples
- Artisanal fishermen
- Extractive workers
- Coastal and marine extractive workers
- Caiçaras
- Faxinalenses
- Benzedeiros
- Ilhéus
- Raizeiros
- Geraizeiros
- Caatingueiros
- Vazanteiros
- Veredeiros
- Collectors of herbaceous ornamental flowers
- Pantaneiros
- Morroquianos
- Pomerano people
- Mangaba collectors
- Babassu nut crackers
- Araguaia Migrants
- Back-pasture communities
- Riverside communities
- Cipozeiros
- Andirobeiros
- Caboclos, and
- Youth of traditional peoples and communities

Traditional communities in protected areas

Of the 324 federal Protected Areas (PA), 178 are of sustainable use, covering a total estimated area of over 40 million hectares. These are divided into five categories: Environmental Protection Area (APA – Área de Proteção Ambiental), Area of Relevant Ecological Interest (ARIE - Área de Relevante Interesse Ecológico), National Forest (Flona – Floresta Nacional), Extractive Reserve (Resex – Reserva Extrativista), and Sustainable Development Reserve (RDS - Reserva de Desenvolvimento Sustentável).

Among the sustainable use PAs, 62 are extractive reserves, comprising over 12 million hectares protected under this category. The RDS, which also house traditional peoples, are only two, located in Pará and Minas Gerais. The Flonas are also designated for the maintenance of traditional peoples and, in total, Brazil holds 67 protected areas under this category, distributed in four biomes – Amazon, Cerrado, Caatinga and Atlantic Forest.

According to the Dynamic Information Panel[59] of the Chico Mendes Institute for Biodiversity Conservation (ICMBio), 52,104 families are beneficiaries of sustainable use protected areas.

Created between 1990 and 2014, the extractive reserves are areas used and co-managed by the local traditional populations that reside in them. The Resex reflect the fight of the forest peoples for the recognition

56 DIEGUES, A.C. (Org.) Biodiversidade e Comunidades Tradicionais no Brasil [Biodiversity and Traditional Communities in Brazil], MMA-USP, 2000, 211 p. Avaliable at < http://www.terrabrasilis.org.br/ecotecadigital/images/abook/pdf/Srie%20Biodiversidade%20%2004%20-%20%20Saberes%20tradicionais%20e%20biodiversidade%20no%20Brasil.pdf >

57 http://www.planalto.gov.br/ccivil_03/_ato2007-2010/2007/decreto/d6040.htm

58 https://www.planalto.gov.br/ccivil_03/_Ato2015-2018/2016/Decreto/D8750.htm#art20

59 http://qv.icmbio.gov.br/QvAJAXZfc/opendoc2.htm?document=painel_corporativo_6476.qvw&host=Local&anonymous=true

of their role in the protection and sustainable use of nature. The first four Resex created in the country, in 1990, are the Chico Mendes Resex and the Upper Juruá Resex, both in Acre, the Cajari River Resex in Amapá, and the Ouro Preto River Resex in Rondônia.

This Brazilian category of sustainable use protected areas was granted recognition as international category of protected area (category VI) in 1992, during the 3rd World Congress of National Parks and Other Protected Areas and, in 1994, at the General Assembly of the International Union for the Conservation of Nature (IUCN).

Indigenous Peoples

In 2010, 817,963 people have self-declared as indigenous, according to the IBGE Demographic Census . Most of the self-declared indigenous population was concentrated in municipalities located in the Amazon biome, followed by the Cerrado[61].

An inventory of the Socioenvironmental Institute (ISA) indicates that 252 indigenous peoples live in Brazil, 48 of them also inhabiting neighboring countries. The total number of indigenous lands (TIs) in the country is 704, featuring different legal-administrative status. The inventory also shows that from 2011 to 2016, 21 indigenous lands had their demarcation processes concluded. Of these, 20 are located in the Legal Amazon and only one outside of this region. The extension of indigenous lands in Brazil holding some degree of official recognition represents 13.77% of the national territory. There is, however, a large volume of indigenous lands pending recognition. According to the Socioenvironmental Institute, 107 TIs have not yet had their identification and delimitation studies published by Funai. The ISA publication also includes the list of 245 indigenous organizations among the most active and expressive in terms of political mobilization and defense of rights (Instituto Socioambiental, 2017)[62].

1.3.4.4. Private Corporate Sector

MMA activities to engage the corporate sector to promote and motivate practices that promote the conservation of biodiversity are occurring through the publication of directives[63], projects and through the coordination of cooperation agendas with organizations of this sector.

Among the initiatives that include actions by the Brazilian corporate sector in favor of the environment, organizations of particular notice are the Brazilian Corporate Council for Sustainable Development – CEBDS, and the Brazil, Climate, Forests and Agriculture Coalition, which took on the commitment of restoring 12 million hectares of forest as determined by the Law on the Protection of Native Vegetation. Inspired by this Coalition partnership with international scale effects for the climate agenda, the SBio/MMA intends to motivate the incorporation of biodiversity-related themes into such initiatives.

Among the projects under implementation by SBio/MMA, of particular notice is the Regional-Local TEEB Project: biodiversity conservation through the integration of ecosystem services in public policies and in corporate actions. This project is coordinated by MMA in collaboration with the National Confederation of Industries – CNI, under the Brazil-Germany Cooperation for Sustainable Development. The TEEB Project promotes concrete examples of the actual integration of biodiversity and ecosystem services into decision making processes at the public and corporate spheres.

At the end of 2015, MMA initiated its participation in another project with the corporate sector, involving the agriculture sector of the states of Maranhão, Tocantins, Piauí and Bahia, in the region known as MATOPIBA. The project "MATOPIBA 2020 – Frontline for a productive and sustainable future", proposed by the Brazilian Rural Society, Conservation International Brazil and Brazilian Foundation for Sustainable Development – FBDS, has the objective of building in the region a model of sustainable agriculture landscape, through actions related to the transformation of the forms of production and consumption; incentives to the compliance with environmental legislation (adherence to CAR, development and implementation of the Environmental Recuperation Program – PRA), and support to the creation, implementation and management of protected areas, with the target of conserving 40% of this territory in areas under different protection regimes, such as PA, indigenous lands, RLs and APPs.

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61 Brasil: uma visão geográfica e ambiental no início do século XXI, capítulo Diversidade e Patrimônio Cultural [Brazil: a geographical and environmental outlook at the beginning of the 21st century, chapter on Diversity and Cultural Heritage], IBGE, 2016, pg 404 <http://biblioteca.ibge.gov.br/visualizacao/livros/liv97884.pdf>

62 Povos Indígenas no Brasil [Indigenous Peoples in Brazil]: 2011-2016 [Eds. Beto Ricardo and Fany Ricardo]. São Paulo: Instituto Socioambiental, 2017.

63 Schaltegger & Bestandig (2011); MMA(2012).

MMA also works in partnership with the Brazilian Foundation for Sustainable Development – FBDS on the diagnosis of the situation of APPs in Brazil. With this diagnosis it will be possible to assess the size of the area actually protected by APPs with vegetation cover, and the APP areas where recuperation is necessary. This diagnosis is essential for the efficient planning and implementation of the recuperation actions for degraded APPs.

MMA intends to strengthen and expand the partnerships that include the corporate sector as another ally collaborating to the achievement of the conservation and protection targets for Brazilian ecosystems and species, together with actions for strengthening production chains of phytotherapics with access to genetic heritage and associated traditional knowledge, capacity building on Access and Benefit Sharing, and a structuring project for Amazon Forest-Based Cosmetics. The actions to be developed should include the ventures of women, indigenous peoples and traditional communities.

1.3.4.5. Academia

The dialogue between science and politics is translated into the improvement of information quality for decision making. The Brazilian academia has much to offer to the process of public policies development and implementation, including: specialized technical knowledge, data and information generation and interpretation, international credibility, independence and circumspection. Historically, however, it is still necessary to make progress in the clear definition of the role of academia in the discussion of public policies. On the government side, it is necessary to provide guidance to academia on the most useful format and availability of scientific information to answer questions on the implementation of public policies. On the side of scientist, it is necessary to expand the engagement in the process of developing and implementing public policies, and in the improvement of decisions that affect the entire society.

MMA has delineated an approach to strengthening the use of the scientific basis in the decision-making processes of public policies on the conservation of biodiversity in Brazil, based on three pillars: (1) systematization, qualification and dissemination of databases; filling scientific gaps on biodiversity, ecosystem services and human well-being; and (3) strategic analyses and contributions to decision making on public policies. This approach will also contribute to the achievement of the National Biodiversity targets, in particular Target 19, in addition to promoting the integration of the academic sector in the contributions of the Action Plan.

Systematization, qualification and dissemination of scientific databases

Two fundamental points for structuring scientific knowledge on the Brazilian biodiversity are the integration and the systematization of scientific databases on biodiversity available in the country, considering their heterogeneity. This characteristic refers to the format of data and information on biodiversity originating from different research groups, that present different objectives, methodologies and vocabulary. Considering these aspects and starting from the available data under federal environmental institutions, the Biodiversity Portal[64] was launched at the end of 2015, with the objective of making data and information on Brazilian biodiversity available to society, as generated or received by MMA and its agencies.

Filling the scientific gaps on biodiversity, ecosystem services and human well-being

With a well-structured and operational database holding quantitative and qualitative data it is possible to identify the scientific gaps that still exist on biodiversity, ecosystem/environmental services and human well-being, traditional knowledge, and the gender relations and their interactions with biodiversity. For that, the concept framework of the Intergovernmental Platform on Biodiversity and Ecosystem Services – IPBES will be used as reference for the regional diagnoses on the current state of biodiversity and ecosystem services.

The IPBES is carrying out global and regional assessments on the state and trends of biodiversity and ecosystem services, the impact of biodiversity and ecosystem services on human well-being, and the effectiveness of responses, including the Biodiversity Strategic Plan and its Aichi Targets, and the national NBSAPs. These assessments also intend to identify the needs for capacity building, knowledge and tools for political support.

At the national level, the Brazilian Platform on Biodiversity and Ecosystem Services – BPBES was created, framed as a Working Group of the Brazilian Society for the Progress of Science – SBPC, and counting with support from MCTI/CNPq, the Biota/Fapesp Program, and the Brazilian Foundation for Sustainable Development

64 https://portaldabiodiversidade.icmbio.gov.br/portal/

– FBDS. The BPBES national report will identify relevant gaps in scientific knowledge in its executive summary. These gaps may be filled by targeted research developed by a research network and by a research group.

Another instrument for the interaction between academia and decision makers for filling the scientific gaps on biodiversity is the National System of Biodiversity Research[65] – Sisbiota. This system has the following objectives: promote and expand knowledge on Brazilian biodiversity; improve the capacity to predict responses to global change, particularly land use change and climate change; and create linkages among research and capacity building of human resources, environmental education and dissemination of scientific knowledge. This system operates with four main themes: (1) Expansion of knowledge on biodiversity; (2) Patterns and processes related to biodiversity; (3) Biodiversity monitoring; and (4) Development of bioproducts and uses of biodiversity. This multilateral initiative is coordinated by MCTIC through its subordinate agencies, and involves: the MMA, the National Fund for Scientific and Technological Development – FNDCT, the Coordination for Professional Improvement of Higher Education Graduates – CAPES, the National Council of Scientific and Technological Development – CNPq, and 18 state foundations for research support.

Strategic Analyses and Contributions to decision making on Public Policies

To complement basic scientific research, it is considered necessary to work on the development of strategic analyses and contributions to decision making on public policies through research projects directly applicable to public policies that are strategic for MMA and for Brazil's position in international processes. Some research institutions are already developing important work in this area, and the use of existing structure in research centers has the potential to provide the governmental sector with a broader vision on priorities for monitoring, with greater insertion of scientific data in the development of public policies.

The development of comparative studies on the conservation efforts implemented by different countries on specific themes also translates into an objective to be sought. It is necessary to advance in the definition of means, processes and tools so that science can, in fact, participate in the political decision making process, also considering social and gender aspects connected to biodiversity. MMA actions in this direction are guided by the search for connection among technical and expert teams, as it was done in the development of the National Plan for the Recuperation of Native Vegetation – Planaveg, where joint work was carried out with the third sector, academia and governmental agencies[66].

National Program of Biodiversity and Ecosystem Research

The National Program of Biodiversity and Ecosystem Research was built under MCTIC coordination, with the mission to "propose actions and solutions based on scientific knowledge that improve national, regional and local strategies for planning and development, so as to inform, adjust and assess public policies and promote the conservation and sustainable use of biodiversity and ecosystem services".

The Program is directly related to the CBD Biodiversity Strategic Plan 2011-2020 and is structured around three pillars, based on the strategic objectives that guide the Aichi Targets and the National Biodiversity Targets 2011-2020: (1) Propose measures for reducing direct pressure associated to biodiversity loss and ecosystem degradation; (2) Planning the conservation and recuperation of ecosystems and their essential services; (3) Use of biodiversity and provision of ecosystem services. Each pillar is subdivided into lines of action, which will serve as the basis for constructing the two-year plans that will be developed under the Program.

The Program seeks to obtain qualified information for the implementation of public policies targeting the conservation of species and ecosystems, and intends, through coordination and partnerships, to promote joint actions for expanding and applying scientific knowledge.

65 Available at: http://cnpq.br/apresentacao-sisbiota#void

66 To prepare the proposal of the National Policy and National Plan for the Recuperation of Native Vegetation (PLANAVEG) a Memorandum of Understanding was signed in 2013 between MMA and the World Resources Institute (WRI), a member institution of the Global Partnership on Forest and Landscape Restoration (GPFLR) – for the development of strategic analyses and contributions to decision making on public policies, through research projects directly applicable to public policies that are strategic for SBio and for Brazil's stand in international processes.

1.3.4.6. Promotion of Scientific Research and the Capacity Building of Human Resources on Biodiversity

Important actions to promote scientific research and to build capacity of human resources on biodiversity have been implemented under the responsibility of the National Council on Scientific and Technological Council – CNPq, such as the SISBIOTA BRASIL, PELD, REFLORA, PROTAX, and PRÓARQUIPÉLAGO programs, in addition to some Basic Programs presented below.

SISBIOTA BRASIL Program[67]

The Program of the National System of Biological Research – SISBIOTA BRASIL has the objective of promoting and expanding knowledge on Brazilian biodiversity in an integrated and convergent manner; improve capacity for predicting response to global changes, particularly land use change and climate change, and create linkages among research and capacity building of human resources, environmental education and dissemination of scientific research. This system has four thematic pillars: (1) Expansion of knowledge on biodiversity; (2) Patterns and processes related to biodiversity; (3) Biodiversity monitoring; and (4) Development of bioproducts and uses of biodiversity.

Created by CNPq in 2009, the SISBIOTA BRASIL Program's first motivation to conduct research was the publication of Public Bid MCT/CNPq/MMA/MEC/CAPES/FNDCT – Ação Transversal/FAPs Nº 47/2010 – SISBIOTA BRASIL, which approved 39 research networks, with co-financing from MMA, CAPES/MEC, MCT/ National Fund for Scientific and Technological Development – FNDCT, and 13 state foundations for research support.

PELD Program[68]

The Long Term Ecological Research Program – PELD represents a pioneering initiative and a strategic vision of the Federal Government by coordinating, since 1999, a network of reference sites for scientific research on the Ecosystem Ecology theme. Through PELD, CNPq promotes the generation of qualified scientific knowledge on our ecosystems and the biodiversity they house. PELD also motivates the transfer of the generated knowledge to civil society, seeking to contribute to the environmentally sustainable development of our country.

Information collected under PELD, which include long time-series of data on ecosystems and their associated biota, is of extreme relevance for Brazil, a country housing the largest biodiversity in the world, which also faces great challenges regarding socio-economic development. In this context, we have strong responsibility in the generation and dissemination of knowledge that can be used for constructing development models that are more sustainable from the socio-environmental perspective.

Counting with a specific budget line in the Federal Government Multi-Year Plan (PPA) since 2000, PELD is carried out by CNPq. Its governance structure is established by Normative Resolution nº 23/2011, which defines the Management and Scientific Committees of the Program and their responsibilities. Monitoring and Evaluation activities of research projects and of the Program are periodically carried out, seeking the efficient management of generated knowledge, as well as the constant improvement of this important initiative. It counts with financial support from CAPES and eleven State Foundations for Research Support.

In 2016, the Public Bid CNPq/CAPES/FAPs/BC-Fundo Newton/PELD no 15/2016 - Pesquisa Ecológica de Longa Duração was published to ensure continuity of the Program. The PELD network currently counts with 30 research sites distributed among various ecosystems.

"REFLORA" Program[69]

The Program "Plants of Brazil: Historical Recovery and Virtual Herbarium for Knowledge and Conservation of the Brazilian Flora – REFLORA" has the objective of recovering and making available to Brazil and to the world the images and information on samples of the Brazilian flora collected until the 20th century by foreign missions, deposited at the Royal Botanic Gardens of Kew (RBGK) – England, and Muséum National d'Histoire Naturelle de Paris (MNHN) – France.

The REFLORA Program is structured around two lines of action that encompass the Reflora Virtual Herbarium installed at the Rio de Janeiro Botanical Garden (JBRJ) and the promotion of 24 individual or network research projects through Public Bid MCT/CNPq/FNDCT/MEC/CAPES/FAP´s Nº 56/2010 –Reflora. It involves different

67 http://cnpq.br/apresentacao-sisbiota
68 http://www.cnpq.br/web/guest/apresentacao-peld/
69 http://www.cnpq.br/web/guest/apresentacao-reflora/

funding agencies, both at the federal level (CNPq, MCT/FNDCT and MEC/CAPES), and at the state level (FAPEAM, FAPESB, FAPEMIG, FAPESC, FAPESP, FAPERJ, Araucária Foundation and FAP-DF), in addition to national (Natura S.A. and Vale S.A.) and international corporations (Newton Fund/British Council). The institutional partnerships are represented by: RBGK – Kew, MNHN – Paris, JBRJ and HVFF – INCT/UFPE, and by the institutions housing the research projects: UFMG, UNICAMP, UFV, UFSC, FIOCRUZ/RJ, IBT, INPA, MHNJB, UEFS, UESC, UFC, UFJF, UFPR, UFRJ, UFRPE, UFU, UnB.

The historical recovery, the production and dissemination of data on native plants function as the foundation for obtaining knowledge, conservation and sustainable use of the Brazilian flora. These also contribute to the validation of the taxonomic identity of the analyzed specimens, the discovery and designation of type-materials, in addition to the capacity building and training of human resources on Taxonomy. The repatriation of these data in electronic format is allowing their online inclusion in the Reflora Virtual Herbarium, thus contributing to the knowledge and conservation of the Brazilian flora.

The Reflora Virtual Herbarium also directly contributes to other great projects such as the online List of Brazilian Flora Species, and contributes to the integration of the Brazilian collections into the Global Strategy for Plant Conservation: World Flora Online by 2020, which is part of the Convention on Biological Diversity, to which Brazil is Party. The working platforms of the REFLORA Virtual Herbarium and the List of Brazilian Flora Species are indispensable for Brazil to fulfill the first target of the Global Strategy for Plant Conservation (GSPC-CDB) for 2020, which is the preparation of the Monographed Flora of Brazil, with online access.

PROTAX Program[70]

The Capacity Building Program on Taxonomy – PROTAX was implemented as a result of discussions carried out among scientific societies, which have been signaling for the last several years the insufficient number of taxonomists and their importance to allow the country to manage and generate knowledge on Brazilian biodiversity. Despite the increase in the number of taxonomists observed in the last few years, particularly as a result of initiatives by CNPq and CAPES, there is still great demand for these experts. The greatest challenge regarding the number of taxonomists is to cover the large territorial area and mega-biodiversity in Brazil.

The first tranche of this program comprised a 5-year partnership among CNPq, CAPES and MCTIC, concluded on the 30th of October 2010. The selected projects were supported through MSc, PhD and special post-doc scholarships on taxonomy, in addition to allowances for basic expenses and capital needs and a notebook for students under selected post-graduation courses.

The second tranche was implemented under a partnership with CAPES and through the Public Bid MCT/CNPq/MEC/CAPES Nº 52/2010 - PROTAX – Capacity Building Program on Taxonomy, seeking the continuity and expansion of the program initiated in 2005. In total, 103 projects were selected and were granted scholarships for Scientific Initiation, Technical Support, MSc, PhD and Junior Post-doc, as well as allowances for basic expenses.

The program is currently implementing its third tranche (Call for Proposals 001/2015 - PROTAX), counting with the important partnership with CAPES. Scholarships were provided for Technical Support, Scientific Initiation, MSc, PhD and Post-doc. This Call for Proposals also counts with the support of several State Research Support Foundations (FAPs), which provide grants for the development of research projects.

PROTAX is regulated by Normative Resolution RN 006/2007 under CNPq and has the objective of supporting and providing inputs to the various governmental actions related to the knowledge and preservation of biodiversity. Among these, notably the PPBio, REFLORA, SISBIOTA, the List of Brazilian Flora, the List of Brazilian Fauna, the Directives of the National Biodiversity Policy and of the Convention on Biological Diversity, the state-level biodiversity projects, among others. It should be noted that the training of human resources on taxonomy and curatorship of collections will directly contribute to the development of the online List of the Brazilian Flora, which is a target under the Global Strategy for Plant Conservation of the Convention on Biological Diversity (GSPC-CBD), to be achieved by 2020.

70 http://www.cnpq.br/web/guest/apresentacao-proatax/

Archipelago and Oceanic Islands Program[71]

The United Nations Convention on the Law of the Sea – UNCLOS and the ratification of this international treaty by Brazil at the end of the 1980´s generated the need to occupy the Brazilian oceanic islands and increase the technical-scientific knowledge on these ecosystems, as that instrument ensured the rights of the Parties to explore and use the natural resources present in the waters, ocean bed and sub-soil areas surrounding the above-water land bodies within a 200 nautical miles radius, inside the Exclusive Economic Zone – EEZ.

Although the geographical occupancy (in part by civil society, in part by military personnel) of the Brazilian oceanic islands (Atol das Rocas, São Pedro and São Paulo Archipelago, Fernando de Noronha Archipelago, Trindade and Martim Vaz Islands, and Abrolhos Archipelago) dates back to World War II, the successive Brazilian governments considered necessary to take actual possession of these territories, in addition to possession by rights, seeking to exercise the use of the multiple natural potential offered by these territories within their EEZs.

Under this scenario, as the treaty requires the permanent presence of civil society on the islands with the purpose of peacefully exploring the biotic and abiotic potential, since 1996 the Brazilian government, through the Secretariat of the Inter-ministerial Commission on Sea Resources (SeCIRM), connected to the Navy high leadership (Ministry of Defense – MD), sends researchers to the São Pedro and São Paulo Archipelago – ASPSP with the objective of studying their complex ecosystem.

Since 2004, by request of the SeCIRM, CNPq has integrated the Archipelago and Oceanic Islands Program into its research support structure, which represented an important step in the support to research on various areas of knowledge in that region. In 2009, CNPq began to support scientific initiatives developed on and around the Trindade and Martim Vaz Islands, allowing the expansion and consolidation of the study of Brazilian oceanic islands, which is the original and foremost objective of the Program, created in 2004.

Thus, CNPq, together with its partners in the implementation of this Program (MCTC, SeCIRM and others), intends to support research, development and innovation projects that seek the understanding of the dynamics of the various island ecosystems in the South Atlantic (Atol das Rocas, Fernando de Noronha Archipelago, Trindade and Martim Vaz Islands, and Abrolhos Archipelago), as well as in the Equatorial Atlantic, where the São Pedro and São Paulo Archipelago is located.

In 2015, CNPq launched the Call for Implementation of the call for proposals CNPq nº 15/2015 – Archipelago and Oceanic Islands Program, with the objective of allowing continuity and increasing support to research projects under the Archipelago and Oceanic Islands Program, to be implemented in the region of the São Pedro and São Paulo Archipelago (PROARQUIPÉLAGO) and Trindade Island and Martim Vaz Archipelago (PROTRINDADE).

Basic Programs under CNPq

In addition to the thematic programs mentioned above, CNPq provides continuous support to research and training of human resources through important Basic Programs encompassing various areas of knowledge, biodiversity among them. On this latter theme, of particular notice are the Basic Programs on Ecology and Limnology, Zoology, Botany, Oceanography, and Environmental Sciences, which support mainly research projects, training of human resources in the country and abroad, participation in and organization of scientific events, and support to visiting researchers. Additionally, CNPq implements some actions of programs under MCTIC, particularly through public calls for proposals, as described below.

Biodiversity Research Program - PPBio[72]

The Biodiversity Research Program – PPBio was created by the then the Ministry of Science and Technology – MCT in 2004 with national scope, and the objective of promoting the development of research, training and capacity building of human resources, and institutional strengthening in the biological diversity research and development theme, in compliance with the Directives of the National Biodiversity Policy.

CNPq is responsible for providing grants and scholarships to proposals selected through public bids and supporting MCTIC in the monitoring and evaluation of the performance of research projects organized in networks.

71 http://www.cnpq.br/web/guest/apresentacao-ppbio/

72 The PPBio book is available at: http://www.sibbr.gov.br/internal/?area=comunicacao&subarea=noticias&subarea=noticia_105

The Program includes four actions as follows:

- Support to the implementation and maintenance of biota inventory networks – establish regional inventory networks that use standardized methodologies, allowing to streamline and organize the generation of knowledge on Brazilian biodiversity. The networks should adopt the standardized PPBio protocols for sample collection, inventory and monitoring;
- Support to the modernization of biological collections (ex-situ collections) – create the means to establish a national-level policy for the management of biological collections, while promoting the maintenance, expansion and establishment of a connection among these collections;
- Support to research and development on Biodiversity thematic areas – develop research and generate knowledge on bio-prospection, environmental services, and other themes;
- Develop strategic actions for policies on biodiversity research.

The program initiated its activities in the Amazon Region in 2004, strengthening the activities of MCTIC institutes in the region with the creation of the Implementing Centers of the Western Amazon (National Amazon Research Institute – INPA) and Eastern Amazon (Emílio Goeldi Museum – MPEG). Later, this action was expanded to the semi-arid region, through a collaboration with the State University of Feira de Santana.

In 2012, through the Call for Proposals MCT/CNPq nº 35/2012 – PPBio/Geoma, which combined research activities under two programs related to biodiversity conservation (PPBio and Geoma), the program was expanded with the approval of PPBio networks in five phytogeographical regions: Western Amazon, Semi-arid, Cerrado, Atlantic Forest, and Southern Grasslands, totaling seven networks and a project of the Geoma Network. This action is expected to conclude in 2017.

Since its creation, the Program is being monitored and evaluated through periodic meetings of an Evaluation Committee comprised by prominent researchers on the theme and representatives of MCTIC and CNPq, with the participation of the coordinators of networks and coordinators of the associated research projects.

In 2016, MCTIC and CNPq published the book "Meeting Biodiversity[73]", produced under the PPBio and Geoma Programs, with the objective of expanding the dissemination of knowledge on Brazilian biodiversity.

Regional Networks of Research on Biodiversity and Biotechnology – BIONORTE[74], PRÓ-CENTRO-OESTE[75] and RENORBIO[76]

BIONORTE Network[77]

The BIONORTE Network, created by MCT Administrative Ruling nº 901, of 04 December 2008, has the objective of integrating expertise for the development of research, development and innovation projects and training of PhD scientists focusing on biodiversity and biotechnology, aiming at the generation of knowledge, processes and products that may contribute to the sustainable development of the Legal Amazon region. It is comprised of teaching and research institutions in the Legal Amazon with research projects that intend to generate socio-economic impacts and improve the life quality of the population inhabiting the Brazilian Amazon. The network is led by a Managing Council, headed by an Executive Coordinator and assisted by a Scientific Committee.

73 The PPBio book is available at: http://www.sibbr.gov.br/internal/?area=comunicacao&subarea=noticias&subarea=noticia_105
74 http://www.bionorte.org.br/
75 http://redeprocentrooeste.org.br/
76 www.renorbio.org.br/
77 http://www.cnpq.br/web/guest/apresentacao-bionorte/

***PRÓ-CENTRO-OESTE Network*[78]**

The Center-West Network of Post-Graduation, Research and Innovation – PRO-CENTRO-OESTE Network was created by Inter-ministerial Administrative Ruling nº 1.038, of 10 December 2009. This network has the objective of training human resources and producing scientific, technological and innovation knowledge that can contribute to the sustainable development of the Center-West Region. The PRO-CENTRO-OESTE Network is comprised by the teaching and research institutions of the states of Goiás, Mato Grosso, Mato Grosso do Sul, and Federal District, and their respective State Secretariats of Science and Technology and Research Support Foundations. It is led by a Managing Council, managed by an Executive Secretariat and assisted by a Scientific Committee and Local Committees.

RENORBIO Network

The RENORBIO was created and established by Administrative Rulings MCT nº 598, of 26 November 2004, and MCT nº 969, of 11 December 2011. These Administrative Rulings also defined its structure and operating mechanism under MCTIC. Focusing on the states of the Northeast Region (Alagoas, Bahia, Ceará, Maranhão, Paraíba, Piauí, Pernambuco, Rio Grande do Norte and Sergipe) and the state of Espírito Santo, the objective of this network is to establish and promote the regional experts on Biotechnology and connected themes to implement research, development and innovation projects that are important for the development of the region, applying state-of-the-art tools and scientific expertise for the development of these actions.

In 2013, the Call for Proposals Nº 79/2013 - MCTI/CNPq/FNDCT – Crosscutting Action – Regional Networks on Biodiversity and Biotechnology Research was launched, with the objective of promoting the expansion and consolidation of the RENORBIO, PRÓ-CENTRO-OESTE and BIONORTE Networks, contributing to the training of human resources and the sustainable social and economic development of the North, Center-West and Northeast Regions, aiming at the conservation and sustainable use of the natural resources in the biomes encompassed by these regions.

1.3.4.7. Crosscutting Themes: gender, poverty combat and sustainable development

The role of women in the conservation and sustainable use of biodiversity

The contribution of women's practices and knowledge must be recognized and valued in the processes for proposing, planning, constructing, decision-making and implementing policies, programs and actions aiming at the conservation of biodiversity. The full participation of women should therefore be sought, whenever possible, at all levels of the development and implementation of policies, including their participation in advisory and management councils. The CBD recognizes, in its Preamble, the vital role that women play in the conservation and sustainable use of biological diversity, affirming the need of full participation of women at all levels of policy-making for the conservation of biodiversity.

The gender equality concept supported by the UN[79] establishes that the rights, responsibilities and opportunities should be equal for all individuals, regardless of their gender, while gender mainstreaming[80] is defined as the process of assessing the implications for women and men of any planned action, program or public policy, considering social and economic aspects, so that women and men benefit equally. Another aspect presented in CBD guidance is that "the ultimate goal is to achieve gender equality", and that "gender mainstreaming is the strategy" or the path to achieve it. Thus, the CBD recommends that gender mainstreaming should not simply be an add-on aspect of policies and other formal instruments, but rather should effectively be an integral dimension of all steps of the design, implementation and monitoring of processes, programs and projects.

Brazil has been globally recognized by the achievements of the federal government in the promotion of gender equality through actions of the Secretariat of Policies for Women – SPM and the Secretariat of Policies for Promoting Racial Equality – SEPPIR, currently under the Ministry of Justice and Citizenship. On the other hand, the statistics provided by IBGE's National System of Information on Gender – SNIG[81] indicate

78 http://cnpq.br/apresentacao-rede-pro-centro-oeste/

79 United Nations. Gender Mainstreaming - An overview. Office of the Special Adviser on Gender Issues. New York. 2002. 38 p. http://www.un.org/womenwatch/osagi/pdf/e65237.pdf

80 Convention on Biological Diversity. Guidance on mainstreaming gender. Montreal, 2014. 22p. https://www.cbd.int/doc/meetings/wgri/wgri-05/information/wgri-05-inf-17-add1-en.pdf

81 http://www.ibge.gov.br/apps/snig/v1/apresentacao.html

that currently, in Brazil, the number of women living in poverty is higher than the number of men, and that the inequality between genders has increased in the last decade. This issue has direct implication on other social and environmental aspect – poverty and its impact on biodiversity. Box 16 highlights the legal and strategic instruments which refer directly or indirectly to issues of social equality, with emphasis on gender issues.

Box 16: Legal and strategic instruments directly or indirectly related to the role of the different parts of society in environmental policies.

- 1988 Federal Constitution: addresses the equality between women and men (Art. 5º, Art. 189, Art. 201 and Art. 226).
- MMA Administrative Ruling n° 287/2012: institutes the Internal Committee on Gender, with the objective of promoting discussion for integrating the gender perspective on environmental policies.
- National Plan for Promoting the Chains of Products from Socio-biodiversity – PNPSB: has the objective of developing integrated actions for promoting and strengthening the economic chains of products from socio-biodiversity, aggregating value and consolidating sustainable markets, in addition to promoting and accelerating the overcome of poverty and social inequalities in rural areas, including gender, race and ethnic inequality, through a strategy of sustainable territorial development.
- National Plan of Agroecology and Organic Production (PLANAPO II): has the objective of coordinating and implementing programs and actions that induce the transition to agroecological production, organic production, and agroecology-based production, as a contribution to sustainable development, allowing the population to improve life quality through the offer and consumption of healthy food and the sustainable use of natural resources. It addresses the gender perspective through 3 targets and 23 initiatives.
- National Plan of Policies for Women – PNPM: takes into consideration the participation of women at the various levels of social control on public policies targeting socio-environmental development; recognizes the role of rural and forest populations in the management, use and conservation of natural resources. Addresses gender perspective, biodiversity and sustainable development in 3 of its 10 chapters.
- Decree nº 6.040, of 07 February 2007: institutes the National Policy for the Sustainable Development of Traditional Peoples and Communities, which seeks to promote the sustainable development of Traditional Peoples and Communities, with emphasis on the recognition, strengthening and warranty of their territorial, social, environmental, economic and cultural rights, respecting and valuing their identity, forms of organization and institutions. It also seeks to strengthen programs and actions on gender relationships in traditional peoples and communities, ensuring the vision and participation of women in governmental actions, valuing the historical importance of women and their ethnic and social leadership.
- 5th objective of the UN 2030 agenda – Sustainable Development Goals – SDG: Aims to achieve gender equality and the empowerment of women and girls, considering also the implementation of reforms to grant women equal rights to economic resources, as well as access to property and control over land and other forms of ownership, financial services, inheritance and natural resources, in compliance with national laws.

Combatting poverty, and sustainable development

The 2030 Agenda for Sustainable Development[82] recognizes that the eradication of poverty, in all its forms and dimensions, is the greatest global challenge and an indispensable requirement for sustainable development. Under the 2030 Agenda, the UN established the Sustainable Development Goals – SDG, which in addition to permeate the human rights and gender equality perspectives, are based on three dimensions of sustainable development – economic, social and environmental. The focus of the 17 SDGs encompasses: combatting poverty; food security; sustainable agriculture; sustainable water management and sanitation for all; access to sustainable energy, resilient infrastructure; sustainable production and consumption patterns; combatting climate change and its impacts; conservation and sustainable use of the oceans, seas and marine resources for sustainable development; protection, recuperation and sustainable use of terrestrial ecosystems; combat to desertification, land degradation and biodiversity loss.

According to the assessment of the Organization for Economic Cooperation and Development – OECD, during the last few years Brazil has increased investments in the cooperation for development and, even though the focus of cooperation actions and initiatives are health and agriculture, there has been an increase in the number of environmental projects with the perspective of growth in the foreseeable future.

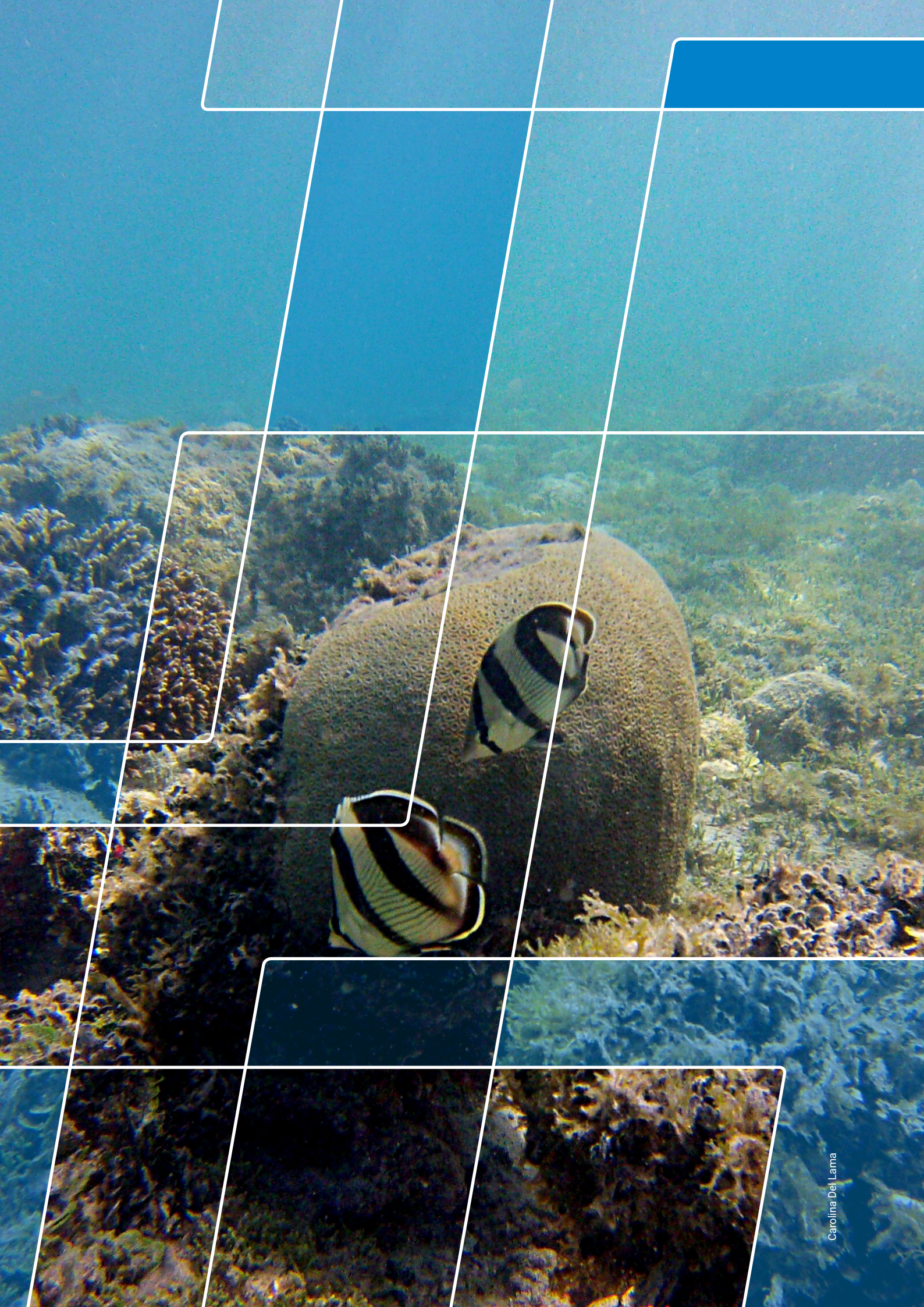
In Brazil, as in other emerging economies, the economic growth, urbanization and increase in income levels also result in the increase of pressure on the environment. Such factors lead to the growing demand for land, water, resources, energy and transport and, consequently, to the increase of pollution and generation of waste. The associated aspects of equitable governance and management of natural resources can guide the country towards the achievement of sustainable and inclusive development.

The integrated management instruments in Brazil have also been focusing the water issue, with water resources plans at the national and state level. However, the actions foreseen in those plans do not encompass the entire Brazilian territory. On the other hand, water scarcity has been a source of concern not only in semi-arid regions, but also in more economically developed regions, which present greater water demand.

In addition, it should be noted that there are under-dimensioned or obsolete structures and high loss rates in the distribution systems, in addition to concerns over water quality. The country's precariousness on the sanitation theme is a factor of concern also regarding the collection and treatment of sewage, which results in negative impacts on the environment and population health, in addition to the risk of contamination by fertilizers and pesticides in the soil.

Under this scenario, of particular notice is the importance of the coordination that is being carried out by SBio/MMA with the other federal, state and municipal governmental agencies, in addition to the various sectors of society, academia and the private sector, inviting them to engage in the processes of NBSAP development and implementation, in such a way that biodiversity may be integrated to components of plans under other sectors and vice-versa, reinforcing the catalyzing potential of the synergy resulting from the strategic alignment and inter-institutional efforts.

82 https://nacoesunidas.org/pos2015/agenda2030/



Carolina Del Lama

2. Strategic Components of the NBSAP

2.1. Mission

To promote, in an integrated manner, the conservation of biodiversity and the sustainable use of its components, ensuring the fair and equitable sharing of benefits arising from the use of the genetic heritage, valuing the associated traditional knowledge and respecting gender and inter-generation equality, which contributes to poverty eradication.

2.2. Vision

By 2050, the Brazilian biodiversity and ecosystem services will be valued, conserved, adequately recovered and sustainably used, and the Brazilian society will be aware of its intrinsic value and vital contribution for sustainable development and human well-being at present and in the future.

2.3. Principles and directives

The NBSAP is grounded on the same principles and directives established for the implementation of the National Biodiversity Policy – PNB (Decree nº 4.339, of 22 August 2002), which consider the Brazilian commitments under the CBD in addition to the rulings of the Brazilian Constitution and other regulations currently in force related to biodiversity. The PNB principles and directives that provide the basis for the NBSAP are presented in Boxes 17 and 18.

In addition to the principles and directives for PNB implementation, established by the aforementioned Decree nº 4.339/2002, it is relevant to mention the principles established by Conabio for the internalization and implementation of the National Biodiversity Targets (Conabio Resolution nº 06/2013, of 03 September 2013) (Box 19).

Box 17: Principles for the implementation of the National Biodiversity Policy– PNB (Decree nº 4.339/2002).

I – The biological diversity possesses intrinsic value, thus deserving respect regardless of its value to humans or potential for human use;

II – States have the sovereign right to exploit their own biological resources, pursuant to their own environmental and development policies;

III – States are responsible for the conservation of their own biodiversity and for ensuring that activities within their jurisdiction or control do not cause damage to the environment or biodiversity of other states or of areas beyond the limits of national jurisdiction;

IV – The conservation and sustainable use of biodiversity are a common concern of humankind, but with differentiated responsibilities, where developed countries shall provide new and additional financial resources and facilitate appropriate access to relevant technologies to address the needs of developing countries;

V – An ecologically balanced environment is a universal right, as it is an asset of shared use and vital for the healthy quality of life, where the duty to defend it and preserve it for present and future generations falls to governments and the collective;

VI – The management objectives for land, water and biological resources are a choice of society and should engage all relevant sectors and all scientific capacities and consider all forms of relevant information, including scientific, traditional and local knowledge, innovation and uses;

VII – The maintenance of biodiversity is vital for evolution and for the maintenance of the systems necessary to sustain life in the biosphere; therefore, it is necessary to safeguard and promote the sexual reproduction and cross-breeding capacity of organisms;

VIII – Where consistent scientific evidence exists on severe and irreversible risk to biodiversity, the governmental authorities will determine cost effective measures to prevent environmental degradation;

IX – The internalization of environmental costs and the use of economic instruments will be promoted taking into account the principle where the polluter shall bear the cost of pollution, with due respect for public interest and with no distortion to international trade and investments;

X – The installation of civil works or activity with the potential to cause significant environmental degradation shall be preceded by an ex-ante environmental impact study, which shall be made publicly available;

XI – The human being is part of nature and has been present in the various Brazilian ecosystems for over ten thousand years, and all of these ecosystems have been and are being altered by human beings at smaller or greater scale;

XII – The maintenance of the national cultural diversity is important for the plurality of values in society concerning biodiversity, considering also that indigenous peoples, quilombola communities and other local communities play an important role in the conservation and sustainable use of Brazilian biodiversity;

XIII – Actions related to access to traditional knowledge associated to biodiversity shall be carried out with the previous informed consent of indigenous peoples, quilombolas and other local communities;

XIV – The use value of biodiversity is determined from cultural values and includes the value of direct and indirect use, future use option, and intrinsic value, including the ecological, genetic, social, economic, scientific, educational, cultural, recreative and aesthetic value;

XV – The conservation and sustainable use of biodiversity should contribute to the economic and social development and to poverty eradication;

XVI – Ecosystem management shall seek the appropriate balance between the conservation and sustainable use of biodiversity, and ecosystems shall be managed within their functional limits;

XVII – Ecosystems shall be understood and managed under an economic context, with the following objectives: a) reduce market distortions that negatively affect biodiversity; b) promote incentives for biodiversity conservation and sustainable use; and c) internalize as much as possible the costs and benefits within the same ecosystem;

XVIII – Research, ex-situ conservation and value added to Brazilian biodiversity components shall be preferably carried out in-country, while international cooperation initiatives are welcome with due respect to national interests and coordination;

XIX – National actions related to biodiversity management shall establish synergy and integrated actions with international conventions, treaties and agreements related to the biodiversity management theme; and

XX – Biodiversity management actions will have integrated, decentralized and participatory character, allowing the effective access of all sectors of Brazilian society to the benefits resulting from the use of biodiversity.

Box 18: Directives for the implementation of the National Biodiversity Policy – PNB (Decree nº 4.339/2002).

I – Cooperation will be directly established with other states or, when necessary, through relevant international agreements and organizations where areas beyond national jurisdiction is concerned, in particular in border areas, Antarctica, open ocean and wide ocean floors regarding migratory species, and in other matters of mutual interest, for the conservation and sustainable use of biodiversity;

II – The national effort for the conservation and sustainable use of biodiversity shall be integrated in relevant sectoral or inter-sectoral plans, programs and policies, in a complementary and harmonizing manner;

III – Substantial investments are necessary to conserve the biological diversity, from which will consequently result environmental, economic and social benefits;

IV – It is vital to anticipate, prevent and combat, at their origin, the causes of the considerable reduction or loss of biological diversity;

V – The sustainability of the use of biodiversity components shall be determined from an economic, social and environmental perspective, particularly regarding the maintenance of biodiversity;

VI – Ecosystem management shall be decentralized to the appropriate level and ecosystem managers shall take into consideration the actual and potential effects of their activities on neighboring and other ecosystems;

VII – Ecosystem management shall be implemented at the appropriate space and time scales, and the objectives of ecosystem management shall be established for the long term, recognizing that change is inevitable.

VIII – Ecosystem management shall focus on the internal ecosystem structures, processes and functional relationships, apply adaptive management practices, and ensure inter-sectoral cooperation;

IX – An enabling environment shall be created to allow access to genetic resources and their environmentally healthy use by other countries that are signatory Parties to the Convention on Biological Diversity, avoiding the imposition of restrictions that oppose the objectives of the Convention

Box 19: Principles for the internalization and implementation of the National Biodiversity Targets 2011-2020 (Conabio Resolution nº 06/2013, of 03 September 2013).

I. Promote, within Conabio, whenever necessary and including by means of working groups, expert advice and technical workshops, the definition of the concepts applied in the text of the targets, with the purpose of providing clear and objective understanding of the intended meaning of the used terms.

II. Propose the establishment, under Conabio and with the participation of various sectors of society, of the analysis criteria and indicators for assessing the implementation of targets.

III. Propose the implementation of the national biodiversity targets 2011-2020 in coordination with a national strategy and action plan for the conservation and sustainable use of biodiversity, recognizing the efforts and policies related to the national targets.

IV. a. Encourage the adoption of incentives aiming at the implementation of targets. b. Encourage the establishment of legislation and regulations aiming at the implementation of targets.

V. Take into consideration a broad agenda, encompassing inter-institutional and multi-disciplinary actions to be developed by various agencies of the federal, state and municipal governments, and by the various sectors of society.

VI. Take into consideration the specific characteristics of each biome and macro geopolitical region of the country, with the objective of balancing actual risks to remaining ecosystems, technological viability, economic, social and environmental aspects, considering the Ecological-Economic Zoning.

VII. Promote the permanent generation, updating and incorporation of technical-scientific knowledge into the process of target implementation.

2.4. Strategic Objectives and National Targets

The five strategic objectives of the NBSAP and their respective National Biodiversity Targets 2011-2020, established according to Conabio Resolution nº 06/2013, are presented in Table 7.

Table 7: Strategic Objectives and their respective 20 National Biodiversity Targets 2011-2020.

Strategic Objective A – Address the underlying causes of biodiversity loss by mainstreaming biodiversity considerations across government and society.
National Target 1: By 2020, at the latest, Brazilian people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably.
National Target 2: By 2020, at the latest, biodiversity values, geo-diversity values, and socio-diversity values have been integrated into national and local development and poverty reduction and inequality reduction strategies, and are being incorporated into national accounting, as appropriate, and into planning procedures and reporting systems.
National Target 3: By 2020, at the latest, incentives harmful to biodiversity, including the so-called perverse subsidies, are eliminated, phased out or reformed in order to minimize negative impacts. Positive incentives for the conservation and sustainable use of biodiversity are developed and applied, consistent and in harmony with the CBD, taking into account national and regional socio economic conditions.
National Target 4: By 2020, at the latest, governments, private sector and stakeholders at all levels have taken steps to achieve or have implemented plans for sustainable production and consumption to mitigate or prevent negative impacts from the use of natural resources.
Strategic Objective B – Reduce the direct pressures on biodiversity and promote sustainable use.
National Target 5: By 2020, the rate of loss of native habitats is reduced by at least 50% (in comparison with the 2009 rate) and, as much as possible, brought close to zero, and degradation and fragmentation is significantly reduced in all biomes.
National Target 6: By 2020 all stocks of any aquatic organism are managed and harvested sustainably, legally and applying ecosystem based approaches, so that overharvesting is avoided, recovery plans and measures are in place for depleted species, fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems, and the impacts of fisheries on stocks, species and ecosystems are within safe ecological limits, when scientifically established.
National Target 7: By 2020 the incorporation of sustainable management practices is disseminated and promoted in agriculture, livestock production, aquaculture, silviculture, extractive activities, and forest and fauna management, ensuring conservation of biodiversity.
National Target 8: By 2020, pollution, including from excess nutrients, has been brought to levels that are not detrimental to ecosystem function and biodiversity.
National Target 9: By 2020, the National Strategy on Invasive Alien Species is fully implemented, with the participation and commitment of states and the elaboration of a National Policy, ensuring the continuous and updated diagnosis of species and the effectiveness of Action Plans for Prevention, Contention and Control.
National Target 10: By 2015, the multiple anthropogenic pressures on coral reefs, and other marine and coastal ecosystems impacted by climate change or ocean acidification are minimized, so as to maintain their integrity and functioning.

Tabela 7 (Cont.): Strategic Objectives and their respective 20 National Biodiversity Targets 2011-2020.

Strategic Objective C: To improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity.
National Target 11: By 2020, at least 30% of the Amazon, 17% of each of the other terrestrial biomes, and 10% of the marine and coastal areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through protected areas foreseen under the SNUC Law and other categories of officially protected areas such as Permanent Protection Areas, legal reserves, and indigenous lands with native vegetation, ensuring and respecting the demarcation, regularization, and effective and equitable management, so as to ensure ecological interconnection, integration and representation in broader landscapes and seascapes.
National Target 12: By 2020, the risk of extinction of threatened species has been significantly reduced, tending to zero, and their conservation status, particularly of those most in decline, has been improved.
National Target13: By 2020, the genetic diversity of microorganisms, cultivated plants, farmed and domesticated animals and of wild relatives, including socio-economically as well as culturally valuable species, is maintained, and strategies have been developed and implemented for minimizing the loss of genetic diversity.
Strategic Objective D: Enhance the benefits to all from biodiversity and ecosystem services.
National Target 14: By 2020, ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, traditional peoples and communities, indigenous peoples and local communities, and the poor and vulnerable.
National Target 15: By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced through conservation and restoration actions, including restoration of at least 15% of degraded ecosystems, prioritizing the most degraded biomes, hydrographic regions and ecoregions, thereby contributing to climate change mitigation and adaptation and to combatting desertification.
National Target 16: By 2015, the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization is in force and operational, consistent with national legislation.
Strategic Objective E: Enhance the implementation through participatory planning, knowledge management and capacity building.
National Target 17: By 2014, the national biodiversity strategy is updated and adopted as policy instrument, with effective, participatory and updated action plans, which foresee periodic monitoring and evaluation.
National Target 18: By 2020, the traditional knowledge, innovations and practices of indigenous peoples, family rural producers and traditional communities relevant for the conservation and sustainable use of biodiversity, and their customary use of biological resources, are respected, in accordance with their uses, customs and traditions, national legislation and relevant international commitments, and fully integrated and reflected in the implementation of the CBD, with the full and effective participation of indigenous peoples, family rural producers and traditional communities, at all relevant levels.
National Target 19: By 2020, the science base and technologies necessary for enhancing knowledge on biodiversity, its values, functioning and trends, and the consequences of its loss, are improved and shared, and the sustainable use of biodiversity, as well as the generation of biodiversity-based technology and innovation are supported, duly transferred and applied. By 2017, the complete compilation of existing records on aquatic and terrestrial fauna, flora and microbiota is finalized and made available through permanent and open access databases, with specificities safeguarded, with a view to identify knowledge gaps related to biomes and taxonomic groups.
National Target 20: Immediately following the approval of the Brazilian targets, resources needs assessments are carried out for the implementation of national targets, followed by the mobilization and allocation of financial resources to enable, from 2015 on, the implementation and monitoring of the Strategic Plan for Biodiversity 2011-2020, as well as the achievement of its targets.

2.5. Indicators for monitoring the achievement of the National Biodiversity Targets

For effectively monitoring and assessing the progress towards achieving the National Biodiversity Targets 2011-2020, it was necessary to define a set of indicators and a strategy to measure them. As previously discussed (section 1.3.2), between 2014 and 2015, a preliminary set of indicators was built through a broad participatory process, in partnership with the institutions that comprise the PainelBio working groups known as Thematic Groups (Table 8).

At that time, the Thematic Groups also suggested complementary indicators, which are essential to ensure the monitoring of all National Targets, however still require further detailing regarding source, measuring methodology and other items related to the monitoring of these indicators. In 2016, SBio received contributions from institutions recommending indicators to be added to the monitoring of NBSAP actions and targets (Table 9).

Table 8: Indicators for monitoring the National Biodiversity Targets 2011-2020.

Indicator		Description	Data source	Target(s)
PB 001	Environmental Awareness and Sustainable Habits	Percent (%) of the population belonging to 4 categories of environmental awareness: "indifferent", "beginner", "engaged" and "aware". The indicator assesses consumption habits related to economy, planning, recycling and sustainable acquisitions.	- Ministry of the Environment (MMA).	1 and 4
PB 002	Federal Expenditure on Biodiversity	Amount in Reais (R$) referring to environmental expenditure by the federal government as calculated through research carried out by IPEA under the project on Scoping and Tracking Federal Environmental Expenditure. The indicator will encompass the various federal government institutions that implement actions related to the environment, with the purpose of presenting a broader and more effective measure of the federal environmental expenditure over the years, and the historical data series that should encompass the actions of the programs listed in all PPAs (Federal Multi-Year Plan) until present.	- Integrated Financial Management System (*Sistema Integrado de Administração Financeira - SIAFI*) of the Ministry of Finance (MF); - Integrated Budget Data System (*Sistema Integrado de Dados Orçamentários - SIDOR*) of the Ministry of Planning, Development and Administration (MP).	2
PB 003	Number of states applying the Green VAT	Number of states that are applying the Green VAT (*ICMS Ecológico*).	- State Governments and the Federal District.	3
PB 004	Recovery Rate of Recyclable Materials as Compared to the Total Collected Volume of Urban Solid Waste	Percent (%) of the annual volume of dry recyclable materials recovered, collected by municipalities, subcontracted companies, waste collectors' associations and others, and the total volume of urban solid waste in municipalities with population over 100 thousand inhabitants. This is the ratio between the volume of collected solid waste with final destination considered adequate and the total collected volume, expressed as tonnes per day (t/day).	- National Research on Basic Sanitation (*Pesquisa Nacional de Saneamento Básico - PNSB*) of the Brazilian Institute of geography and Statistics (IBGE); - Sanitation Sector Modernization Program (*Programa de Modernização do Setor de Saneamento - PMSS*) of the Ministry of Cities.	4 and 8

Tabela 8 (Cont.): Indicators for monitoring the National Biodiversity Targets 2011-2020.

Indicator		Description	Data source	Target(s)
PB 005	Energy Intensity	Ratio between final energy use and the country's Gross National Product (GNP), with values linked to 1995 prices. The final energy consumption is expressed in tonnes of oil equivalent (toe), and the GNP in Reais (R$). The variables used for calculation are the Brazilian final energy consumption and GNP.	- National Energy Balance (NEB) published by the Energy Research Company (*EPE – Empresa de Pesquisa Energética*), under the Ministry of Mines and Energy (MME); - Resident population estimates by IBGE.	4
PB 006	Participation of Each Different Source in the Energy Availability	Assessment based on the participation of each energy source and their respective level of impact on biodiversity according to a study by Instituto Life[83].	- National Energy Balance (NEB), published by EPE.	4
PB 007	Brazilian Ecological Footprint	Size (hectares) of productive areas on land and sea, necessary to generate the products, goods and services that support the life style of one consumer (a person, a city or a country)[84].	- Global Footprint Network[85]	4
PB 008	Number of Fire Occurrences by Biome	Number and density of fire occurrences in specific territories, in a given month or year.	- Weather Forecast and Climatic Studies Center (*Centro de Previsão de Tempo e Estudos Climáticos - CPTEC*), of the National Institute of Space Research (INPE).	5 and 15
PB 009	Remaining Native Vegetation Cover	Percent (%) native vegetation cover as compared to the total area of each region, taking as reference the zero-map of the Conservation and Sustainable Use of Brazilian Biodiversity Project (PROBIO I).	- Technical Manual of Brazilian Vegetation (IBGE); - PROBIO I (MMA); - Program on the Environmental Monitoring of Brazilian Biomes (PMABB), under MMA.	5, 10, 14 and 15
PB 010	National Extractive Fisheries Production	Volume (tonnes) and value (R$) of the national fisheries production.	- National Information System on Fisheries and Aquaculture (SINPESQ), under MAPA.	6

83 http://institutolife.org/wp-content/uploads/2014/09/Energia-EN.pdf.

84 http://www.wwf.org.br/natureza_brasileira/especiais/pegada_ecologica/

85 http://www.footprintnetwork.org/en/index.php/GFN/page/trends/brazil/

86 Variables used: area planted with the main crops, expressed in hectares (ha), and the amounts of agricultural chemicals consumed, discriminated according to the main use classes (herbicides, fungicides, insecticides, acaricides and others, including bactericides, molluscicides, growth regulators, mineral oil, plant oil, feromones, sulfur, adjuvants and wetting agents), expressed in tonnes per year (t/year).

Tabela 8 (Cont.): Indicators for monitoring the National Biodiversity Targets 2011-2020.

Indicator		Description	Data source	Target(s)
PB 011	Intensity of the Use of Agricultural Chemicals	Ratio between the annual amount of agricultural chemicals used (kg) and the area of agricultural crops (hectares), presented in kg/ha for each year[86].	- Reports on the Trade of Agricultural Chemicals (Ibama); - Annual Bulletin on the Production, Import, Export and Sales of Agricultural Chemicals in Brazil (Ibama); - Reports on the Consumption of Active Ingredients and Agricultural Chemicals and Like-Substances in Brazil (Ibama); - Systematic Inventory of Agriculture Production (*Levantamento Sistemático da Produção Agrícola - LSPA*), by IBGE; - Municipal Agriculture Production (*Produção Agrícola Municipal - PAM*), do IBGE.	7
PB 012	Producers Registered in the National Registry of Organic Producers (*Cadastro Nacional de Produtores Orgânicos - CNPO*)	Number of organic producers in Brazil (individuals and companies).	- Report generated by CNPO (MAPA); - Report generated by agencies responsible for organic production quality control and by Certification agencies; - Reports produced by inter-sectoral groups engaged in the production of organic products.	7
PB 013	No-till in Annual Crops	Percent (%) area occupied by annual crops applying no-till practices.	- Brazilian Agricultural Research Corporation (Embrapa) - MAPA.	7
PB 014	Quality of Inland Waters	Water quality in some inland water bodies (sections of rivers and reservoirs), expressed by the Biochemical Oxygen Demand (BOD) and the Water Quality Index (*Índice de Qualidade de Água – IQA*).	- Pernambuco State Environmental Agency (CPRH/PE); - São Paulo State Environmental Agency (CETESB/SP); - Rio Grande do Sul State Henrique Luiz Roessler Foundation for Environmental Protection (FEPAM/RS); - Minas Gerais State Institute for Water Management (IGAM/MG); - Paraná State Water Institute (Águas Paraná/PR); - Bahia State Institute for the Environment and Water Resources (IINEMA/BA); - Espírito Santo State Institute for the Environment and Water Resources (IEMA/ES); - Rio de Janeiro State Institute for the Environment (INEA/RJ); - Superintendence of Water Resources Planning (SPR), under ANA.	8

87 This indicator expresses air quality and provides a measure of population exposure to air pollution in urban areas. The variables used for this indicator are the average and maximum observed concentrations of pollutants and the number of violations of the primary standards of the National Environment Council – CONAMA in a specific place, within the period of one year.

Tabela 8 (Cont.): Indicators for monitoring the National Biodiversity Targets 2011-2020.

Indicator		Description	Data source	Target(s)
PB 015	Concentration of Air Pollutants in Urban Areas[87]	Total suspended particles (TSP), inhalable particles (PM10), sulfur dioxide (SO_2), nitrogen dioxide (NO_2), ozone (O_3) and carbon monoxide (CO), measured in micrograms per cubic meter.	- State and municipal agencies and private institutions; - Pernambuco State Environmental Agency (CPRH/PE); - Southern Air (*Ar do Sul*)/ Automatic Network for Monitoring Air Quality, under FEPAM/RS; - CETESB/SP; - Bahia Environmental Protection Company (CETREL/BA); - Minas Gerais State Foundation for the Environment (FEAM/MG); - INEA/RJ; - Paraná Environmental Institute (IAP/PR); - Federal District Institute for the Environment and Water Resources (IBRAM/DF); - Automatic Network for Monitoring Air Quality in the Vitória Metropolitan Area – RAMQAr (IEMA/ES); - Vitória Municipal Secretariat of the Environment, ES (SEMMAM/ES).	8
PB 016	Officially Recognized Invasive Alien Species	Number of terrestrial and aquatic (marine and freshwater) invasive species of micro-organisms, plants and animals, from some taxonomic groups.	- SBio/MMA and Hórus Institute.	9
PB 017	Protected Areas	Number and area (square kilometers, km^2) of federal and state protected areas, by type of use; Ratio expressed in percent (%), between the surface area covered by federal and state protected areas and the total territorial area in each biome or region.	- National Cadaster of Protected Areas (*Cadastro Nacional de Unidades de Conservação - CNUC*) of the Protected Areas Department (DAP), under SBio/MMA.	10 and 11
PB 018	Management Effectiveness	Percent (%) value referring to the management effectiveness of protected areas considered in the calculation for target achievement.	- Chico Mendes Institute for Biodiversity Conservation – ICMBio; - Protected Areas Department (DAP), under SBio/MMA.	11
PB 019	Threatened Species of Fauna and Flora	Number of species of fauna and flora that are extinct or considered as threatened with extinction in the Brazilian biomes.	- SBio/MMA.	12
PB 020	Threatened Species of Fauna and Flora with Action Plans for their Recuperation and Conservation	Number of threatened species of the Brazilian fauna and flora addressed by National Action Plans (PANs), and respective percent (%) of the total number of threatened Brazilian fauna and flora species.	- Department of Biodiversity Research, Evaluation and Monitoring, under ICMBio; - National Flora Conservation Center (CNCFlora), under the Research Institute of the Rio de Janeiro Botanical Garden (JBRJ).	12
PB 021	Conserved Genetic Resources of the Fauna, Flora and Micro-organisms	Existing number of live collections and germplasm banks (fauna, flora and micro-organisms), their operating conditions, number of conserved species and samples per species, geographical representativeness of the collection.	- Germplasm and micro-organism banks (Embrapa, Fiocruz, Universities, Botanical Gardens, etc.)	13

Tabela 8 (Cont.): Indicators for monitoring the National Biodiversity Targets 2011-2020.

Indicator		Description	Data source	Target(s)
PB 022	Territorial and Environmental Management Plan (PGTA) of Indigenous Lands	Number and area (hectares or km^2) of Indigenous Lands that possess a Territorial and Environmental Management Plan (*Plano de Gestão Territorial e Ambiental – PGTA*), by biome.	- National Indigenous Peoples Foundation (Funai)	14 e 18
PB 023	Greenhouse Gas Emissions (GGE) of Anthropic Origin	Profile of Greenhouse Gas Emissions (GGE) by anthropic source within the national territory, among which the carbon dioxide (CO_2), methane gas (CH_4), nitrous oxide (N_2O), and others.	- National Inventory of Anthropic Emissions by Source and Removal by Sinks of GGE not Controlled by the Montreal Protocol; - Annual Estimates of Brazilian GGE Emissions, coordinated by MCTIC.	8 e 15
PB 024	Agreements or Other Instruments for Benefit Sharing	Number of agreements or other instruments for benefit sharing signed with the federal government, indigenous peoples, traditional peoples and communities, and traditional rural producers.	- Genetic Heritage Management Council (CGen).	16 e 18
PB 025	Sustainable Use Protected Areas with Management Instruments	Proportion of Sustainable Use Protected Areas (according to SNUC) such as Resex, RDS, and FLONA, for which a management instrument was prepared and implemented.	- CNUC (DAP/SBio/MMA)	18
PB 026	Degree of Database Adherence to the SiBBr	Proportion and number of databases on biodiversity which have been systematized and integrated into SiBBr. The result of this indicator will be stratified according to specific categories for presentation, in order to provide an overview of the effort needed to achieve the target. The proposed categories are by taxonomic group and data source/type.	- Information System on Brazilian Biodiversity (SiBBr), under MCTIC	19
PB 027	Scientific Production Index	Ratio between the scientific production and the number of researchers working in each region of the country (productivity by area and number of researchers by field of knowledge).	- Coordination for the Professional Improvement of Higher Education Graduates (CAPES), under the Ministry of Education (MEC) - Science Citation Index; - MCTIC.	19
PB 028	Updating Stage of the National Biodiversity Strategy and Action Plan	This indicator assesses the progress of the Strategy's updating process, accounting the completed steps: (i) definition of the national targets for 2020; (ii) definition of the long-term vision of the NBSAP; (iii) definition of NBSAP objectives and targets; (iv) preparation of the Action Plan; (v) development of indicators; (vi) preparation of the plan for the mobilization of financial resources; (vii) clear identification of governmental plans and partners; (viii) presentation of the updated NBSAP to the CBD.	- SBio/MMA.	17

Table 9: Complementary indicators, currently under assessment, which were recommended by the PainelBio thematic groups and by institutions that have engaged in the NBSAP.

	Suggested complementary indicator	Description	Target
29	Knowledge on biodiversity and its value	Percent of the population who has heard of biodiversity, who knows the correct definition of the term, and who qualifies its value.	1
30	Available resources for Payment for Ecosystem Services (PES)	Total volume of resources in Reais (R$) earmarked, at various levels – national, state, municipal, watershed committee, and private sector – for PES (including the mechanisms associated to the carbon market, water, biodiversity, and others).	3
31	Degradation of native terrestrial habitats	Rate of degradation of the vegetation cover in each biome (km^2/year) as a consequence of the selective extraction of plant species (applying the annual mapping of forest areas undergoing native vegetation suppression in the Amazon, where the vegetation cover has not yet been completely removed).	5 and 15
32	Loss of native terrestrial habitats	Area (km^2) of loss of native habitats as a result of the removal of native vegetation cover in each biome (forest and other vegetation types, including mangroves), and percent (%) of legal and illegal suppression of native vegetation.	5 and 15
33	Threatened species impacted by fisheries addressed by implemented and monitored PANs	Proportion or percent (%) of threatened species impacted by fisheries that are addressed by PANs (ratio between the number of threatened species impacted by fisheries addressed by Action Plans and the total number of threatened species impacted by fisheries).	6
34	Fish stocks exploited beyond the safe biological thresholds	Proportion or percent (%) of fish stocks with populations outside the safe biological thresholds (those with populations fished above the maximum sustainable production level). The fish stocks within the safe biological thresholds include those that are exploited within or close to the maximum sustainable production level, as well as fish populations not completely exploited.	6
35	Permanent Committees for the Sustainable Management and Use of Fisheries Resources (CPGs) implemented and operational	Proportion or percent (%) of CPGs that are operating: periodic meetings being held with operating scientific sub-committees and monitoring subcommittee, with social participation, and with the proposition of management plans or specific measures.	6
36	*ReefCheck Protocol*	Health index of coral reefs. The ReefCheck protocol monitors 22 parameters that indicate the degree of integrity of these ecosystems. Number of sites where the ReefCheck protocol is being implemented and monitored.	10

Tabela 9 (Cont.): Complementary indicators, currently under assessment, which were recommended by the PainelBio thematic groups and by institutions that have engaged in the NBSAP.

	Suggested complementary indicator	Description	Target
37	Threatened Coastal and Marine Species	- Number of threatened fauna species and percent (%) of species as compared to the total number of assessed species. - Number of threatened fauna species represented in protected areas and percent (%) of threatened species protected in PAs as compared to the threatened species included in national lists. - Number of threatened species and percent of threatened fauna species addressed by PANs as compared to the total number of threatened fauna species.	10 and 12
38	Fragmentation and Connectivity of Landscapes	Landscape fragmentation and connectivity index[88].	11
39	Nutrition Value of Brazilian Biodiversity	Number of native species of Brazilian biodiversity with information on their nutrition value included in the Database on the Nutrition Composition of Biodiversity, in SiBBr. The indicator informs on the number of species of the native biodiversity whose use is being promoted, which represents an incentive for their conservation. This number would be compared to the total number of native food species prioritized in the "Plants for the Future" initiative.	13
40	Implemented Environmental-Economic Accounting	The development of Environmental-Economic Accounting is an important initiative by the Brazilian government, which seeks to systematize all statistic data related to the stock and physical flow of some key resources, such as water, forest areas, changes in land use and cover, and energy. This type of indicator will allow the development and improvement of other metrics and will contribute to the definition of priorities under public policies. It will allow the monitoring of the efficiency of materials, for example, according to the relation between the GNP value generated by used cubic meter of water. It should also contribute to the water permit system, which would have access to detailed information on the use and economic value of the resource, also contributing to its possible pricing.	2

88 The landscape-scale approach allows other spatial conservation measures to be considered to ensure the connectivity of areas of particular interest for biodiversity and ecosystem services, resilience, ecological representativeness, and community interests. In addition, it is important to consider the inter-dependency of the processes at various scales (for example, management of watersheds and "flying rivers", among others). Under this scenario, the different protection regimes may be considered for planning and managing landscapes, considering the principles of equitability, effectiveness and representativeness.

Tabela 9 (Cont.): Complementary indicators, currently under assessment, which were recommended by the PainelBio thematic groups and by institutions that have engaged in the NBSAP.

	Suggested complementary indicator	Description	Target
41	Federal programs that integrate the Value of Ecosystem Services	Biodiversity and ecosystem criteria and values integrated into development policies, plans and processes, and poverty reduction strategies at the national level (Federal Multi-Year Plan - PPA).	2
42	Governmental actions that include or represent positive or perverse incentives that affect biodiversity	Volume of available resources in Reais (R$) that affect biodiversity in programs (including incentives for financing agricultural chemicals).	3
43	Food waste and loss	Loss of food along the production chain and food waste by consumers. Indicator to be developed based on the indicator currently being developed by UNEP and FAO, and which will be required by international agreements starting in 2016.	4
44	Fragmentation Rate of Aquatic Freshwater Habitats	Fragmentation rate of inland aquatic habitats, calculated based on the number of dams by watershed. The calculation method for the index need to be refined by experts, including the definition of the variables to be used.	5
45	Rural properties registered in the National System of the Rural Environmental Cadaster (SICAR) in environmental compliance and in the process of regularization.	Number and percent (%) of properties registered in SICAR.	7
46	Implementation of the National Strategy on Invasive Alien Species	Percent (%) of implementation of actions, instruments and directives of the National Strategy: (i) Management of the National Strategy; (ii) Inter-sectoral coordination; (iii) Legal infrastructure; (iv) Prevention, early detection and emergency action; (v) Management – eradication, contention, control and monitoring; (vi) Generation of scientific knowledge; (vii) Technical capacity building; (viii) Public education and awareness. The implementation of each of the previous items will be measured by a sub-indicator. Calculation should take into consideration the individual percent of implementation of each item, and the indicator will be assessed by a weighted average of the items. The weight of each item still needs to be defined.	9
47	Ecological Representativeness Index in Protected Areas	Ecological representativeness within the numerous protected areas.	11
48	Vegetation Cover in Permanent Preservation Areas (APP) and Legal Reserves (RL)	Percent (%) of APP and RL areas with vegetation cover registered in the CAR as for conservation, which are conserved or recuperated, differentiating between what has and what has not yet been duly validated by the responsible agency.	11

Tabela 9 (Cont.): Complementary indicators, currently under assessment, which were recommended by the PainelBio thematic groups and by institutions that have engaged in the NBSAP.

	Suggested complementary indicator	Description	Target
49	Restoration of APPs and RLs	Area (hectares) of APPs and RLs registered in SICAR and which are being restored. The indicator should inform on the evolution of the total area (hectares) restored in comparison to the degraded area in the country, based on Planaveg (under preparation) and SICAR.	14
50	Area in Process of Recuperation	Percent (%) area in process of recuperation in relation to degraded areas. Measure of the evolution of forest and landscape restoration in the country in face of the progress of degradation, seeking to achieve 15% restoration of degraded ecosystems.	15
51	Benefit Sharing Agreements	Number of benefit sharing agreements signed with the federal government, indigenous peoples, traditional peoples and communities, and traditional rural producers.	16
52	Ratification of the Nagoya Protocol	Proportion or percent (%) of concluded steps towards the ratification of the Nagoya Protocol (1-signing, 2-submission to Congress, 3-ratification by Congress, 4-presidential sanction, 5-filing of ratification at UN headquarters).	16
53	Mobilization of Viable Resources for Biodiversity	The indicator should inform on the estimate of the share of the lack of resources that is viable to be mobilized and executed.	20
54	Federal resources for the implementation of actions and achievement of National Targets.	Amount difference between the Estimated Total and the Executed at the federal level (sum of the volume of executed federal budget resources and extra-budget resources from national and international sources). The indicator aims at identifying how much is still needed to achieve the necessary volume of federal resources (gap) for implementing the actions required for the achievement of Targets.	20
55	REDD+ Carbon Stocks through the restoration of APP, RL, pastures and degraded areas	Carbon stock increment through the restoration of APP, RL, pastures and degraded areas.	15
56	Indigenous Lands	This indicator is comprised by the number and surface area (km²) of Indigenous Lands and by the ratio, expressed as percent, between the surface area encompassed by Indigenous Lands and the total territorial area in each biome or region.	14 and 18
57	Implementation of actions related to gender equality	Financial resources in Reais (R$) made available for the implementation of actions related to gender equality.	

During 2017, all of these indicators for monitoring the achievement of the National Targets, as well as other indicators developed or improved in the two years preceding the conclusion of PainelBio's process of proposing indicators, such as indicators from MMA's strategic planning[89], were analyzed based on scope, feasibility and strategic relevance of each indicator for the set of National Biodiversity Targets. Additional information on this analysis, the technical datasheets of the indicators containing the first measurement, as well as information on the method for monitoring the Targets can be consulted on the MMA's website: www.mma.gov.br/epanb[90].

The process of defining and using indicators for the National Biodiversity Targets is dynamic and will be improved in time, both seeking to increase the number of Targets represented and to improve the quality of indicators. This improvement will occur according to the progress obtained in the implementation of the NBSAP and other related initiatives, such as the monitoring of the Sustainable Development Goals, under the coordination of the National Commission for the Sustainable Development Goals (*Comissão Nacional para os Objetivos de Desenvolvimento Sustentável - CNODS*)[91].

From a total of 97 indicators, 17 are currently ready to be monitored, of which 14 individually address one Target each, and other 3 indicators address two Targets each, totaling 20 applications. These indicators address the five Specific Objectives and 12 National Biodiversity Targets (Figure 11). Other 7 indicators are close to being implemented, still requiring the resolution of some pending issues or complementation of information. If these latter are completed soon, other three Targets (7, 16 and 20) will increase this total to 16 Targets represented in the monitoring of indicators under the NBSAP. It is still necessary to develop indicators for Targets 3, 6, 13, 14 and 18.

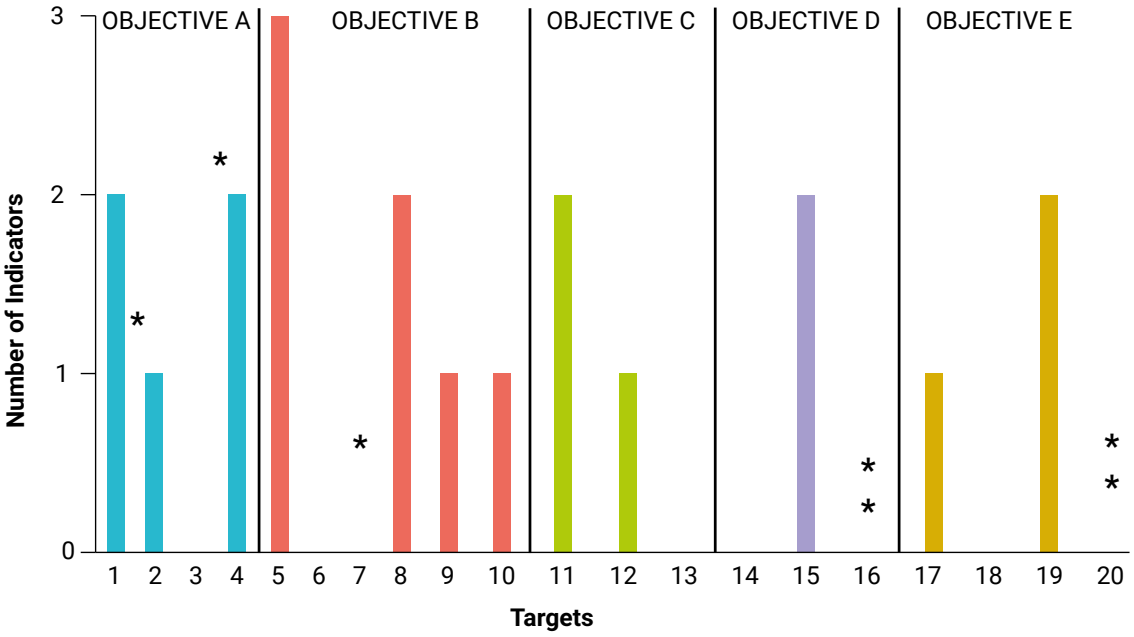


Figure 11: Frequency of indicators by Target according to the Strategic Objective to which they respectively belong. Where: * = number of indicators that may soon be assigned to the Target.

89 http://www.mma.gov.br/governanca-ambiental/gest%C3%A3o-estrat%C3%A9gica/planejamento-estrat%C3%A9gico

90 Reports from consulting work carried out by Grupo Natureza, Sociedade e Conservação (NSC) under the Project BRA/12/G31 – National Biodiversity Planning to Support the Implementation of the CBD Strategic Plan 2011-2020 in Brazil.

91 Representatives of the following participate in CNODS: ministries of Planning Development and Administration (MPDG), Environment (MMA), External Affairs (MRE), Social Development (MDS), Secretariat of the President's Office (SEGOV) and President's Office. The state level is represented by the Brazilian Association of State Environmental Agencies (Abema), and the municipal level by the National Confederation of Municipalities (CNM). Civil society is represented by the National Association of Deans of Federal Higher Education Institutions (Andifes), Brazilian Society for the Progress of Science (SBPC), National Confederation of Indistries (CNI), ETHOS Institute of Corporations and Social Responsibility, National Council of Extractive-based Peoples (CNS), General Labor Union (UGT), Global Vision and Abrinq Foundation for the Rights of Children and Youth. Technical support will be provided by the Research Institute on Applied Economics (Ipea) and by the Brazilian Institute of Geography and Statistics (IBGE). The CNODS Executive Secretariat will be the National Secretariat of Social Coordination of the Secretariat of the President's Office.

2.5.1. Indicators ready to be monitored

Strategic Objective A

Address the underlying causes of biodiversity loss by mainstreaming biodiversity considerations across government and society.

Target 1 By 2020, at the latest, Brazilian people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably.

Indicator	Description	Relevance
Indicator A1.1 Qualification in biodiversity conservation with socioenvironmental inclusion	The indicator represents the number of graduates from the face-to-face and distance-learning courses offered by MMA, in partnership with the states, municipalities, civil society institutions and universities, focusing on: conservation, sustainable use and recuperation of biodiversity with socioenvironmental inclusion.	OThe qualification processes are capable of promoting change, lead individuals to understand their role in society and seek atitudes increasingly more aligned with the conservation of biodiversity and sustainable use of natural resources, making increasingly conscious and contextualized choices. These processes increase citizen access, regardless of age or education level, to information on the environment, and have the purpose of engaging the various actors of society in the discussion and construction of public policies capable of generating commitment and action effectiveness.
Indicator A1.2 Qualification in management of natural resources and multiple use of water	The indicator representes the number of graduates from the face-to-face and distance-learning courses offered by MMA, in partnership with the states, municipalities, civil society institutions and universities, focusing on: environmentally appropriate management of natural resources and multiple use of water.	The qualification processes are capable of promoting change, lead individuals to understand their role in society and seek atitudes increasingly more aligned with the conservation of biodiversity and sustainable use of natural resources, making increasingly conscious and contextualized choices. These processes increase citizen access, regardless of age or education level, to information on the environment, and have the purpose of engaging the various actors of society in the discussion and construction of public policies capable of generating commitment and action effectiveness.

Natália Guimarães

Target 2 By 2020, at the latest, biodiversity values, geo-diversity values, and socio-diversity values have been integrated into national and local development and poverty reduction and inequality reduction strategies, and are being incorporated into national accounting, as appropriate, and into planning procedures and reporting systems.

Indicator	Description	Relevance
Indicator A2.1 Planning territorial use and occupancy	Proportion of the Brazilian territory under use and occupancy directives with sustainable basis defined by macro-regional, regional or state ecological-economic zoning (EEZs).	The indicator represents the scope of the main instrument for integrated territorial planning in Brazil, the Ecological-Economic Zoning (EEZ), which informs decision makers for the preparation, spatialization and implementation of public and private programs, plans, policies and projects. The EEZ is a participatory planning effort for occupying a territory and using the natural resources, and considers, in its methodological approach, the ecosystems and biodiversity as elements that contribute and are impacted by the main uses of the territory and its resources, thus bringing the value of these elements and the importance of their conservation to the continuity of the various production activities.

Target 4 By 2020, at the latest, governments, private sector and stakeholders at all levels have taken steps to achieve or have implemented plans for sustainable production and consumption to mitigate or prevent negative impacts from the use of natural resources.

Indicator	Description	Relevance
Indicator A4.1 Energy Intensity	Efficiency of final energy consumption in the national territory.	Seeking energy efficiency is part of the plan to make better use of energy resources and reduce the environmental impacts generated by economic activities. In the case of energy intensity, the smaller the value, the greater the efficiency in energy use. Therefore, the participation of renewable sources in the energy grid, recycling and investments in research and development are important factors to improve energy efficiency seeking the reduction of the use of fossil fuels and hence the emission of greenhouse gases into the atmosphere.
Indicator A4.2 Number of Adherences to the A3P*	The indicator represents the adherence of public institutions from the different governmental levels (federal, state and municipal) to the Environmental Agenda in Public Administration (Agenda Ambiental na Administração Pública - A3P).	The inclusion of sustainability as a theme under the A3P Program guides the implementation of the rational use of natural resources and public assets, the reduction of waste, the appropriate management of solid waste and improvement of life quality in the work environment. This agrees with the constitutional principle of efficiency and contributes to savings in the operation of public services.

* Environmental Agenda
In Public Administration

Strategic Objective B

Reduce the direct pressure on biodiversity and promote sustainable use.

Target 5 By 2020, the rate of loss of native habitats is reduced by at least 50 % (in comparison with the 2009 rate) and, as much as possible, brought close to zero, and degradation and fragmentation is significantly reduced in all biomes.

Indicator	Description	Relevance
Indicator B5.1 Fire occurrences and forest fires	The indicator expresses the annual fire occurrences and forest fires.	The frequency of fire occurrences in a territory may be used as indicator of the overtaking of agriculture and anthropic use on native vegetation areas, as long as it is associated to other indicators. In addition to the harmful effects on biodiversity, the exposure of soil to inclement weather (intensifying erosion processes) and compromising water resources, these occurrences also generate and transfer into the atmosphere large quantities of smoke containing aerosols and greenhouse gases, particularly CO^2.
Indicator B5.2 Remaining native vegetation cover	This indicator measures the surface area of native vegetation cover and its representativeness in relation to its original extension in the Legal Amazon (forest formations) and in five Brazilian biomes: Cerrado, Atlantic Forest, Caatinga, Pantanal and Pampas.	Data from the monitoring of vegetation cover in the Brazilian biomes and the understanding of land use and cover dynamics are key information for the development and performance evaluation of policies for deforestation control and prevention, and for territorial planning and regularization. In addition, the indicator allows monitoring the achievement of the Brazilian greenhouse gas emissions reduction target.
Indicator B5.3 Rural properties registered in the Rural Environmental Cadaster	Rural properties registered in the Rural Environmental Cadaster (*Cadastro Ambiental Rural - CAR*), which is a governmental electronic registry at the national level, in which all rural properties are required to enroll.	The CAR promotes the registration and environmental regularization of rural properties, integrating environmental information of rural properties and holdings regarding Permanent Preservation Areas (*Áreas de Preservação Permanente – APP*), restricted use areas, Legal Reserve, remaining patches of forests and other native vegetation formations, and areas under consolidated use, composing a database for control, monitoring, environmental and economic planning, and combat to deforestation.

Target 8 By 2020, pollution, including from excess nutrients, has been brought to levels that are not detrimental to ecosystem function and biodiversity.

Indicator	Description	Relevance
Indicator B8.1 Quality of Inland Waters	The indicator evaluates the quality of untreated water for human use through public water distribution services and the environmental health of the aquatic ecosystem through the Water Quality Index (*Índice de Qualidade da Água – IQA*).	The IQA is a key instrument for diagnosing the environmental quality of inland waters for human use through public water distribution services, as it is particularly sensitive to elements that are characteristic of pollution caused by household sewage, such as thermotolerant coliforms. In addition, the IQA indicates the ecological condition of the aquatic habitat, as it detects organic and nutrient loads such as phosphorus and nitrogen which, when in excessive quantities, may lead to the degradation of the aquatic habitat through eutrophization processes.
Indicator B8.2 State Water Resources Plans	Proportion of the national territory addressed by State Water Resources Plans (*Planos Estaduais de Recursos Hídricos - PERH*), which serve the purpose of guiding water resources management and related public policies.	Water resources plans are instruments of the National Water Resources Policy, prepared at the national, state or watershed level, which guide water management and the implementation of the basis and mechanisms necessary for managing this resource (information system, classification, use permits and water fees). The plans are strategic instruments for guiding the implementation of water resources policies and management systems in coordination with the national water resources plan, which is coordinated by MMA.

Target 9 By 2020, the National Strategy on Invasive Alien Species is fully implemented, with the participation and commitment of states and the elaboration of a National Policy, ensuring the continuous and updated diagnosis of species and the effectiveness of Action Plans for Prevention, Contention and Control.

Indicator	Description	Relevance
Indicator B9.1 Prevention or control of invasive alien species	Native species of the Brazilian fauna and flora included in the National Lists of Threatened Species addressed by instruments with the purpose of contributing to their recuperation and conservation.	The maintenance of biodiversity is important to support life on Earth and ensure the provision of the multiple forms of subsistence. This indicator uses the National Lists as reference and contributes to demonstrate the proportion of threatened species which are addressed in instruments for their recuperation/ conservation, which have the purpose of guiding actions for reducing their risk of extinction and ensuring their sustainable use.

Target 10 By 2015, the multiple anthropogenic pressures on coral reefs and other marine and coastal ecosystems impacted by climate change or ocean acidification are minimized, so as to maintain their integrity and functioning.

Indicator	Description	Relevance
Indicator B10.1 Area of marine environment within protected areas	Proportion of the area of marine environment protected within protected areas included in the National Protected Area Cadaster (*Cadastro Nacional de Unidades de Conservação - CNUC*).	Sustainable development includes the maintenance of biodiversity, both because of its intrinsic value and its importance for the quality of life of the human population, which implies the conservation of Brazilian biomes, including the marine and coastal areas. Protected areas are essential instruments for the protection of socio-biodiversity, in addition to providing ecosystem services that are fundamental to support life on Earth.

Strategic Objective C

Melhorar a situação da biodiversidade protegendo ecossistemas, espécies e diversidade genética.

Target 11 By 2020, at least 30% of the Amazon, 17% of each of the other terrestrial biomes, and 10% of the marine and coastal areas, especially areas or particular importance for biodiversity and ecosystem services, are conserved through protected areas foreseen under the SNUC Law and other categories of officially protected areas such as Permanent Protection Areas, legal reserves, and indigenous lands with native vegetation, ensuring and respecting demarcation, regularization, and effective and equitable management, so as to ensure ecological interconnection, integration and representation in broader landscapes and seascapes.

Indicator	Description	Relevance
Indicator C11.1 Rural properties registered in CAR* * Rural Environmental Cadastre	Rural properties registered in the Rural Environmental Cadaster (*Cadastro Ambiental Rural - CAR*), which is a governmental electronic registry at the national level, in which all rural properties are required to enroll.	The CAR promotes the registration and environmental regularization of rural properties, integrating environmental information of rural properties and holdings regarding Permanent Preservation Areas (*Áreas de Preservação Permanente – APP*), restricted use areas, Legal Reserve, remaining patches of forests and other native vegetation formations, and areas under consolidated use, composing a database for control, monitoring, environmental and economic planning, and combat to deforestation.
Indicator C11.2 Brazilian biomes and area of marine environment within protected areas	Proportion of the Brazilian biomes and area of marine environment protected within protected areas included in the National Protected Area Cadaster (*Cadastro Nacional de Unidades de Conservação - CNUC*).	Sustainable development includes the maintenance of biodiversity, both because of its intrinsic value and its importance for the quality of life of the human population, which implies the conservation of Brazilian biomes, including the marine and coastal areas. Protected areas are essential instruments for the protection of socio-biodiversity, in addition to providing ecosystem services that are fundamental to support life on Earth.

Target 12 By 2020, the risk of extinction of threatened species has been significantly reduced, tending to zero, and their conservation status, particularly of those most in decline, has been improved.

Indicator	Description	Relevance
Indicator C12.1 Threatened species of fauna and flora addressed in instruments for their recuperation and conservation	Native species of the Brazilian fauna and flora included in the National Lists of Threatened Species addressed by instruments with the purpose of contributing to their recuperation and conservation.	The maintenance of biodiversity is important to support life on Earth and ensure the provision of the multiple forms of subsistence. This indicator uses the National Lists as reference and contributes to demonstrate the proportion of threatened species which are addressed in instruments for their recuperation/ conservation, which have the purpose of guiding actions for reducing their risk of extinction and ensuring their sustainable use.

Strategic Objective D

Enhance the benefits to all from biodiversity and ecosystem services.

Target 15 By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced through conservation and restoration actions, including restoration of at least 15% of degraded ecosystems, prioritizing the most degraded biomes, hydrographic regions and ecoregions, thereby contributing to climate change mitigation and adaptation and to combatting desertification.

Indicator	Description	Relevance
Indicator D15.1 Fire occurrences and forest fires	The indicator expresses the number of annual fire occurrences and forest fires.	The frequency of fire occurrences in a territory may be used as indicator of the overtaking of agriculture and anthropic use on native vegetation areas, as long as it is associated to other indicators. In addition to the harmful effects on biodiversity, to the exposure of soil to inclement weather (intensifying erosion processes) and compromising water resources, these occurrences also generate and transfer into the atmosphere large quantities of smoke containing aerosols and greenhouse gases, particularly CO_2.
Indicator D15.2 Remaining native vegetation cover	The indicator measures, through the analysis of satellite images, the extension of native vegetation cover and its representativeness in relation to its original extension in the Legal Amazon (forest formations) and in five Brazilian biomes: Cerrado, Atlantic Forest, Caatinga, Pantanal and Pampas.	Data from the monitoring of vegetation cover in the Brazilian biomes and the understanding of land use and cover dynamics are key information for the development and performance evaluation of policies for deforestation control and prevention, and for territorial planning and regularization. In addition, the indicator allows monitoring the achievement of the Brazilian greenhouse gas emissions reduction target.

Strategic Objective E

Enhance implementation through participatory planning, knowledge management and capacity building.

Target 17 By 2014, the national biodiversity strategy is updated and adopted as policy instrument, with effective, participatory and updated action plans, which foresee periodic monitoring and evaluation.

Indicator	Description	Relevance
Indicator 17.1 National Biodiversity Strategy and Action Plan	This indicator verifies the progress of the necessary steps for updating the National Biodiversity Strategy and Action Plan (NBSAP).	The National Biodiversity Strategy and Action Plan (NBSAP) is the main instrument for implementing the Convention on Biological Diversity – CBD at the national level (article 6th). The preparation of a national biodiversity strategy (or equivalente instrument) is part of the commitments of the Parties to the Convention, as well as the development of instruments to ensure that this strategy is integrated into the planning and activities of all sectors whose activities may cause impacts (both positive or negative) on biodiversity. The indicator focuses a central aspect of Target 17, which is the very progress of the NBSAP updating process.

Target 19 By 2020, the science base and technologies necessary for enhancing knowledge on biodiversity, its values, functioning and trends, and the consequences of its loss, are improved and shared, and the sustainable use of biodiversity, as well as the generation of biodiversity-based technology and innovation are supported, duly transferred and applied. By 2017, the complete compilation of existing records on aquatic and terrestrial fauna, flora and microbiota is finalized and made available through permanent and open access databases, with specificities safeguarded, with a view to identify knowledge gaps related to biomes and taxonomic groups.

Indicator	Description	Relevance
Indicator E19.1 Scope of the National Forest Inventory	Area of the national territory sampled by the National Forest Inventory (*Inventário Florestal Nacional - IFN*).	The indicator directly represents the progress of the National Forest Inventory (IFN). Information generated by the IFN significantly contributes to increase knowledge on biodiversity, particularly regarding the identification, occurrence, distribution and status of arboreal and srhub species, and the use of forest resources by local communities. The IFN is an important database with scientific data to support programs for the conservation and sustainable use of biodiversity and, more specifically, such programs targeting threatened plant species, or plant species of high ecological or commercial value.
Indicator E19.2 Data integration into the Information System on Brazilian Biodiversity – SiBBr	The indicator presents the proportion and number of records belonging to different databases (publishing institutions) on biodiversity, which are systematized and integrated into the Information System on Brazilian Biodiversity (*Sistema de Informação sobre Biodiversidade Brasileira – SiBBr*).	The SiBBr is an online platform developed to encourage and facilitate the publication, integration, access to and use of information on the Brazilian biodiversity, supporting research and informing the process of developing public policies and making decisions related to the conservation and sustainable use of biodiversity. Making available the records on the occurrence of biodiversity is key for various analyses related to the conservation status of biodiversity, gap analysis, definition of priority areas for conservation, territorial planning, among others.

2.6. Mobilization of Resources

The Resource Mobilization Plan is being prepared according to guidance provided under Target 20, which establishes that assessments should be carried out of the resources needed to comply with the commitments established by the National Targets, followed by the mobilization and allocation of resources to allow their implementation.

The NBSAP[92] scope analysis indicates that the information on resources available for the implementation of the Action Plan still require study and detailing, as out of the 52 institutions that contributed actions to the Action Plan, 37 (71%) presented data and information regarding: (i) estimated costs; (ii) resources that have already been invested; and (iii) resources earmarked for action implementation.

With the purpose of fulfilling these commitments, as well as generating consolidated information on environmental expenditures in the country, the federal government has invested efforts to increase the amount of information on public expenditures related to biodiversity.

In this context, the Institute of Applied Economics Research (IPEA) is carrying out the inventory of the federal government environmental expenditures related to the conservation of biodiversity between 2006 and 2015, through the Coordination of Studies on Environmental Sustainability (COSAM). The adopted methodology applies the Classification of Environmental Activities (CEA) developed by the United Nations under the System of Economic and Environmental Accounts (SEEA). The SEEA is a multi-purpose conceptual structure that allows to describe the interactions between economics and the environment. Standardized classification is applied to the inventoried governmental expenditures related to the environment. Once the methodology is designed and validated, the data on the federal government's budgetary and financial execution will be systematically classified and made available to decision makers and the general public.

The research carried out by IPEA with CEA application considers three criteria: expenditures must be recorded in the official budget or in the executing institutions (regarding extra-budget expenses); (ii) collected information must be compatible at the international level with other methodologies for assessing environmental expenditures; and (iii) the data must compose continuous and comparable annual historical series.

This analytical study has the following planned stages: (1) the study's strategic planning; (2) development of the methodology for defining the environmental expenditure parameters; (3) classification of the budget lines for environmental expenditures; (4) establishment of cooperation agreements with the institutions responsible for providing relevant data (MMA and Secretariat of the Federal Budget – SOF); (5) construction of a database containing the classification of environmental expenditures; and (6) data analysis and publication of collected information.

Since 2015, IPEA is working on the definition of a method to classify the environmental activities and on the construction of the database containing the federal budget expenditures. Furthermore, the understanding of the governmental expenditures on biodiversity conservation is crucial for the coherent construction and effective implementation of the NBSAP, constituting an important step to understand the current input of financial resources, identify the needs and define the strategies for the mobilization and smart allocation of these resources.

According to information presented at the International Workshop on Environmental Expenditures – methodological directives and advances in Latin America[93], carried out on March 15 and 16, 2017, at the IPEA headquarters in Brasília, the work was initiated in 2015 with the revision of the national and international methodologies for the identification of environmental expenditures, consultation of references, adaptation of the methodology to be applied and development of a pilot study using 2010 data.

Currently, the database contains the classification of expenditures for all years between 2002 and 2016, and these data are being revised and refined. The research results will be published by IPEA in separate sections. Possibly in 2017 the Discussion Texts on the methodology and the pilot study on 2010 data will be made available, followed by the historical data series from 2012 to 2016.

92 Information obtained from the scope analysis prepared by IUCN.

93 http://www.ipea.gov.br/portal/index.php?option=com_content&view=article&id=29599

The preliminary results shown on the research report Dimensioning and monitoring federal environmental expenditure, published in IPEA'a Regional, Urban and Environmental Bulletin 15, Jul.-Dec. 2016 , indicate that:

"The preliminary results of the ongoing research are demonstrating that, despite the worsening of environmental problems in the country, the governmental environmental expenditures have been proportionally decreasing in the federal budget in the past several years.
The research identified the Federal Environmental Expenditures [FEE] along the period 2004-2014. It was verified that the budgetary expenditures (executed value) earmarked for environmental activities have gradually increased, in absolute values, in the period 2004-2009, going from R$ 1.96 billion in 2004 to R$ 8.27 billion in 2009. In a manner proportional to the total expenditures of the federal government, the FEE have also increased by almost four times, going from 0.12% to 0.43%.
However, starting in 2010 the FEE began to decrease year by year, both in absolute values and in relation to the total expenditures of the federal government. They reached R$ 4.47 billion in 2014, representing only 0.20% of the federal budget expenditures – a reduction of approximately 50% of the values referring to 2009, which was the year presenting the highest expenditures in environmental activities in the 10-year period of 2004-2014.
The preliminary descriptive data analysis indicates the evolution of the FEE along the evaluated period. A more thorough analysis of these expenditures is planned to be carried out through data estimate techniques, to obtain a clear picture of the federal government's expenditure related to the environment."

As presented during the same above-mentioned Workshop on Environmental Expenditures, IPEA's objective is to continue the annual studies and, in partnership with the Economic Commission for Latin America and the Caribbean (CEPAL), carry out a pilot study on the private sector and some Brazilian states, as well as to study specific agendas such as the biodiversity agenda.

In addition, Brazil has recently become a member to the Biodiversity Finance Initiative (BIOFIN). This initiative is carried out by the Ministry of Planning, Development and Administration (MP), in partnership with the Ministry of Finance (MF), the MMA, and the United Nations Development Programme (UNDP). BIOFIN's objective in Brazil is to periodically systematize the governmental expenditures on biodiversity with the purpose of identifying gaps and proposing innovative financing mechanisms for the conservation and sustainable use of biodiversity. Thus, using the consolidation of governmental expenditures on biodiversity conservation as a basis, an assessment is being planned of the financing needs to achieve the National Targets. This assessment will be the basis for the preparation of the Resource Mobilization Plan.

This process will include a stage for the compatibilization of the classification key of the CEA methodology, used by IPEA, with the key proposed by BIOFIN. In addition, the following actions are planned, among others: (i) carry out workshops with the participation of governmental agencies and experts to discuss and validate the applied methodology; (ii) assess the opportunities for including markers related to expenditures on biodiversity in the budgetary classifications; and (iii) analyze the potential revenues (or avoided costs) and implications of the implementation of the new financing mechanisms or of the revision of existing mechanisms. For this, BIOFIN in Brazil intends to promote the engagement of various actors in the resource mobilization theme, and propose concrete solutions for strengthening financing mechanisms for biodiversity conservation.

Despite the reduction in the federal budget observed in the past several years, the resources allocated to MMA and its associated institutions has increased by 14% in real terms between 2010-2014, although this remains one of the smallest allocations among the federal agencies in volume of resources.

According to OECD (2015), in 2014 the combined budget of all environmental institutions amounted to R$ 3.6 billion, representing 0.15% of the federal budget. It should be considered, however, that given the cross-cutting character of the theme, other federal ministries and agencies also contribute with a large portion of the governmental expenditure on the environment.

Specifically referring to biodiversity-related programs, between 2010 and 2014 the federal budget expenditure increased by approximately 50% in real terms, which is more than the 14% for environmental management. ICMBio is the agency managing most of this budget, particularly the resources for the management of federal protected areas (OECD, 2015). It should also be noted that the potential resources originating from

94 http://repositorio.ipea.gov.br/bitstream/11058/7118/1/BRU_n15_Dimensionamento.pdf; partial free translation presented in text.

the Federal General Budget through parliamentary amendments may represent a large financial increment to the initiatives targeting biodiversity conservation, expressed in the Federal Multi-Year Plan under the 2018 program – Biodiversity. Several budgetary and extra-budgetary funds have contributed to the financing of programs for the conservation and sustainable use of biodiversity. Examples of this are the National Fund for the Environment, which has paid R$ 230 million since its creation, the Protected Areas Fund created to support the long-term financial sustainability of protected areas, and the National Forest Development Fund, managed by the Brazilian Forest Service to promote the development of forestry activities (OECD, 2015).

Among these, one of the most important is the innovative Amazon Fund, created in 2008 for investments in forest conservation and sustainable use, and for the prevention and monitoring of deforestation. The Fund is managed by the National Bank for Economic and Social Development – BNDES in coordination with MMA. Most of its resources originate from international donors, particularly Norway and Germany, but also from companies such as Petrobras. The total contributions received between 2009 and early 2015 amounted to over R$ 2 billion (OECD, 2015).

The funding of projects with resources from the Global Environment Facility (GEF) is also part of the federal government's strategy to comply with its commitments under the CBD. Comparatively, Brazil holds one of the largest portfolios of GEF projects in the world, when all thematic lines are considered, but with a marked focus on biodiversity (GEF, 2012). Brazil participates in the GEF since its pilot phase in 1991. It is estimated that, by 2013, 51 national projects were financed, totaling US$ 414 million, 43% of which for biodiversity. In addition to the national projects, Brazil participated in 34 regional and global projects, representing an additional total of US$ 222 million (GEF, 2013b).

In addition to supporting the development of the first National Communication to the CBD, the GEF as the financial mechanism of the Convention has contributed to its implementation after the ratification by Brazil. Many GEF-supported projects on biodiversity have been contributing to the implementation of the legally regulated biodiversity-related themes in the country, as well as to the evolution of the legal framework, and to the structuring of an institutional framework focused on the implementation of biodiversity policies.

New GEF-supported projects for implementation in the next several years are being negotiated by SBio/MMA, part of which are currently at an advanced phase of preparation, submitted for approval. For implementing biodiversity conservation and sustainable use actions, in addition to GEF resources SBio/MMA also benefits from bilateral cooperation, particularly with the German and United States of America governments.

All of this progress related to actions for biodiversity conservation in Brazil for which SBio/MMA is responsible includes Brazilian governmental investments in the form of direct or indirect costs, but which indubitably greatly contribute to supranational objectives, focusing on the Brazilian contribution and responsibility for the increase and improvement of the efforts for the conservation of biodiversity and ecosystems at the global level.

2.7. External Communication

The still ongoing technological revolution in communications initiated in the 1990's changed the structure and connections in communication. Digital technology has also brought the convergence of medias which, associated to connectivity and interactivity, radically changed the current forms of communication.

The use of the internet as the "communication fabric of our lives, for work, personal connection, construction of social networks, information, entertainment, public services, politics, and even religion" (CASTELLS, 2015)[95] has gained scale with the greater availability of infrastructure for mobile telephone services and broad band internet, which caused a new revolution with the race to personal mobile devices.

The different possibilities for communication and interactivity are now in our hands. According to research developed by Nielsen Ibope and published by the Valor Econômico newspaper, 125 million Brazilians used cell phones in 2015, where the number of Brazilians using smartphones reached 76.1 million in the third quarter of 2015 – a 48% increase in comparison to the same period in 2014[96].

Innovations resulting from digital technology have unleashed audience segmentation, the fragmentation of channels, and the insertion in global networks. Associated to this, is the need to diversify written and visual contents, interactivity, and the possibility to engage groups around themes of common interest, including for making pressure for changes or new public policies.

In a country with the Brazilian territorial dimensions, a population over 207 million people[97] and regional, cultural and economic diversity, public communication with society is a challenge to be faced with cooperation, innovation and inclusion of groups that are not yet directly or strongly engaged in the National Biodiversity Strategy and Action Plan.

Under the NBSAP context, to achieve an effective and meaningful communication, this must be more strongly associated to environmental education, environmental and health sciences, as well as other specific fields of knowledge. It will be essential to implement different strategies that may promote knowledge dissemination, make science popular, build citizen awareness and, above all, engage the population in the conservation and sustainable use of biodiversity through contents connected to their reality while promoting the insertion in the national and global context of the NBSAP.

While communication must consider the strong insertion of Brazilian people in the digital world and use the resources provided by the new digital and network technologies, it should also seek solutions to reach those populations living in isolated areas where access to energy and telecommunications infrastructure is still severely limited. This will require a detailed inventory of these audiences and the organization of different outreach strategies, depending on the public to be addressed. In particular, communication should seek to highlight the diversity and richness of the work and experiences of those peoples living in rural environments that are still outside the current process of communication inclusion, promoting inclusion and the exchange of experiences and learning.

2.7.1. Public Opinion Polls

One of the challenges every national biodiversity strategy faces is the implementation of Target 1 – By 2020, at the latest, Brazilian people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably.

Brazil has a history of polls that evaluate the interest and understanding of the Brazilian population on environmental and biodiversity themes. In 2006, the poll on "What do Brazilians think about biodiversity" compared data of studies carried out in 1992–1997–2001 under the theme "What do Brazilians think about the Environment and Sustainable Consumption". These comparative studies draw a picture of Brazil from the environmental knowledge perspective, identifying regions, social classes, gender and education level, as well as the evolution of ecological awareness in the country. The joint efforts for implementing comparable polls involved the Religion Studies Institute (*Instituto de Estudos da Religião – ISER*), the Ministry of the Environment, the Brazilian Fund for Biodiversity, WWF-Brazil, the Natura corporation, and the Vox-Populi Institute[98].

Another poll, the Biodiversity Barometer, provides insights into the evolution of biodiversity awareness and its relationship with consumption. This poll has been carried out since 2009 by the Union for Ethical BioTrade

95 O Poder da Comunicação [The Power of Communication]. CASTELLS, 2015
96 http://www.valor.com.br/empresas/4327844/numero-de-usuarios-de-smartphones-no-brasil-cresce-48-no-3-trimestre
97 http://www.ibge.gov.br/apps/populacao/projecao/
98 http://www.eco21.com.br/textos/textos.asp?ID=1363

(UEBT) covering nine countries, including Brazil, and has also contributed to measure the first CBD target on awareness of biodiversity values[99].

Public opinion polls are a strong instrument to evaluate the effectiveness of communication, engagement, and public policies processes. Studying the polls already carried out and the establishment of partnerships to implement new editions providing continuity to these studies should be part of a strategy for monitoring the achievement of Target 1. It would also be opportune to advance the inventory of polls focusing on specific sectors with the support of representative institutions, such as the business sector, agribusiness, and family agriculture. Results from these studies may provide a basis for the debate on the actions and public policies necessary to better engage society in the support of biodiversity conservation actions.

2.7.2. Environmental Education, Capacity Building and Volunteering

Law no 9.795/1999[100] defines the National Environmental Education Policy in Brazil and establishes the environmental education as an essential and permanent component of the national education, requiring its presence and coordination at all levels and modes of the education process, both formal and informal.

The MMA promotes the continuous qualification of educators and of society through face-to-face or distance-learning courses, the promotion of sustainability in family agriculture, the organization of socio-environmental video shows, and the production of guiding materials on the socio-environmental theme[101].

One example is the National Program for the Qualification and Capacity Building of Environmental Managers and Sisnama Counsellors (PNC), established by Administrative Ruling no 286/2005 as a permanent program to address the concerns of states and municipalities about the qualification of environmental management. The program's overall objective is to build the capacity of managers, public servants and environmental technical staff, and it seeks to structure policies under the federation context, consolidating the shared environmental management, which involves the responsibility and empowerment of agencies and institutions at the three levels of government – federal, state and municipal.

From 2006 to 2012, approximately 1,700 municipalities and 7,600 participants (municipal managers, municipal staff, technical staff from city councils and counsellors) were benefitted by the program. In 2017, the course "Structuring the Municipal Environmental Management" was launched, with the objectives of supporting municipalities in their institutional structuring based on socio-environmental-territorial principles, disseminating knowledge, and promoting critical reflection on issues that intend to improve public environmental management[102].

Another available instrument is comprised by the courses targeting staff who develop and implement governmental policies related to protected areas (PA) at the federal, state and municipal level, which also reach members of civil society organizations, national or international public and private institutions, members of Advisory and Management Councils of PAs, and members of networks, forums, committees and councils that work on the theme[103].

In Brazil, the perception still holds that the responsibility for protecting nature falls entirely on governmental authorities. It is fundamental to broaden this vision and to create an environmental awareness of shared and collaborative responsibility to support the advancement of the protection and sustainable use of biodiversity. The voluntary work potential could be further encouraged and associated to environmental education and communication strategies.

The Chico Mendes Institute for Biodiversity Conservation (ICMBio) has a Volunteering Program launched in 2016, which counts with the support of non-governmental organizations and networks such as WWF, IPÊ, SOS Mata Atlântica and Pro-PAs Coalition. This initiative seeks to bring people closer to the management of federal protected areas, which are responsible for maintaining biodiversity, ecosystem services and the livelihoods of traditional populations. The interest of this initiative is to significantly broaden the expectations of disseminating the program and receiving volunteers at the protected areas, research and conservation centers and other institutional units under ICMBio[104].

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99 http://ethicalbiotrade.org/biodiversity-barometer/
100 http://www.planalto.gov.br/ccivil_03/leis/L9795.htm
101 http://www.mma.gov.br/educacao-ambiental
102 Direct communication by MMA.
103 Direct communication by MMA.
104 http://www.icmbio.gov.br/portal/ultimas-noticias/20-geral/8800-icmbio-e-wwf-brasil-avaliam-novas-parcerias

2.7.3. Target Audience

The institutions of the eight segments currently engaged in the NBSAP comprise a significant network to reach specific audiences within the Brazilian society, as shown in Figure 12. Strong coordination and mobilization among the group of institutions that voluntarily adhered to the NBSAP is needed to increase the intensity of communication on biodiversity.

In addition, it will be necessary to engage other groups and sectors of society, identify the specific needs of traditional communities and indigenous peoples, involve representatives of these groups, and carry out communication to address these needs, particularly seeking to bring attention to what is being carried out locally.

However, it is also necessary to apply efforts to engage other specific target audiences and their representative entities (Table 10). In addition to these, other external audience segments may be identified along the implementation of the NBSAP.

Figure 12: Thematic network of the 8 segments adherent to the NBSAP.

Table 10: External Communication: Priority audiences to be reached.

Specific Audiences	
Agriculture Segment	Family Rural Producers
	Agriculture and Livestock Producers
	Agriculture and Livestock Agents
Education Segment	Teachers
	Students – children and youth
	University Professors and Students
Federal Governmental Legislative Body	Deputies and Senators
	Legislative Advisers
State Governmental Executive Body	Governors
	Secretaries of the Environment
	Secretaries of Planning
	Secretaries of Education
Municipal Governmental Executive Body	Mayors
	Secretaries of the Environment
	Secretaries of Planning
	Secretaries of Education

2.7.4. The External Communication Strategic Lines and Objectives

Taking as reference the NBSAP Mission and Vision, the role of communication to external audiences will be to promote the dissemination of information that increase knowledge on biodiversity, its uses and the need to conserve it, as well as on the NBSAP, its importance and implementation status. The overall objective of external communication is to promote and carry out engagement strategies and actions that demonstrate the actual support and commitment of people and the various sectors of society to biodiversity protection.

The National Biodiversity Strategy and Action Plan encompasses a significant diversity of audiences and specific needs. Thus, the following Strategic Lines of Communication are proposed for the NBSAP:

1. Produce and disseminate knowledge – Associate communication with environmental education, and environmental and health sciences, promoting the dissemination of knowledge, the popularization of science, and the awareness and engagement of citizens in the conservation and sustainable use of biodiversity, with contents that bring biodiversity themes closer to the reality of the various population groups.

2. Research, identify needs and propose the means – Through studies and research, understand the perception of the Brazilian population about biodiversity and the environment, identify knowledge gaps and propose actions to further and better engage Brazilians in actions for the protection and sustainable use of biodiversity.

3. Promote communication that is integrated and inclusive, and that encourages and supports the extensive network of NBSAP implementing partners and their respective audiences – The institutions engaged in the NBSAP and their respective audiences comprise an extensive network, which should be strategically employed to promote strong actions in favor of biodiversity and its sustainable use, with the identification of synergies and opportunities for joint actions.

The Strategic Objectives in Communication, presented below on Table 11, shall be unfolded into related actions that can be reported as contributions to the achievement of targets. Ideally, the proposed strategic objectives in communication presented below should be discussed and confirmed through consultation with the institutions engaged in the NBSAP.

Table 11: Objectives in Communication related to the Strategic Objectives for Biodiversity.

Strategic Objectives for Biodiversity and Communications Objectives
Biodiversity Strategic Objective A: Address the underlying causes of biodiversity loss by mainstreaming biodiversity considerations across government and society.
Communication Objective A.1: By 2020, the Brazilian people, in its various segments, will have been made aware and have engaged in the conservation of biodiversity through capacity building programs on environmental education, projects for the popularization of science, communication actions and campaigns, respecting cultural diversity and the different needs of specific audiences.
Communication Objective A.2: By 2020, public opinion polls will be carried out to measure Brazilian people's knowledge and engagement on themes related to biodiversity, its uses and protection, to inform public policies related to biodiversity.
Biodiversity Strategic Objective B: Reduce the direct pressures on biodiversity and promote sustainable use.
Communication Objective B.1: By 2020, the rates of deforestation and habitat loss, and their relation to the loss of biodiversity, will be broadly disseminated by the NBSAP implementation partners with the purpose of increasing awareness on the negative effects of the loss of natural habitats and increasing engagement to promote the reduction of the ecological footprint of the country's individual persons and various sectors.
Biodiversity Strategic Objective C: Improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity.
Communication Objective C.1: By 2020, the biodiversity inventories in Brazilian protected areas and their dependence on healthy and complete ecosystems will be periodically disseminated with the purpose of enlightening the population about the value of protected areas and their biodiversity, seeking to engage the population in the support to conservation by means of participation in volunteering work programs and touristic visitation.
Communication Objective C.2: The National Lists of Threatened Species and species protection actions will be periodically disseminated, encouraging the engagement of the population in the protection of species, through information campaigns and support programs.
Biodiversity Strategic Objective D: Enhance the benefits to all from biodiversity and ecosystem services.
Communication Objective D.1: By 2020, different actors/groups will be encouraged to support and promote the restoration of ecosystems that provide essential services, as well as the recuperation of degraded ecosystems for climate change mitigation and adaptation and implementation of the Nagoya Protocol (access and benefit sharing).
Biodiversity Strategic Objective E: Enhance the implementation through participatory planning, knowledge management and capacity building.
Communication Objective E.1: By 2017, the set of main impact indicators for NBSAP implementation will be identified, which may be employed as dissemination and communication benchmarks on the strategy's progress, on the protection of biodiversity in the country and on target achievement, and a joint plan will be established for this dissemination on May 22, the International Day for Biological Diversity.
Communication Objective E.2: By 2018 the technical detailing and the necessary due diligence will have been carried out to make operational the production and dissemination of the identified indicators.
Communication Objective E.3: Strengthening PainelBio and its Thematic Groups as a participatory and collaborative forum for discussing the National Biodiversity Strategy and Action Plan 2011-2020.


Rui Faquini

3. Action Plan

The Action Plan was initially developed with actions under the responsibility of the Secretariat of Biodiversity – SBio/MMA, to which were added actions under the institutions and programs that engaged in the NBSAP construction process.

The list of contributing institutions and programs is presented in Annex I. The NBSAP Action Plan is presented in Annex II.

Within the Action Plan structure, the contributing (adherent) institutions and programs are grouped according to their respective work segment (Figure 13):

- Group 1: MMA Secretariats (including SBio);
- Group 2: Agencies Connected to MMA;
- Group 3: Ministries, Special Secretariats and Public Corporations;
- Group 4: Institutes/Institutions (including those dedicated to research) Connected to Ministries;
- Group 5: State (OEMAs) and Municipal Environmental Agencies;
- Group 6: Civil Society (NGOs and similar organizations)
- Group 7: Financing Agents and Private Sector;
- Group 8: Academia (Long-Term Ecological Research - PELD and Biodiversity Research Programs - PPBio)

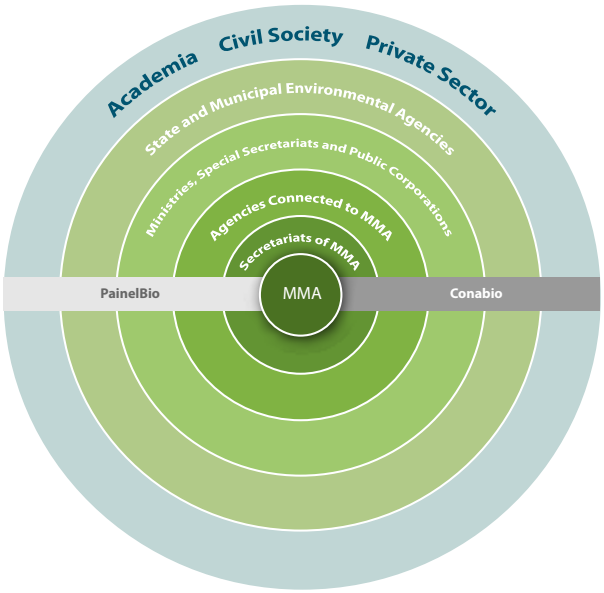

Figure 13: Work segments of the sectors of society engaged in the NBSAP construction and implementation process.

3.1. Actions that comprise the NBSAP Action Plan

3.1.1. Actions under SBio/MMA

The SBio/MMA Strategic Planning is organized around four priority agendas (genetic heritage, species, ecosystems and protected areas), which are the structuring pillars within which are distributed the main actions to be developed under SBio coordination (Table 12).

As in the first version of the NBSAP, submitted to CBD in August 2016, actions within the Action Plan are aligned to the SBio strategic planning, directing the National Targets under its responsibility in the establishment of commitments for 2020 based on its institutional and financial capacity.

Table 12: SBio priority agendas and the list of its strategic actions to achieve the National Targets: D = Direct, I = Indirect.

SBio priority agendas	Planned Actions
A. Conserve the Brazilian species minimizing the threats and risk of extinction. I = (1,2,3,4) and D= (6,9,12)	4. National Action Plans for the conservation of threatened species. 5. Fisheries Shared Management System. 6. National Program for the Control of Invasive Alien Species.
B. Conserve Biodiversity in Protected Areas. D = (5, 10 and 11)	7. National Strategy for Consolidating Protected Areas. 8. Evaluation of the ecological representativeness of protected areas to identify conservation gaps and contribute to the Aichi/CBD Target 11. 9. Development and implementation of the SNUC Communication Plan 10. Increase protected areas management capacity. 11. Evaluation of the conservation status of protected areas. 12. Updating the Information System of the National Protected Areas Cadaster.
C. Conserve Ecosystems and promote Sustainable Landscapes Management. I = (1,2,3,4) D= (5,7, 10,11,14,15)	13. Program on the Environmental Monitoring of Brazilian Biomes - PMABB. 14. Updating the Priority Areas for the conservation of biodiversity in Brazilian biomes and in the coastal and marine zone. 15. National Plan for the Recuperation of Native Vegetation - Planaveg.
D. Lead the National Strategy for Developing the Economics of Genetic Heritage and Associated Traditional Knowledge. I = (1,2,3,4) D= (16,18)	16. Regulation of the legal framework (Law nº 13.123/2015) on access to genetic heritage and associated traditional knowledge and benefit sharing. 17. National Plan for Awareness Raising and Strengthening of Capacity for access to genetic heritage and associated traditional knowledge and benefit sharing. 18. Intelligence System and traceability of information on genetic heritage and associated traditional knowledge. 19. Development and strengthening of production chains that are users of genetic heritage and associated traditional knowledge. 20. Strategy to promote the Brazilian model for access and benefit sharing in Brazilian and multilateral forums.

3.1.2. Actions under institutions adherent to the NBSAP

The Action Plan also reflects the effort for structuring and strengthening the NBSAP at the national level by including the commitments established by the other sectors of society and governmental institutions, and provides continuity to the participatory construction process initiated with the definition of the National Biodiversity Strategy, and followed by the Dialogues on Biodiversity process, the development of contributions for a Governmental Action Plan for the Conservation and Sustainable Use of Biodiversity, the creation of PainelBio, the participatory construction of indicators for the national targets, and the structuring of the NBSAP document.

Other steps will be necessary to achieve the consolidation of the Action Plan, such as: the refinement and adoption of indicators for monitoring the National Biodiversity Targets, the expansion of the Action Plan with a national focus, through the registration of new adherences and contributions, and the presentation of the NBSAP to the Conabio.

During the process of developing this second version of the NBSAP, 231 institutions were invited to join, sending their contributions. From this universe, 66 institutions contributed both to the text and to the Action Plan, while 52 contributed only with actions. The Action Plan received approximately 700 additional actions in the period from October to December 2016, distributed among the 20 National Targets. After the first revision to eliminate redundancies, in April 2017, the Action Plan now counts with 721 actions in total (Figure 14), of which 57 are under SBio and 664 under the other adherent institutions.

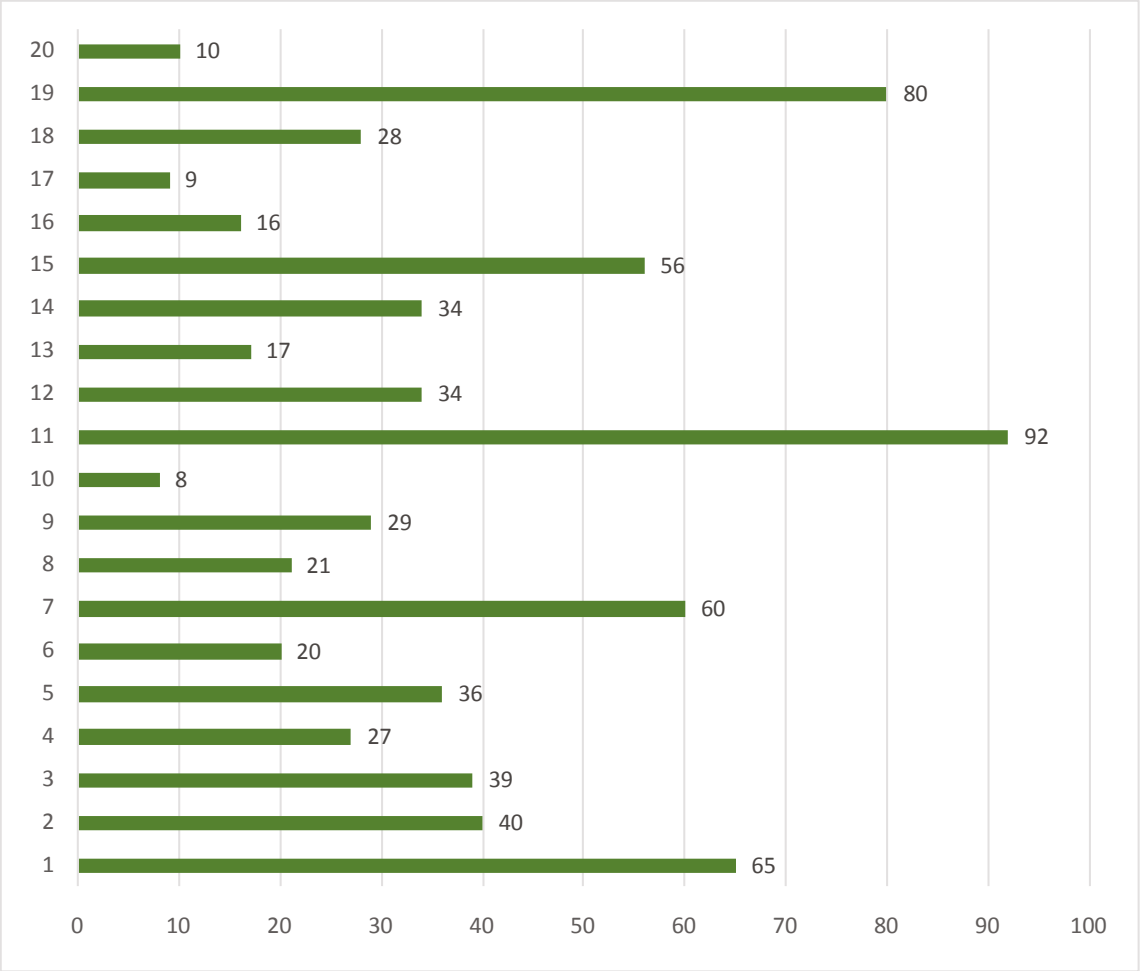

Figure 14: Distribution of actions in relation to the 20 National Targets of the NBSAP.

3.2. Monitoring of the Action Plan implementation process

The Monitoring Plan of the Implementation Process for actions under the NBSAP Action Plan was built with the intention of offering a roadmap and minimum framework of process monitoring indicators to keep track of the status of implementation of actions under the Action Plan and of the overall process of NBSAP implementation.

The number of NBSAP adherent institutions and the volume of actions to be carried out clearly indicate the challenge of monitoring the implementation process of the National Strategy, measuring and evaluating the achieved results, carry out adequate communication among the Action Plan implementing partners, and presenting the results to Brazilian society and to the CBD.

The collaborative work methodology among the various segments has been successful in its propositions and recommendations, but it is considered that it can be enhanced by strengthening social participation with the support of PainelBio also in NBSAP implementation and the monitoring of the process.

To initiate the process of monitoring implementation of the Action Plan, the following minimum requirements, presented on Table 13 below, need to be fulfilled:

Table 13: Minimum requirements identified for initiating the process of monitoring the implementation of the Action Plan.

Requirements for the Process of Monitoring the Implementation of the NBSAP Action Plan	
TECHNICAL REQUIREMENTS	• Development of an information system/database to keep track of the implementation of the contributions to the Action Plan and their results; • Inclusion of indicators of process progress in the Action Plan's electronic information system/database, such as actions that are 'not initiated', 'under implementation', and 'implemented', as well as room for recording results and lessons learned; • Definition of responsibilities for monitoring the implementation process of the Action Plan until 2020, and for evaluating results and adjusting and/or updating the Action Plan.
HUMAN REQUIREMENTS	• Establishment of a specific team within MMA to operate as the executive secretariat of the NBSAP, which will implement the monitoring plan and the communication plan, as well as all other activities of process coordination and the mobilization of strategic actors; • Staff hours of MMA staff assigned to the NBSAP Working Group; • Hiring of technical services for the development of the information system/database according to the specifications required by the process; • Hiring of technical services, studies or specialized research (e.g., public opinion polls), or the analysis and evaluation of results from the implementation of the Action Plan.
FINANCIAL REQUIREMENTS	• Financial resources for the development, implementation and maintenance of the Action Plan's electronic information system/database; • Definition of the costs of implementation for NBSAP monitoring plans; • Fund raising; • Resources allocation.

3.2.1. Process Indicators for Monitoring the Status of Actions and NBSAP Implementation

Table 14 below presents the proposed indicators and respective information sources for monitoring the implementation of the NBSAP Action Plan.

Table 14: Process indicators proposed for monitoring the status of Actions and NBSAP Implementation.

Process Indicators	Information source
Specific Indicators: for monitoring action implementation	
Progress status of actions: • Not initiated • Under implementation • Implemented	Adherent institutions and institutions implementing the actions included in the Action Plan
Overall Indicators: for monitoring the overall implementation of the NBSAP	
• Number of technical cooperation agreements established between SBio/MMA and institutions adherent to the Action Plan and to PainelBio, formalizing mutual cooperation processes (to formalize the continuous institutional commitment for the implementation of the NBSAP); • Electronic information system/database designed, developed and implemented to keep track and monitor the Action Plan; • Number of adherent institutions and programs using and feeding the Action Plan's electronic information system/database; • Initial, mid-term and final reports on the implementation of the Action Plan prepared and disseminated.	MMA/NBSAP Working Group
• Decisions and Resolutions related to NBSAP implementation; • Necessary instruments created to promote inter-institutional and international cooperation for the implementation of the PNB and CBD principles and directives in the country; • Number of actions for the capacity building of human resources, institutional strengthening and public awareness identified, proposed and promoted.	Conabio[105]
• Number of institutions Adherent to the Action Plan; • Number of information inputs and updating events on implemented actions recorded in the electronic information system/database; • Number of communications on the implementation progress of proposed actions delivered to MMA.	Institutions Adherent to the Action Plan
• Number of thematic groups with defined coordinator and representative, and operating as a community of interest on the Biodiversity Strategic Objectives; • Number of joint actions, cooperation agreements among adherent institutions or other instruments created for the development of actions aiming at the achievement of the National Biodiversity Targets.	PainelBio

105 According to Article 6 of Decree no 4.703, of 21 May 2003, available at http://www.planalto.gov.br/ccivil_03/decreto/2003/D4703.htm

A continuous process is required for monitoring the implementation of the Action Plan (Figure 16), structured according to the following phases: preparation, implementation, analysis and reporting.

Figure 15: Phases of the implementation and monitoring process.

3.2.2. PainelBio – opportunities for collaboration and support to monitoring

The consolidation of PainelBio and its Thematic Groups as forums for technical discussion, advice and support to the implementation and monitoring of the NBSAP is an opportunity to broaden the engagement of civil society. Among the benefits that may result from this participation the following are highlighted:

- Reinforce the coordination capacity around themes of interest;
- Establish institutional contacts and partnerships;
- Create synergy and increase the coordination and networking capacity;
- Coordinate efforts and optimize actions, human resources and materials to achieve the effectiveness of actions.

The PainelBio and its Thematic Groups can collaborate mainly through the following actions:

- Mobilization and communication among adherent institutions to strengthen NBSAP implementation;
- Mobilization and communication among adherent institutions to keep track of Action Plan implementation;
- Mobilization of other actors and/or potential partners for increasing adherence and engagement by other sectors of society;
- Provision of technical advice through studies and research, followed by proposals and recommendations to MMA;
- Carry out meetings and debates on relevant aspects related to the progress of NBSAP implementation;
- Establishment of inter-institutional connections to increase the scope of the Action Plan;
- Communications to society about the results of analyses and debates.

The Thematic Groups are currently related to the five Biodiversity Strategic Objectives and to the gender theme (Box 3). The composition of the Thematic Groups involves representatives from various institutions adherent to the NBSAP from different segments – public, private, academia and third sector –, where some institutions are also members of the Conabio. The PainelBio Thematic Groups would periodically discuss pending themes and issues and would present proposals and recommendations to MMA to advance the implementation of the NBSAP.

3.3. Internal Communication

The process of developing the NBSAP involved various actors from different segments of society. A strong and strategic internal communication among the institutions involved in the implementation of the Action Plan must be promoted to increase cohesion, ensure the efficient flow of the processes for monitoring NBSAP implementation, optimize results and outreach communication to other groups that are not yet directly involved in the process.

Internal communication involves the group comprised by MMA and institutions adherent to the NBSAP and that contribute to the Action Plan, which are the Implementing Partners (Table 15), as each is responsible for some type of action related to the Strategy and/or to the Plan, and all, each in its own way, contribute to the implementation of the Action Plan and the achievement of the National Targets.

However, other institutions and social segments may yet join the group, following the identification of opportunities, specific needs or voluntary adherence.

The institutions involved in the implementation of the NBSAP are listed in Table 15 below, organized by segment and by type of contribution already provided (to the NBSAP text and/or to the Action Plan)[106].

Table 15: Internal communication: List of partner institutions, segment and role.

Internal Communication		
Implementing Partners		
Segment	**Partner**	**Role**
1 - MMA Secretariats	Secretariat of Biodiversity	Implementation Coordinator
	Secretariat of Extractive Activities and Sustainable Rural Development	Contributors/Adherent to the Action Plan
	Secretariat of Institutional Coordination and Environmental Citizenship	
	Secretariat of Climate Change and Forests	
	Secretariat of Water Resources and Environmental Quality	
2 – Agencies connected to MMA	National Water Agency	Contributors/Adherent to the Action Plan
	Chico Mendes Institute for Biodiversity Conservation	
	Rio de Janeiro Botanical Garden	
	Brazilian Forest Service	
3 - Ministérios, Secretarias Especiais e Empresas Públicas	Brazilian Agricultural Research Corporation	Contributors/Adherent to the Action Plan
	Ministry of Science, Technology, Innovation and Communication	
	Ministry of Health	
	Ministry of Tourism	
	Ministry of Agriculture, Livestock and Supply	Contributors to the text of the Strategy
	Ministry of Planning, Development and Administration	

106 The number of institutions and programs that contribute to the NBSAP varies according to the expansion of the adherence process.

Internal Communication		
Implementing Partners		
Segment	**Partner**	**Role**
4 - Institutes/ Institutions connected to Ministries	National Council of Scientific and Technological Development	Contributors/Adherent to the Action Plan
	Joaquim Nabuco Foundation	
	National Indigenous Peoples Foundation	
	Oswaldo Cruz Foundation	
	Institute of the National Historical and Artistic Heritage	
	National Institute of Technology	
	Brazilian Geological Service	Contributor to the text of the Strategy
5 – State Environmental Agencies	Santa Catarina Environment Foundation	Contributors/Adherent to the Action Plan
	Rio Grande do Sul Henrique Luís Roessler State Foundation for Environmental Protection	
	Roraima State Foundation of the Environment and Water Resources	
	Amazonas Institute of Environmental Protection	
	Minas Gerais State Institute of Forests	
	Rio de Janeiro State Environmental Institute	
	Mato Grosso do Sul State Secretariat of Environment and Economic Development	
	Goiás State Secretariat of the Environment, Water Resources, Infrastructure, Cities and Metropolitan Affairs	
	São Paulo State Secretariat of the Environment	
	Amazonas State Secretariat of the Environment	
	Paraná State Secretariat of the Environment and Water Resources	
	Tocantins Secretariat of the Environment and Water Resources	
	Rio Grande do Sul State Secretariat of the Environment	
	Ceará State Secretariat of the Environment	

Internal Communication		
Implementing Partners		
Segment	**Partner**	**Role**
6 - Civil Society (NGOs)	Agroícone	Contributors/Adherent to the Action Plan
	Northeastern Environmental Research Center	
	Conservation International	
	Biodiversitas Foundation	
	Boticário Group Foundation for the Protection of Nature	
	Neotrópica Foundation of Brazil	
	ICLEI SAMS – Secretariat for South America	
	Mamirauá Institute of Sustainable Development	
	Araçá-Piranga Socio Environmental Center	
	Atlantic Forest Biosphere Reserve	
	International Union for the Conservation of Nature	
	Corporate Council for Sustainable Development	Contributors to the text of the Strategy
	Brazilian Fund for Biodiversity	
	Society Population and Nature Institute	
	Oceana Brasil	
7 – Financing Agencies and Private Sector	Financing Agency for Studies and Projects	Contributor/Adherent to the Plan
8 - Academia	Western Amazon Network/INPA	Contributors/Adherent to the Plan
	Atlantic Forest Network 1/UERJ	
	Atlantic Forest Network 1/UFPR	
	PELD Site: Southern Grasslands	
	PELD Site: Atlantic Forest and Lake System of the Medium Doce River-MG	
	PELD Site: Northern Pantanal, Site 12	
	PELD Site: Emas National Park – Site 13	
	PELD Site: Floodplains of the Upper Paraná River – Site 6	
	PELD Site: Cerrado – Amazon Forest Transition - Site 15	

Internal communication will be a challenge given the large number of participating institutions and the diversity of segments and proposed actions. The Ministry of the Environment must carry out strong coordination and mobilization as a link between the implementing level and the other partners.

Under this context, the Brazilian Panel on Biodiversity and its Thematic Groups have an important role and contribution in the support to internal communication and flow of information related to the Action Plan, seeking to establish mutual actions of Coordination, Cooperation and Communication.

3.3.1. Objectives of the Internal Communication

The objectives of the Internal Communication are as follows:

- Promote the alignment and cohesion among the NBSAP implementing partners;
- Disseminate relevant information to each participant and to the group as a whole, at a defined periodicity;
- Encourage the information flow and the sharing of data related to the planned actions, to monitor the implementation of the Action Plan;
- Promote transparency;
- Strengthen the processes of identification of potential association and joint dissemination of information to the external audiences.

It is important to consider that each institution adhering to the NBSAP directly interacts with its target audiences, and that good communication among institutions will strengthen the dissemination of bulletins, news and contents related to the protection of biodiversity.

INSTITUTION OR PROGRAM		ACRONYM	State
1 - MMA Secretariats	Secretariat of Biodiversity	SBio	-
	Secretariat of Institutional Coordination and Environmental Citizenship	SAIC	-
	Secretariat of Extractive Activities and Sustainable Rural Development	SEDR	-
	Secretariat of Climate Change and Forests	SMCF	-
	National Water Agency	SHRQ	-
2 - Agencies connected to MMA	Chico Mendes Institute for Biodiversity Conservation	ANA	-
	Rio de Janeiro Botanical Garden	ICMBio	-
	Brazilian Forest Service	JBRJ	-
	State Environmental Agency	SFB	-
3 – State Environmental Agencies	Santa Catarina Environment Foundation	CPRH	PE
	Henrique Luís Roessler State Foundation for Environmental Protection	Fatma	SC
	State Foundation for the Environment and Water Resources	Fepam	RS
	Amazonas Institute for Environmental Protection	Femarh	RR
	State Environmental Institute	IPAAM	AM
	State Institute of Forests	INEA	RJ
	State Secretariat of the Environment and Economic Development	IEF	MG
	State Secretariat of the Environment, Water Resources, Infrastructure, Cities and Metropolitan Affairs	Semade	MS
	Secretariat of the Environment	Secima	GO
	Amazonas State Secretariat of the Environment	SMA	SP
	State Secretariat of the Environment and Water Resources	Sema	AM
	Secretariat of the Environment and Water Resources	Sema	PR
	Secretariat of the Environment and Sustainable Development	Semarh	TO
	Secretariat of the Environment	Sema	RS
	Brazilian Agricultural Research Corporation	Sema	CE
4 - Ministries, Special Secretariats and Public Corporations	Ministry of Agriculture, Livestock and Supply	Embrapa	-
	Ministry of Science, Technology, Innovation and Communication	MAPA	-
	Ministry of Planning, Development and Administration	MCTIC	-
	Ministry of Health	MP	-
	Ministry of Tourism	MS	-
	Ministério do Turismo	Mtur	-

INSTITUTION OR PROGRAM		ACRONYM	State
5 - Institutes/ Institutions connected to Ministries	National Supply Company	CONAB	-
	National Council of Scientific and Technological Development	CNPq	-
	National Council of Traditional Peoples and Communities/Pantaneiras Network	CNPCT	-
	Joaquim Nabuco Foundation	FUNDAJ	-
	National Indigenous Peoples Foundation	FUNAI	-
	Oswaldo Cruz Foundation	Fiocruz	-
	National Institute of Historical and Artistic Heritage	IPHAN	-
	National Institute of Amazon Research	INPA	-
	National Technology Institute	INT	-
	Brazilian Geological Service	CPRM	-
	Agroicone	-	-
6 - Civil Society (NGOs and similar organizations)	Association of Municipal Environmental Agencies	ANAMMA	-
	Northeastern Environmental Research Center	Cepan	-
	Conservation International	CI	-
	Corporate Council for Sustainable Development	CEBDS	-
	Biodiversitas Foundation	-	-
	Boticário Group Foundation for the Protection of Nature	-	-
	Neotrópica Foundation of Brazil	-	-
	Brazilian Fund for Biodiversity	FUNBIO	-
	ICLEI SAMS – Secretariat for South America	ICLEI	-
	Mamirauá Institute	-	AM
	Society Population and Nature Institute	ISPN	-
	Network of Atlantic Forest NGOs	-	-
	Atlantic Forest Biosphere Reserve	RBMA	-
	International Union for the Conservation of Nature	UICN	-
	Oceana Brasil	-	-
	Araçá-Piranga Socio-Environmental Center	-	RS
7 - Financing Agencies and Private Sector	Financing Agency for Studies and Projects	FINEP	-
8 - Academia	Western Amazon Network/INPA	-	AM
	Western Amazon Network /UFMT	-	MT
	Atlantic Forest Network 1/UERJ	-	RJ
	Atlantic Forest Network 1/UFPR	-	PR
	Pantanal Network/UFMT	-	MT
	PELD Site: Southern Grasslands	-	RS
	PELD Site: Atlantic Forest and Lake System of the Medium Doce River	-	MG
	PELD Site: Emas National Park – Site 13	-	GO
	PELD Site: Upper Paraná River Floodplains – Site 6	-	PR
	PELD Site: Cerrado-Amazon Forest Transition - Site 15	-	MT

Annex II - Acknowledgements

A large number of institutions, programs and experts contributed with information and actions to the construction of the National Biodiversity Strategy and Action Plan (NBSAP). We are grateful to all of those who, among many others, made the preparation of this document possible.

Name	Institution or Program	Acronym	UF
Adão Martins	Network of Atlantic Forest NGOs/ Araçá-Piranga Socio-Environmental Center	-	-
Adriana Brito da Silva	Secretariat of Climate Change and Forests	SMCF/ MMA	-
Adriana Moreira	World Bank	-	-
Ana Paula Leite Prates	Chico Mendes Institute for Biodiversity Conservation	ICMBio	-
André Ramalho	Corporate Council for Sustainable Development	CEBDS	-
Andrea Ferreira Portela Nunes	Ministry of Science, Technology, Innovation and Communication	MCTIC	-
Andréa Franco de Oliveira	State Environmental Institute	INEA	RJ
Beatriz Mesquita Jardim Pedrosa	Joaquim Nabuco Foundation	FUNDAJ	-
Beatriz Schwantes Marimon	PELD Site: Cerrado-Amazon Forest Transition - Site 15	-	MT
Bráulio Dias	International Expert, Former Executive Secretary of the CBD	-	-
Camila Mendes	Biodiversitas Foundation	-	-
Carlos Eduardo Marinelli	NSC Nature, Society and Conservation Group - Consultant	-	-
Cassia Barbosa Saretta	Brazilian Forest Service	SFB	-
Catia Nunes Da Cunha	Pantanal Network/UFMT	-	MT
Claudia Regina Sala De Pinho	National Council of Traditional Peoples and Communities/Pantaneiras Network	CNPCT	-
Cláudio Maretti	Chico Mendes Institute for Biodiversity Conservation	ICMBio	-
Claudio Ruy Vasconcelos da Fonseca	National Institute for Amazon Research	INPA	-
Cleyton Ferreira Lino	Atlantic Forest Biosphere Reserve	RBMA	-
Cristiane Barbosa	Northeastern Center of Environmental Research	Cepan	-
Cristiane Peres	Secretariat of the Environment and Water Resources	Semarh	TO
Danielle Calandino	Brazilian Fund for Biodiversity	FUNBIO	-
Dennis M. N. Patrocinio	RS State Secretariat of the Environment	Sema	RS

Name	Institution or Program	Acronym	UF
Domingos de Jesus Rodrigues	Western Amazon Network/UFMT	-	MT
Edel Moraes Tenorio	National Council of Extractive Workers	CNS	
Eduardo Dalcin	Rio de Janeiro Botanical Garden	JBRJ	-
Elda Maria Pereira Cunha	State Secretariat of the Environment, Water Resources, Infrastructure, Cities and Metropolitan Affairs	Secima	GO
Elisa Romano	National Confederation of Industries	CNI	-
Érica Ribeiro Magalhães	Secretariat of Biodiversity	SBio	
Fernanda F.C. Marques	Brazilian Fund for Biodiversity	FUNBIO	-
Francisco Antônio Rodrigues Barbosa	PELD Site: Atlantic Forest and Lake System of the Medium Doce River	-	MG
Glaucia Moreira Drummond	Biodiversitas Foundation	-	-
Gustavo Henrique de Oliveira	Secretariat of Biodiversity	SBio	-
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Helena de Dogoy Bergalo	Atlantic Forest Network 1/UERJ	-	RJ
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Ianelli Sobral Loureiro	National Supply Corporation	CONAB	-
Isabel Benedetti Figueiredo	Society Population and Nature Institute	ISPN	-
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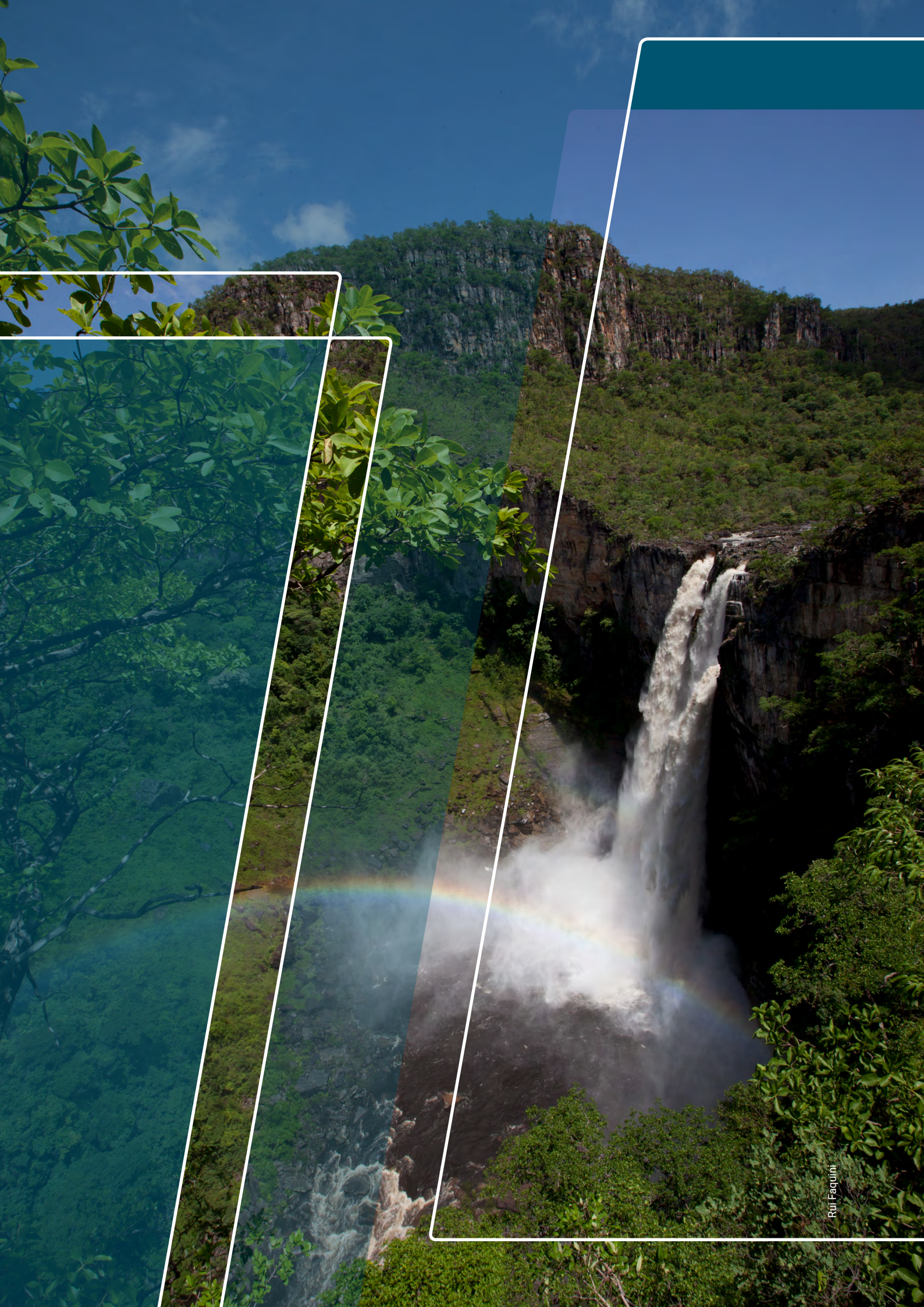
João Paulo Viana	Applied Economics Research Institute	IPEA	-
João Soccal Seyffarth	Secretariat of Biodiversity	SBio	
Laura Tillmann Viana	National Water Agency	ANA	-
Leonardo Munhoz	Agroicone	-	-
Liliana Rodrigues	PELD Site: Upper Paraná River Floodplain – Site 6	-	PR
Lívian Lima do Carmo Souza	Ministry of Tourism	Mtur	-
Luana Lopes	United Nations Development Programme	PNUD	-
Luís Fernando Stumpf	Network of Atlantic Forest NGOs/Araçá-Piranga Socio-Environmental Center	-	-

Name	Institution or Program	Acronym	UF
Luthiana Carbonell dos Santos	Santa Catarina Foundation for the Environment	Fatma	SC
Maira Smith	National Indigenous Peoples Foundation	FUNAI	-
Marcelo Garcia	Amazonas Institute for Environmental Protection	IPAAM	AM
Marcia Chame dos Santos	Oswaldo Cruz Foundation	Fiocruz	-
Márcia Cristina Mendes Marques	Atlantic Forest Network 1/UFPR	UFPR	PR
Mariana Egler	Secretariat of Climate Change and Forests	SMCF/ MMA	-
Mariana Otero Cariello	National Council of Scientific and Technological Development	CNPq	-
Mariana Silva	Secretariat of Extractive Activities and Sustainable Rural Development	SEDR/ MMA	-
Marisete Catapa	Árvore Consulting Socio-environmental Management Ltd - Consultant	-	-
Martina Muller	São Paulo Secretariat of the Environment	SMA	SP
Mercedes Bustamante	University of Brasília	UnB	DF
Milton Kanashiro	Brazilian Agricultural Research Corporation	Embrapa	-
Monica Brick Peres	Oceana Brasil	-	-
Monica de Medeiros Mongelli	Institute of National Historical and Artistic Heritage	IPHAN	-
Nívea Marcondes	Árvore Consulting Socio-environmental Management Ltd - Consultant	-	-
Natália Guerra Brayner	Institute of National Historical and Artistic Heritage	IPHAN	-
Nicholas Kaminski	Neotrópica Foundation of Brazil	-	-
Nilson Maximo de Oliveira	Atlantic Forest Biosphere Reserve	RBMA	-
Patrícia Ferreira Tavares	State Environmental Agency	CPRH	PE
Patrícia Metzler Saraiva	Ministry of Agriculture, Livestock and Supply	MAPA	-
Paulenir Constâncio	Communications Team of the Ministry of the Environment	MMA	-
Paulo Jose Pereira de Resende	Financing Agency for Studies and Projects	FINEP	-
Pedro Gasparinetti Vaconcellos	Consultant	-	-
Raquel de Oliveira Alves	Ministry of Planning, Development and Administration	MP	-
Raquel Preto	Henrique Luís Roessler State Foundation for Environmental Protection	Fepam	RS

Name	Institution or Program	Acronym	UF
Renata Cavalhes Meliga	Communications Team of the Ministry of the Environment	MMA	DF
Renata Medeiros dos Santos	National Confederation of Industries	CNI	-
Richard Marcelo Silva Costa	State Foundation for the Environment and Water Resources	Femarh	RR
Rivaldo Pinheiro Neto	Secretariat of Institutional Coordination and Environmental Citizenship	SAIC/ MMA	-
Robson Louiz Capretz	Boticário Group Foundation for the Protection of Nature	-	-
Rodrigo de Oliveira Perpétuo	ICLEI SAMS – Secretariat for South America	ICLEI	-
Rogério Fábio Bittencourt Cabral	Consultant	-	-
Rogério Pereira Bastos	PELD Site: Emas National Park – Site 13	-	GO
Ronaldo Weigand Jr.	Nova Terra - Consultant	-	-
Silvia Mara Pagel	Henrique Luís Roessler State Foundation for Environmental Protection	Fepam	RS
Solange Soares Macedo	State Foundation for the Environment and Water Resources	Femarh	RR
Sonia A. Cordebelle de Almeida	State Institute of Forests	IEF	MG
Sophia B. N. Picarelli	ICLEI SAMS - Secretariat for South America	ICLEI	-
Sueli Naomi Ota	State Secretariat of Environment and Water Resources	Sema	PR
Suzana Pádua	Ecological Research Institute	IPÊ	
Sylvia Torrecilha	State Secretariat of the Environment and Economic Development	Semade	MS
Tell Victor Furtado Coura	Ministry of Health	MS	-
Thaís Pacheco Kasecker	Conservation International	CI	-
Valerio de Patta Pillar	PELD Site: Southern Grasslands	-	RS
Valter José Marques	Brazilian Geological Service	CPRM	-
Vana Tercia Silva de Freitas	Secretariat of Institutional Coordination and Environmental Citizenship	SAIC/ MMA	-
Vanessa dos Santos Teruya	National Indigenous Peoples Foundation	FUNAI	-
Vincenzo Maria Lauriola	Ministry of Science, Technology, Innovation and Communication	MCTIC	-
Vinicius de Assis Moreira	PELD Site: Atlantic Forest and Lake System of the Medium Doce River	-	MG
Walter Cravo Júnior	National Technology Institute	INT	-
William Ernest Magnusson	Western Amazon Network/INPA	-	AM


Rui Faquini

Strategic Objective A

Address the underlying causes of biodiversity loss by mainstreaming biodiversity considerations across government and society

4 targets | 37 institutions | 171 actions

National Targets: 1 to 4

1.Create awareness on the value of biodiversity

65 actions

- Environmental education
- Publication of reports
- Workshops

2.Integrate biodiversity values into development

40 actions

- Area prioritization methodologies
- Territorial management
- National accounting and poverty eradication

3. Eliminate harmful incentives and implement positive incentives

39 actions

- Land tenure regularization
- Integration between environmental aspects and private sector
- CRA, Green VAT, PRA, PSA

4. Sustainable production and consumption

27 actions

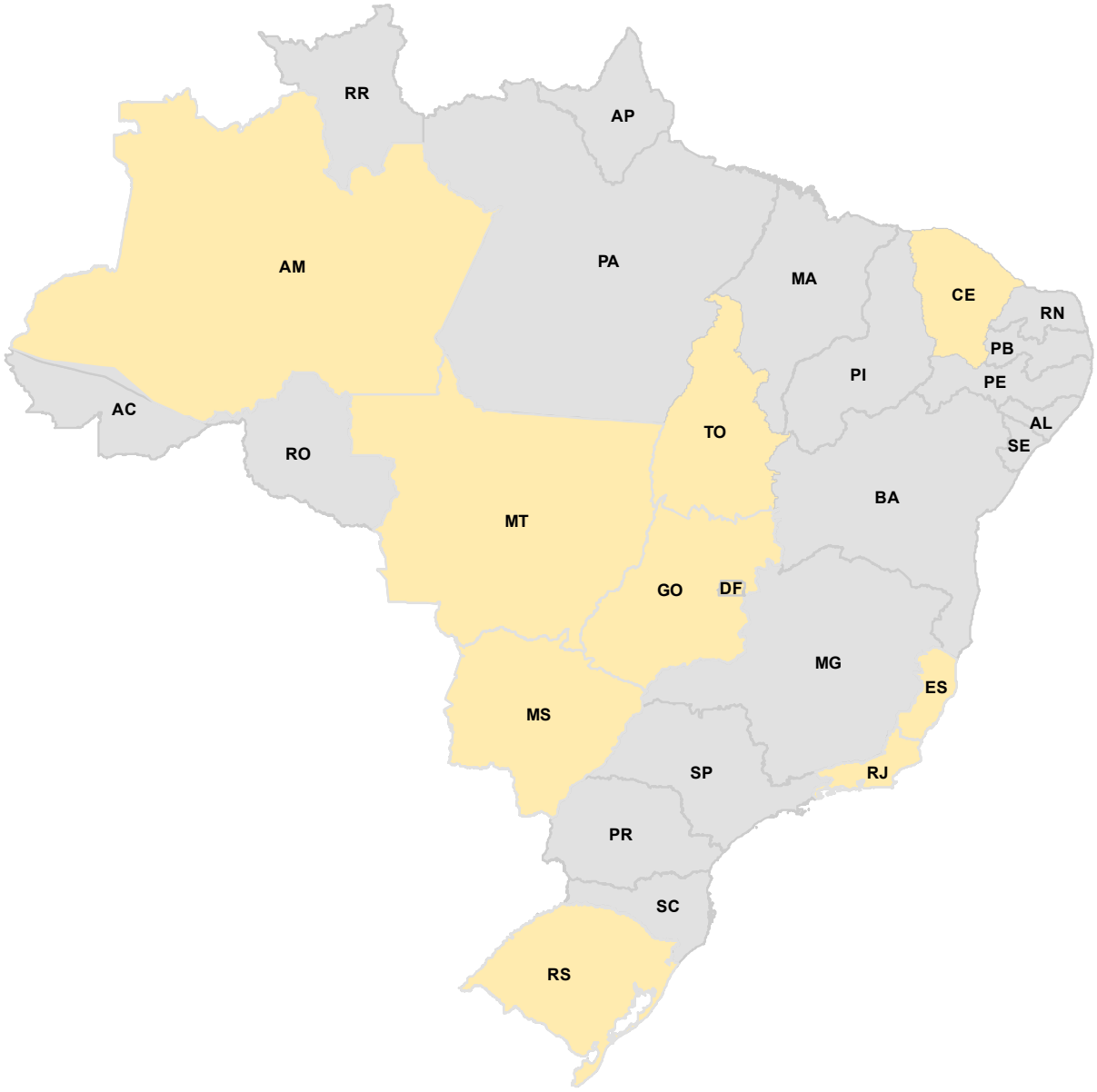
- Management of concession contracts
- Quality Seals
- Management of solid waste and ecosystem services

Comparison of the actions in the Action Plan with the components of the National Targets described in the 5th National Report to the CBD

Target 1: By 2020, at the latest, Brazilian people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably.	
Parts of the Target	**Nº of actions**
Total actions for the Target	65
Number of actions for part 1: People's awareness of the values of biodiversity.	16
Number of actions for part 2: Awareness of the steps the population can take to conserve biodiversity and use it sustainably.	12
Number of actions that address both parts:	37
Target 2: By 2020, at the latest, biodiversity values, geo-diversity values, and socio-diversity values have been integrated into national and local development and poverty reduction and inequality reduction strategies, and are being incorporated into national accounting, as appropriate, and into planning procedures and reporting systems.	
Parts of the Target	**Nº of actions**
Total actions for the Target	**40**
Number of actions for part 1: Integration of biodiversity, geo-diversity and socio-diversity values into national and local development, poverty eradication and inequality reduction strategies	31
Number of actions for part 2: Integration of biodiversity, geo-diversity and socio-diversity values into national accounting, as appropriate, and into planning procedures and reporting systems	3
Number of actions that address both parts	6
Target 3: By 2020, at the latest, incentives harmful to biodiversity, including the so-called perverse subsidies, are eliminated, phased out or reformed in order to minimize negative impacts. Positive incentives for the conservation and sustainable use of biodiversity are developed and applied, consistent and in harmony with the CBD, taking into account national and regional socio economic conditions.	
Parts of the Target	**Nº of actions**
Total actions for the Target	**39**
Number of actions for part 1: Incentives harmful to biodiversity, including the so-called perverse subsidies, are reduced or reformed in order to minimize negative impacts.	15
Number of actions for part 2: Positive incentives for the conservation and sustainable use of biodiversity are developed and applied, consistent and in harmony with the CBD, taking into account national and regional socio economic conditions.	13
Number of actions that address both parts:	11
Target 4: By 2020, at the latest, governments, private sector and stakeholders at all levels have taken steps to achieve or have implemented plans for sustainable production and consumption to mitigate or prevent negative impacts from the use of natural resources.	
Parts of the Target	**Nº of actions**
Total actions for the Target	**27**
Number of actions for part 1: Governments, private sector and stakeholders at all levels have taken steps to achieve or have implemented plans for sustainable production and consumption to mitigate or prevent negative impacts from the use of natural resources.	27

Distribution of sectors/segments contributing to objective A

Sectors	TOTAL ADHERENT INSTITUTIONS	INSTITUTIONS THAT CONTRIBUTE TO OBJECTIVE A	%
MMA Secretariats	3	3	100%
Agencies connected to MMA	4	3	75%
Ministries, Special Secretariats and Public Corporations	4	3	75%
Institutes/ Institutions connected to Ministries	6	2	33%
State Environmental Agencies (OEMAs)	14	11	79%
Civil Society (NGOs and similar organizations)	11	7	64%
Financing Agencies and Private Sector	1	0	0%
Academia	10	8	80%



States of the proposing institutions contributing to objective A

Target 1

By 2020, at the latest, Brazilian people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably.

Target-Action	Group/segment	Action	Objective
Target1-Action1	MMA Secretariats	Training of managers and society for strengthening actions for the conservation, sustainable use and recuperation of biodiversity with socio-environmental inclusion.	Develop continuous training processes, both face-to-face and distance learning, targeting the population's awareness about the socio-environmental problems and the values of biodiversity, as well as the adoption of practices that contribute to the conservation and sustainable use of natural resources.
Target1-Action2	MMA Secretariats	Development and implementation of the communication strategy of the Regional-Local TEEB project.	Communicate the value of biodiversity and of ecosystem services and the relevance of the consideration of these services in the decision-making processes of public and private actors.
Target1-Action3	MMA Secretariats	Development and implementation of the communication strategy of the Project on Biodiversity and Climate Change in the Atlantic Forest.	Communicate the values of biodiversity and of ecosystem services, and the importance of the Atlantic Forest in the Climate Change context.
Target1-Action4	MMA Secretariats	Promotion of knowledge and sustainable use of biodiversity species (implementation of the Plants for the Future Initiative/ Biodiversity for Food and Nutrition Project - BFN).	1. Revise, organize and publish the results of the inventory of the botanical-ecological aspects and different use possibilities of native species of the Brazilian flora with current or potential economic value. 2. Make the information on species available in SiBBr.
Target1-Action5	MMA Secretariats	Implementation of the National Prize on Biodiversity	Promote activities and projects that are concluded or at an advanced stage of implementation, which present evidence of results or impacts contributing to the improvement of the conservation status of Brazilian biodiversity.
Target1-Action6	MMA Secretariats	Communication and promotion of information on the value of biodiversity and the importance of the ABS System management in Brazil and in the world.	Inform and enhance public awareness in Brazil on the environmental, social, cultural and economic values of the Brazilian genetic heritage and of the associated traditional knowledge, as well as on the benefits resulting from the maintenance of biodiversity and ecosystem services.
Target1-Action7	MMA Secretariats	Implementation of an action plan for training and capacity building of environmental educators, managers and other audiences involved with the Biodiversity Agenda.	Disseminate information on the conservation and sustainable use of biodiversity species.
Target1-Action8	Agencies Connected to MMA	Publication of the Reports "Overview of Water Resources in Brazil" (annual publication).	Present an overview of the status of water resources management in the country, with information covering the entire national territory in compliance with CNRH Resolution nº 58/2006.
Target1-Action9	Agencies Connected to MMA	Dissemination of knowledge on plant diversity.	1. Promote the active and conscious participation of society in the debate on socio-environmental issues. 2. Collaborate to the conservation of biodiversity and the achievement of sustainability in the relationship between people and the planet, through exhibits, education activities and discussion forums with a participatory and cross-cutting approach, considering the cultural differences and characteristics of the various audiences.
Target1-Action10	Ministries, Special Secretariats and Public Corporations	Development and implementation of programs for the generation of knowledge on biodiversity species.	Reduce the threat of extinction faced by species from Brazilian biodiversity, recuperate their populations, and promote knowledge and sustainable use.
Target1-Action11	Ministries, Special Secretariats and Public Corporations	Provision of an Education Module on the health of rural, forest and water populations, through the AVASUS platform, in distance-learning format.	Contribute to make health workers think about how the labor processes and the livelihoods of Rural, Forest and Water Populations can interfere in the health-disease processes, thus transforming health care practices and improving access to health care by these populations.
Target1-Action12	Ministries, Special Secretariats and Public Corporations	Implementation of the Education Project on the Health of Artisanal Fisheries Workers and Training of Multiplying Agents on Social Participation in SUS Management.	Carry out education actions on the rights to labor health by artisanal fisheries; and train fisherwomen and fishermen stakeholders at Brazilian Fisheries Communities for participating in the SUS Social Control and its relationship with occupational health.

Responsibility for the Action	Possible partners	Start date	Conclusion date	Interface with other targets	"Is there a cost estimate? (yes or no)"
DEA/SAIC/MMA	ICMBio, Funbio (GEF Nutrition)	2016	Continuous Action	4, 5, 6, 7,111	NO
DECO/SBio/MMA	GIZ, CNI, Boticário Group Foundation	2017	2019	2	YES
DECO/SBio/MMA	DPMC/SMCQ/MMA, GIZ, SEMA-BA, SEA-RJ, SMA-SP, SEMA-PR, Network of Atlantic Forest NGOs and Pact for the Restoration of the Atlantic Forest and Municipalities, FUNBIO	2016	2018	15	NO
DESP/SBio/MMA	Embrapa; Public Universities; South (FAPEU); Center-West (Embrapa); Southeast (Biodiversitas/ Zoobotânica Foundation/BH); Northeast (APNE/UFPE); North (Emilio Goeldi Museum); MCTIC (publication on SiBBr); Funbio	2003	2018	4	YES
DESP/SBio/MMA	ICMBio and JBRJ	2014	Continuous Action	12	YES
DPG/SBio/MMA	Ascom/MMA, Secom and Municipalities	2016	Continuous Action	4, 16, 18	NO
MMA and connected agencies	ICMBio, JBRJ and MEC	2016	Continuous Action. Included in PPA 2016-2019	7, 12	NO
ANA	State Water Resources Managers and similar public and private entities	"July (every year)"	"November (every year)"	2	YES
JBRJ	CAPES/MEC, MINC Private initiative	2017	2020	12	YES
MCTIC	MMA	2019	-	4, 12	YES
Ministry of Health	Federal University of Ceará - UFC and SUS Open University - UNASUS	2015	no estimate	2.18	YES
Ministry of Health	Federal University of Bahia - UFBA	2016	2017	2, 18	YES

Target-Action	Group/segment	Action	Objective
Target1-Action13	Ministries, Special Secretariats and Public Corporations	Carry out the Course for Professional Improvement on Popular Health Education (EdpopSUS).	Implement a Capacity Building Project of Popular Education on Occupational Health for the multi-expert health teams and community stakeholders.
Target1-Action14	Ministries, Special Secretariats and Public Corporations	Development and publication of a manual to provide guidance on Occupational Health Vigilance for extractive and riverside workers.	Publish the manual to provide guidance on Occupational Health Vigilance for extractive and riverside workers, in electronic format.
Target1-Action15	Ministries, Special Secretariats and Public Corporations	Development of the Manual on Brazilian Medicinal Plants	Publish the manual in electronic format.
Target1-Action16	Ministries, Special Secretariats and Public Corporations	Production and distribution of the "Tourism and Sustainability" Guide and promotion of the Green Passport Campaign.	Inform and create awareness among tourism service providers, public managers and tourists regarding responsible tourism practices.
Target1-Action17	Ministries, Special Secretariats and Public Corporations	Cooperation in the Braztoa Sustainability Prize.	Acknowledge and disseminate good practices of Responsible Tourism in the sector.
Target1-Action18	Institutes/ Institutions connected to Ministries	Management and dissemination of the Health Channel - open TV channel of the public health service (SUS).	Disseminate knowledge on health, public policies, citizenship, treatments, current themes, behavior, technological development, environment and sustainability, among other themes.
Target1-Action19	Institutes/ Institutions connected to Ministries	Coordination, implementation and dissemination of the Brazilian Olympic Games on Health and Environment - OBSMA	1. Strengthen, in young students from the 6th to the 9th grade of Middle and High School of public and private schools recognized by MEC, the desire to learn, know, research and investigate. 2. Encourage the development of school work that contributes to improve environmental conditions in Brazil. 3. Bring scientific knowledge close to the school daily activities, and provide visibility to the pedagogical activities of teachers and schools.
Target1-Action20	Institutes/ Institutions connected to Ministries	Management and dissemination of the itinerant museum "Mobile Science - Life and Health" to all.	1. Promote the scientific and health dissemination; 2. Bring science closer to the daily lives of visitors, offering a space of discovery, reflection and enchantment for science and technology, through interactive activities.
Target1-Action21	Institutes/ Institutions connected to Ministries	Management and dissemination of the Fiocruz Butterfly Farm.	1. Promote the knowledge on Lepidoptera and their ecological importance. 2. Create public awareness with the purpose of disseminating science related to biodiversity.
Target1-Action22	Institutes/ Institutions connected to Ministries	Management and dissemination of the Science Express bus.	Promote scientific knowledge in schools located in socially vulnerable territories.
Target1-Action23	Institutes/ Institutions connected to Ministries	Management and dissemination of Itinerant Exhibits.	Promote scientific knowledge through exhibits of the Museum of Life at various Brazilian capital cities.
Target1-Action24	Institutes/ Institutions connected to Ministries	Management of the Sciences and Health Education Service (Seducs).	1. Promote education of teachers and youth; 2. Subsidize the educational aspects of the different exhibits that comprise the Museum of Life and promote the educational work in collaboration with schools.
Target1-Action25	Institutes/ Institutions connected to Ministries	Management and publication of the Science and Society Bulletin.	Make news available on the scientific dissemination field, public understanding of science, science and arts, and non-formal education in general.

Responsibility for the Action	Possible partners	Start date	Conclusion date	Interface with other targets	"Is there a cost estimate? (yes or no)"
Ministry of Health	Joaquim Venâncio Health Polytechnic School of the Oswaldo Cruz Foundation (EPSJV/Fiocruz)	2016	2018	2, 18	YES
Ministry of Health	Department of Environmental Health and Occupational Health (DSDT) under the Secretariat of Health Vigilance (SVS)/MS	2017	2019	2, 18	YES
Ministry of Health	"Department of Science and Technology (DECIT) of the Secretariat of Science, Technology and Strategic Supplies of the Ministry of Health (SCTIE)/MS"	2017	2018	18	YES
MTur	United Nations Environment Programme - UNEP	2016	-	4	NO
MTur	Braztoa Sustainability Prize	2014	-	4	YES
Health Channel - Fiocruz	Futura Channel, TV Brasil	Continuous Action	Continuous Action	4, 12	NO
House of Oswaldo Cruz - COC Fiocruz	Municipal, state and federal schools.	Continuous Action	Continuous Action	12	NO
Museum of Life/House of Oswaldo Cruz - COC - Fiocruz	Other Fiocruz units and universities	Continuous Action	Continuous Action	4, 12	NO
Museum of Life/House of Oswaldo Cruz - COC - Fiocruz	Oswaldo Cruz Institute/Fiocruz	Continuous Action	Continuous Action	12	NO
Museum of Life/House of Oswaldo Cruz - COC - Fiocruz	-	Continuous Action	Continuous Action	12	NO
Museum of Life/House of Oswaldo Cruz - COC - Fiocruz	Other units under Fiocruz and universities	Continuous Action	Continuous Action	12	NO
Museum of Life/House of Oswaldo Cruz - COC - Fiocruz	Municipal and state schools	Continuous Action	Continuous Action	12	NO
Museum of Life/House of Oswaldo Cruz - COC - Fiocruz	Other units under Fiocruz and universities	Continuous Action	Continuous Action	12	NO

Target-Action	Group/segment	Action	Objective
Target1-Action26	Institutes/ Institutions connected to Ministries	Management of the virtual Information Center on Wildlife Health - CISS	Increase the knowledge of society and decision makers on the importance of biodiversity conservation for the health of wildlife, domestic animals and humans, through the free access to virtual specialized information, informative bulletins, workshops, courses, videos, educational materials and digital media.
Target1-Action27	Institutes/ Institutions connected to Ministries	Management of the Fiocruz's Health Video Distributor.	1. Produce and disseminate audio-visual materials on health and environment. 2. Carry out research, reception, cataloguing, production, promotion and distribution of audio-visual materials, as a contribution to strengthen the public health service (SUS) and the improvement of life and health conditions of the Brazilian population.
Target1-Action28	State Environmental Agencies (OEMAs)	Carry out talks and workshops, and production of guiding booklets for various audiences in federal, state and municipal protected areas, associations of rural producers from family agriculture and cooperatives.	Create awareness among the target audience on the need to use biodiversity sustainably.
Target1-Action29	State Environmental Agencies (OEMAs)	Implementation and management of the Project on "Capacity Building for Sustainable Development at the Taquari River Watershed", created under the Cooperation Agreement MMA/SRHU/nº 02078/2014, signed between the Secretariat of Water Resources and Urban Environment (SRHU/ MMA) and the Mato Grosso do Sul Environmental Institute (IMASUL).	1. Build capacity and engage the population residing in eleven municipalities pertaining to the Taquari River Watershed in processes that seek new behavior patterns targeting the preservation and conservation of natural resources, promoting sustainability based on social, economic and environmental balance, in the following municipalities: Alcinópolis, Camapuã, Corumbá, Costa Rica, Coxim, Figueirão, Ladário, Pedro Gomes, Rio Verde de Mato Grosso, São Gabriel do Oeste, and Sonora; 2. Disseminate information and sustainable environmental practices; 3. Build the capacity of rural producers for the development of actions for the recuperation of degraded areas; 4. Build the capacity of public managers for the support and management of greenhouses for seedling production, as a means to increase the supply of seedlings for the recuperation of degraded areas in the project's target municipalities.
Target1-Action30	State Environmental Agencies (OEMAs)	Technical cooperation between IMASUL and WWF for the development of environmental education actions.	1. Support the Development of the State Program on Environmental Education, 2. Make available educational and informative materials to allow the calculation of the ecological footprint, and organize the Hour of the Planet.
Target1-Action31	State Environmental Agencies (OEMAs)	Implementation and management of the State Environmental Education Information System (SisEA/MS) of the Imasul Environmental Education Unit (Unea) under the Project "Integrated Environmental Management System of Mato Grosso do Sul – SIGA/MS".	1. Promote the cadaster, integration, systematization, analysis and monitoring of programs, projects, campaigns and other environmental education actions; 2. Disseminate information that can provide guidance, share experiences and even models for users.
Target1-Action32	State Environmental Agencies (OEMAs)	Implementation of the Meeting Biodiversity Program.	Promote communication and dissemination of the protected areas (PA) and public awareness on the biodiversity that exists in PAs.
Target1-Action33	State Environmental Agencies (OEMAs)	Dissemination of actions and information on conservation and sustainable practices.	Carry out the Environment Week at municipalities and communities inside and around PAs.
Target1-Action34	State Environmental Agencies (OEMAs)	Production of informative materials on PAs to promote environmental education.	Protected Areas and production of materials targeting local and/or regional communities.
Target1-Action35	State Environmental Agencies (OEMAs)	Implementation of Seedling Production Units (Greenhouses).	Link greenhouses to conservation actions and the increase of vegetation cover in the most degraded areas of caatinga in the state, creating possibilities for the sustainable use of natural resources, as well as job and income alternatives around PAs.
Target1-Action36	State Environmental Agencies (OEMAs)	Establishment of the Electronic System for the Management of Ceará State Protected Areas.	Provide the state with a tool capable of effectively standardizing all records and forms of use of the information related to PAs, allowing the adequate management of these protected territories.
Target1-Action37	State Environmental Agencies (OEMAs)	Voluntary Environmental Agent Program.	Allow people to express citizenship and commitment to the future of the environment and to local life quality. Citizens may share responsibility with PA managers in the implementation of nature conservation actions, such as research, protection, visitation, public use and environmental education.

Responsibility for the Action	Possible partners	Start date	Conclusion date	Interface with other targets	"Is there a cost estimate? (yes or no)"
Biodiversity & Health Institutional Program - Fiocruz President's Office	LNCC, other units and centers under Fiocruz, universities, NGOs, research centers	Continuous Action	Continuous Action	12	NO
Health Video - MCICT - Fiocruz	Research, teaching and technology institutions	Continuous Action	Continuous Action	12	NO
FERMARH - RR	DPMA, CBPM, 6th BC, ICMBIO	-	-	12, 14	NO
IMASUL - MS	MMA, SRH, Municipal Secretariats and Agraer	2014	Ongoing	7	YES
IMASUL - MS, WWF	NGOs, Schools, Universities	2016	2018	7	NO
Environmental Education Unit of the Development and Information Management/IMASUL - MS	Municipal Governments	2015	Continuous Action	11	NO
Advisory of the Directorate of Biodiversity and Protected Areas (DIBAP)/INEA-RJ	-	2016	2020	11	YES
SEMA - AM	Municipal Governments, Mothers of Protected Areas Associations, NGOs, FAZ and Churches	2015	2020	4, 7, 11	YES
SEMA- CE, Municipal Governments	-	2016	2021	4, 7, 9, 15	YES
COBIO/CEDIB/SEMA - CE	SEMA - CE, DAE, DNOCS, Universities and Others	2016	2018	2,4,7	YES
COBIO/CEDIB/SEMA - CE	ETICE, PGE, SEMACE	2017	2019	4	YES
COBIO/CEDIB/SEMA - CE	Universities	2016	2018	2,8,13,14	YES

Target-Action	Group/segment	Action	Objective
Target1-Action38	State Environmental Agencies (OEMAs)	Knowledge on biodiversity present in PAs in the state of Mato Grosso	Carry out the inventory of at least three PAs in the Amazon Biome.
Target1-Action39	State Environmental Agencies (OEMAs)	Production of informative materials on PAs to promote environmental education.	Protected Areas and production of materials targeting local and/or regional communities.
Target1-Action40	State Environmental Agencies (OEMAs)	Coordination of the Inter-Institutional Commission on Environmental Education.	Contribute to the inter- and intra-institutional coordination, converging efforts to target the implementation of the National and State Environmental Education Policies and the development of the State Environmental Education Directives.
Target1-Action41	State Environmental Agencies (OEMAs)	Revitalization of the Iguaçu River.	Develop public awareness in the Program's target municipalities, with emphasis on the importance of water resources and the maintenance of APPs.
Target1-Action42	State Environmental Agencies (OEMAs)	Management of the itinerant Environmental Education Truck Project.	Develop environmental education activities at various municipalities in the state, taking knowledge to places where these activities are insufficiently addressed by educational programs.
Target1-Action43	State Environmental Agencies (OEMAs)	Management of the Paraná Bike Program.	Awareness-raising program to encourage the use of bicycles, reducing gas emissions and disseminating sustainability.
Target1-Action44	State Environmental Agencies (OEMAs)	Environmental Education through Social Participation in Environmental Management.	1. Carry out a workshop for creating the Management Council and selecting the priority challenges for action in the Escarpa Devoniana Environmental Protection Area (APA); 2. Establish conciliatory paths between the conservation of the natural and cultural heritage and the production of goods; 3. Build and strengthen a network of agents capable of monitoring and guiding actions and activities in compliance with legal requirements.
Target1-Action45	State Environmental Agencies (OEMAs)	Production of the booklet "Ecosystems of Paraná".	Inform society on the projects and actions to achieve the Aichi targets.
Target1-Action46	State Environmental Agencies (OEMAs)	School-Park Program.	Include education for sustainable consumption among the environmental education themes in PAs.
Target1-Action47	State Environmental Agencies (OEMAs)	Management of the Valuation of Food Plants of the Pantanal and the Cerrado Project 2015.	1. Enable the improvement of the life quality of residents, income increase, conservation of native vegetation, food security and rural development. 2. Associate local knowledge to scientific knowledge; good practices in the manipulation of foodstuffs; preparation of flours and preserves (with emphasis on nutritional value); production of seedlings; good practices for the collection, conservation and processing of native fruits; and trade. This action includes the distribution, to communities involved in the Program, of a recipe book and contextualized booklets for the Cerrado and Pantanal (produced by the project's team), containing the information provided during the workshops.
Target1-Action48	State Environmental Agencies (OEMAs)	Implementation and coordination of the Biota-MS Program.	Build an integrated base of scientific, technological and innovation knowledge in Mato Grosso do Sul to support decision making related to biodiversity management.
Target1-Action49	State Environmental Agencies (OEMAs)	Management of the Program on Communication for Biodiversity.	Disseminate the Action Plan and its results in national and international events.
Target1-Action50	State Environmental Agencies (OEMAs)	Management of the Program on Public Awareness Raising on Biodiversity.	Produce and show videos that communicate and create awareness on themes related to biodiversity in the state of São Paulo.

Responsibility for the Action	Possible partners	Start date	Conclusion date	Interface with other targets	"Is there a cost estimate? (yes or no)"
UFMT, SEMA - MT	IFMT	2016	2021	2,6,8,13,14	YES
UFMT, SEMA - MT, IFMT, Municipal Governments	-	2016	2021	2,8,13,14	YES
SEMA - PR	SEED, SEAB, SESA, SETI, Third Sector	Continuous Action	Continuous Action	12	NO
SEMA - PR	Copel, SEAB, SEED, Municipal Governments, Comec, SANEPAR	Continuous Action	Continuous Action	12, 14, 15	NO
SEMA - PR, EMBRAPA	DSR Logistics Group	Continuous Action	Continuous Action	12, 14	NO
SEMA - PR, EMBRAPA	Detran, SESA, Fire Department, PVT	Continuous Action	Continuous Action	8, 15	NO
SEMA -PR, IAP - PR	APA Management Council	Continuous Action	Continuous Action	4, 7, 11	-
SEMA - PR, IAP - PR	-	Continuous Action	Continuous Action	17	NO
SEMA - PR, SEED - PR	Municipal Governments	01/03/2011	Continuous Action	4, 11	YES
SEMADE - MS, UFMS Botany Department	Activities will be carried out with youths and adults in four municipalities, including teachers, staff and students of public schools in target communities.	2015	Continuous Action	4, 7	YES
SEMADE - MS, Mato Grosso do Sul Superintendence of Science and Technology	Universities and State Government, through the Superintendence of Science and Technology and IMASUL	2010	Continuous Action	6, 11, 19	YES
Communication Advisory, SMA Secretary's Office and International Advisory (SMA - SP)		2016	2020	20	YES
Coordination of Environmental Planning and Communication Advisory (SMA - SP)	SMA Secretary's Office/ International Advisory	2016	2020	4, 7	YES

Target-Action	Group/segment	Action	Objective
Target1-Action51	State Environmental Agencies (OEMAs)	Management of the Program on Communication for Biodiversity.	Promote periodical adjustments and updates on the Biodiversity Portal.
Target1-Action52	State Environmental Agencies (OEMAs)	Management of the Program on Public Awareness Raising on Biodiversity.	Promote environmental education actions that are cross-cutting to the various biodiversity actions promoted by the São Paulo Environmental System, including the capacity building for participatory processes.
Target1-Action53	Civil Society (NGOs)	Awareness raising on the instruments of the Forest Code targeting remedies for the lack of environmental compliance and the conservation of remaining native vegetation cover in rural properties.	Disseminate information and promote the capacity building of rural producers on the procedures for environmental regularization of APP and RL, through the Environmental Regularization Program (PRAs). Emphasis on the states of SP, MG, MT, MS and GO.
Target1-Action54	Civil Society (NGOs)	Estimate costs and revenue for different techniques of forest restoration; business cases of forest restoration, including financing strategies.	Promote low-cost and/or economically profitable forest restoration.
Target1-Action55	Civil Society (NGOs)	Support to the preparation and implementation of the communication strategy of the Regional-Local TEEB project.	1. Produce a roadmap for the preparation of public policies on PES. 2. Communicate the value of biodiversity and ecosystem services, and the relevance of considering these services in decision making processes by public and private actors.
Target1-Action56	Civil Society (NGOs)	Support to the preparation and implementation of the communication strategy of the Project on Biodiversity and Climate Change in the Atlantic Forest.	1. Support scientific research for the definition of directives for managing the Lagamar Mosaic, considering climate change. 2. Communicate the value of biodiversity and ecosystem services, and the importance of the Atlantic Forest in the context of Climate Change.
Target1-Action57	Civil Society (NGOs)	Publication of the Regional Biodiversity book.	Inform society on the value of biodiversity.
Target1-Action58	Civil Society (NGOs)	Consolidation of biodiversity data for the Atlantic Forest.	Make data available on biodiversity of the Atlantic Forest of the south of Brazil.
Target1-Action59	Civil Society (NGOs)	Continue the preparation, publication and dissemination of the Atlantic Forest Annual Overview of the Atlantic Forest Biosphere Reserve.	Disseminate information on the progress toward the achievement of the Aichi Targets for the Atlantic Forest regarding communication, awareness raising and decision making.
Target1-Action60	Civil Society (NGOs)	Continue the preparation and publication of the RBMA Notebooks Series.	Disseminate information on actions that have a positive impact on the conservation and sustainable use of the Atlantic Forest Biome.
Target1-Action61	Academia	Carrying out forest inventories.	Conclude ongoing studies.
Target1-Action62	Academia	Development and implementation of the communication strategy for wetlands, land use and Climate Change.	Communicate the value of ecosystem services provided by biodiversity and the relevance of considering these services in decision making processes by public and private actors.
Target1-Action63	Academia	Text formatting, printing and distribution of materials for dissemination of scientific information on the biodiversity of the Cerrado biome, considering all of its aspects (scientific, social, economic).	Produce materials of scientific dissemination to distribute to schools, teachers and/or Basic Education students at the regional/local level (Cerrado biome). These may be distributed to the school network of the municipalities of Silvânia, Gameleira, Bonfinópolis, Leopoldo de Bulhões.
Target1-Action64	Academia	Carry out qualification courses for Basic Education teachers.	Build the capacity of teachers for the use of materials for scientific dissemination related to biodiversity at the regional/local level (Cerrado biome). Teachers receiving these materials may be located at the municipalities of Silvânia, Gameleira, Bonfinópolis, Leopoldo de Bulhões.
Target1-Action65	Academia	Training and environmental education actions at the "deforestation arc" (Amazon-Cerrado transition).	Train the collecting workers of the Xingu Seeds Network and implement environmental education actions with traditional communities and family rural producers located in the Amazon-Cerrado transition.

Responsibility for the Action	Possible partners	Start date	Conclusion date	Interface with other targets	"Is there a cost estimate? (yes or no)"
Coordination of Environmental Planning and Communication Advisory (SMA - SP)	SMA Secretary's Office/ International Advisory	2016	2020	19	YES
São Paulo Zoological Park Foundation, Botany Institute, Forestry Foundation, Coordination of Environmental Education, Coordination of Environmental Enforcement, Environmental Police, Coordination of Biodiversity and Natural Resources, and Forestry Institute (SMA - SP)	-	2016	2020	4, 7	YES
Agroicone	Orplana and other partners of the Change Sugarcane program	"2017 (1st semester)"	not defined	7,11,14,15	NO
Agroicone	NPUT Project and other partners	1st Semester 2015	not yet defined	7, 11, 14, 15	NO
Boticário Foundation	GIZ, CNI, TNC	2006	2020	2	NO
Boticário Foundation	"MMA, Network of Atlantic Forest NGOs and Pact for the Restoration of the Atlantic Forest, GIZ, FAPESP"	2010	2018	15	NO
Araçá-Piranga Center	Sapiranga Municipal Government	2017	2018	2	YES
Paraná Atlantic Forest Network	SPVS	2016	2020		YES
Atlantic Forest Biosphere Reserve	MMA, GIZ, RBMA Network, Atlantic Forest Network, research and learning institutions, federal, state and municipal governments, private sector.	Annual	Annual	Todas	YES
Atlantic Forest Biosphere Reserve	MMA, GIZ, RBMA Network, Atlantic Forest Network, research and learning institutions, federal, state and municipal governments, private sector.	Continuous Action	Continuous Action	Todas	YES
PELD Site: Atlantic Forest and Lake System of the Medium Doce River -MG, Site 4	UFOP, UFSJ, IFMG	2017	2020	-	YES
PELD Site: Northern Pantanal, Site 12	NGOs, civil society and private sector	2018	2020	2, 14,15,19	NO
PELD Site: Emas National Park, Site 13	Universities, Research Institutes, NGOs, MMA	2017	2020	5, 6, 9, 14, 18	NO
PELD Site: Emas National Park, Site 14	Universities, Research Institutes, NGOs, MMA	2017	2020	5, 6, 9, 14, 18	NO
PELD Site: Cerrado - Amazon Forest Transition, Site 15	Socio-environmental Institute (ISA), Xingu Seeds Network (RSX), University of Brasília (UnB), University of Leeds (England) and SEMA-MT	2017	2020	2, 7, 12, 14, 18, 19	YES

Target 2

By 2020, at the latest, biodiversity values, geo-diversity values, and socio-diversity values have been integrated into national and local development and poverty reduction and inequality reduction strategies, and are being incorporated into national accounting, as appropriate, and into planning procedures and reporting systems.

Target-Action	Group/segment	Action	Objective
Target2-Action1	MMA Secretariats	Updating of the priority areas for the conservation, sustainable use and benefit sharing of biodiversity (Amazon, Caatinga, Cerrado, Atlantic Forest, Pampas, Pantanal, Coastal and Marine Zone).	1. Enhance the use of the priority areas for conservation as reference in the daily processes of the national conservation agenda and in the agenda of environmental organizations. 2. Carry out: continuous updating of the database; apply cutting edge technology to ensure continuous use; implementation of tools for the generation of scenarios; create friendly graphic interfaces, etc.
Target2-Action2	MMA Secretariats	Development of subsidies for integrating the value of biodiversity in instruments of the Forest Code.	Assess the importance of private areas for the conservation of biodiversity with the purpose of generating subsidies to allow such importance to be considered in instruments of the Forest Code (SiCAR, PRAs, CRA, PSA etc.)
Target2-Action3	MMA Secretariats	Implementation of the Environmental Economic Accounting for Water and Forest.	Support the implementation and institutionalization of the environmental economic accounting for water and forests as satellite-accounts, to integrate statistical data on the environment in information about economic activities of the National Accounting System (SCN - Sistema de Contas Nacionais) of Brazil.
Target2-Action4	MMA Secretariats	Integration of ecosystem services in the process of Federal PPA preparation, Regional-Local TEEB project.	1. Develop a proposal to integrate biodiversity and ecosystem criteria and values into policies, plans, development processes and poverty reduction strategies at the national level, through the Federal Multi-Year Plan (PPA). 2. Encourage states to also follow this process and begin incorporating this practice.
Target2-Action5	MMA Secretariats	Development and implementation of Macro-EEZs and state zoning processes.	Systematize and generate valid and indispensable information for the sustainable planning and regularization of the Brazilian territory, harmonizing the economic, social and environmental relationships that exist in it, to contribute to a more efficient process of use and occupancy of the available natural resources, and applied according to local characteristics.
Target2-Action6	MMA Secretariats	Implementation of Municipal Environmental Zoning.	Integrate the environmental variables into instruments for planning and managing the use and occupancy of urban soil, particularly into the Master Plan, through capacity building actions in approximately 60 municipalities, and implementation in approximately 25 municipalities.
Target2-Action7	Agencies Connected to MMA	Carry out studies and research to indicate priority areas for the conservation of plants.	Provide support to environmental decision making and to the development of public policies for the conservation of threatened species.
Target2-Action8	Ministries, Special Secretariats and Public Corporations	Implementation of the Policy to Secure Minimum Prices for Products from Socio-biodiversity - PGPM-Bio	Support to the commercialization of products from Socio-biodiversity through instruments for equalizing prices and for payment of direct subsidies, securing income to the populations that manage ecosystems.
Target2-Action9	Ministries, Special Secretariats and Public Corporations	Support to the process of updating the Priority Areas for the Conservation, Sustainable Use and Sharing of Benefits from Biodiversity (Coastal and Marine Zone).	Update the priority areas of the Coastal and Marine Zone through studies (possibly hired under GEF Mar), for application in the planning of the use of these ecosystems and biodiversity conservation. This will contribute to the conservation of coral reefs and other coastal ecosystems.
Target2-Action10	Ministries, Special Secretariats and Public Corporations	Support to the development and implementation of Macro-EEZs and state zoning processes.	1. Support territorial planning and management at the landscape scale in compliance with the National Environment Policy (PNMA), and as foreseen in the National Coastal Management Plan. 2. Reduce possible conflicts over the use of resources and prevent excessive impacts on ecosystems and biodiversity. 3. Make available tools for landscape-scale planning and management in compliance with the National Environment Policy (PNMA, Law no 6.938/1981), and as foreseen in the National Coastal Management Plan (Lei n° 7.661/1988). 4. Publish EEZs through SiBBr and make available the decision-making module.
Target2-Action11	Ministries, Special Secretariats and Public Corporations	Implementation of committees for policies to promote health equality for socially vulnerable populations (among those, the committees on policies to promote broader or specific health equality for Rural, Forest and Water Populations).	Create participatory levels within the governmental sector for the implementation of the National Policy on Integral Health of the Rural, Forest and Water Populations (GM/MS Administrative Ruling nº2866 02/12/11 amended by GM/MS Administrative Ruling nº2311 of 23/10/14).

Responsibility for the Action	Possible partners	Start date	Conclusion date	Interface with other targets	"Is there a cost estimate? (yes or no)"
DECO/SBio/MMA	ICMBio, OEMAs. NGOs working with biodiversity, MAPA (fisheries), MME (oil and gas), Secretariat of Ports, CIRM, Ministry of Defence (Navy), MCTIC, Funbio (ARPA, GEF Mar, Atlantic Forest Project), among others.	"2016 Amazon, Atlantic Forest, Pampas and Coastal and Marine Zone: 1st semester 2017"	"2018 Caatinga, Cerrado and Pantanal: updated in 2016. Amazon, Atlantic Forest, Pampas and Coastal and Marine Zone: 2018"	19	YES
DECO/SBio/MMA	PUC-Rio, UNEP, SFB	2017	2022	3, 5, 11, 12	NO
DECO/SBio/MMA	ANA, SFB, SRHQ/MMA, IBGE	-	2019	20	YES
DECO/SBio/MMA	Municipalities, Ministry of Planning, Development and Administration (MP).	-	2019	20	NO
SRHQ/MMA	Ministries that comprise the Coordinating Commission of the EEZ of the National Territory (CCZEE), institutions that comprise the EEZ Brazil Consortium, state governments and organized civil society.	-	2019 (Federal); 2017 (States)	19	YES
SRHQ/MMA	Secretariat of Urban Development/ Ministry of Cities, municipal governments, IICA	2016	2022	2,14	NO
JBRJ	Conservation Biogeography Lab/UFG	-	-	3, 4, 7, 12, 19	YES
CONAB, MAPA	SEAD/MMA	-	jul/05	3	-
MCTIC	ICMBio, Universities, NGOs working with coastal and marine biodiversity, MAPA (fisheries), MME (oil and gas), Secretariat of Ports, CIRM, Ministry of Defence (Navy), MMA, WWF	2017	-	2	YES
MCTIC, SRHQ/MMA	Ministries: Justice; Defence; Agriculture, Livestock and Supply; Development of Industry and Foreign Trade; Mines and Energy; Transportation; Agrarian Development; Planning, Budget and Administration; Environment; National Integration; Social Development and to Combat Hunger; and Cities; in addition to the Special Secretariat of the President's Office. MCTIC: publication of the EEZ through SiBBr and making available the decision-making module.	-	-	12, 14	YES
Ministry of Health	States and Municipalities (Secretariats of Health)	2017	2019	18	NO

Target 2

By 2020, at the latest, biodiversity values, geo-diversity values, and socio-diversity values have been integrated into national and local development and poverty reduction and inequality reduction strategies, and are being incorporated into national accounting, as appropriate, and into planning procedures and reporting systems.

Target-Action	Group/segment	Action	Objective
Target2-Action12	Ministries, Special Secretariats and Public Corporations	Coordination of the Outlook of the National Policy on Integral Health of the Rural, Forest and Water Populations (Obteia) with the other Policies to Promote Health Equality.	Evaluate and contribute to the implementation of this Policy through a Knowledge and Practices Network involving engaged intellectuals, popular researchers of the rural, forest and water social movements, and the managers and staff of the Unified Health System (SUS - Sistema Único de Saúde).
Target2-Action13	Ministries, Special Secretariats and Public Corporations	Support to the expansion of the service provision range of the Riverside Family and River Family Health care teams.	Increase access to basic health care for the populations of extractive workers and riverside communities.
Target2-Action14	Ministries, Special Secretariats and Public Corporations	Development and publication of the Epidemiological Bulletin on the occupational health of extractive and riverside workers.	Identify the most common diseases and health problems of extractive and riverside workers, allowing their monitoring.
Target2-Action15	Ministries, Special Secretariats and Public Corporations	Implementation of the obligation to fill out the information on occupation and economic activity on the notification forms of the SINAN (National Information System on Reportable Health Problems).	Increase the number of forms with filled information on occupation and economic activity on the notification forms of the SINAN, allowing the tracking of diseases and health complications related to labor activities of extractive and river side workers.
Target2-Action16	Ministries, Special Secretariats and Public Corporations	Training of the basic health care teams to carry out health actions for extractive and riverside workers, as well as health surveillance among workers carrying out formal (MEI) or informal economic activities at households.	Carry out three annual capacity building events at the state level for Community Endemism Agents (ACE) and Community Health Agents (ACS).
Target2-Action17	Ministries, Special Secretariats and Public Corporations	Revision of Administrative Ruling nº 1.339/GM, of 18 November 1999, including diseases and occupational accidents related to extractive and riverside activities.	Revise and publish Administrative Ruling nº 1.339/GM, of 18 November 1999.
Target2-Action18	Institutes/ Institutions connected to Ministries	Management and operation of the Laboratory for Epidemiological Monitoring of Large Ventures.	1. Monitor the main causes of sickness, death and public safety in municipalities surrounding large ventures (e.g. large infrastructure works); and 2. Build a network of local professional health surveillance workers, and social development workers.
Target2-Action19	Institutes/ Institutions connected to Ministries	Development and updating of the Map of Conflicts involving environmental unfairness and health in Brazil.	1. Support the struggle of numerous communities and groups affected in their territories by projects and policies based on a development vision considered not sustainable and harmful for health. 2. Support social movements and environmentalist partners; systematize and socialize available information, providing visibility to complaints presented by communities and partner organizations; 3. Contribute to the monitoring of actions and projects that address environmental unfairness and health problems in different territories and populations in cities, rural settings, forests and coastal zones.
Target2-Action20	Institutes/ Institutions connected to Ministries	Development and maintenance of the Water Atlas - electronic system for viewing and analyzing indicators of water quality, sanitation and health.	1. Collect indicators and data on the status of health, water and basic sanitation in Brazil to produce thematic maps; 2. Build pictures of the status of the sanitation systems, water quality and water borne diseases in Brazilian municipalities; 3. Allow the use of this information by managers as a means to minimize risks to the population and develop public policies for sanitation and water resources.
Target2-Action21	Institutes/ Institutions connected to Ministries	Development of the Observatory of Sustainable and Healthy Territories (OTSS).	Generate action proposals that integrate the scientific and traditional knowledge, that allow the construction of practices for working in the territory, and that can be replicated and adapted to other realities to generate territorial solutions for issues connected to sustainable development and the promotion of health.
Target2-Action22	State Environmental Agencies (OEMAs)	Restoration of biodiversity and ecosystem services of the Cerrado, Caatinga and Atlantic Forest biomes in Minas Gerais, applying Systematic Conservation Planning (SCP) methodologies.	Strengthen the capacity for analysis, decision making and design of policies based on evidence from the State Environmental System (SISEMA), and particularly from IEF, for the management of biodiversity, ecosystem services and anthropic pressures in the state.
Target2-Action23	State Environmental Agencies (OEMAs)	Update of the lists of fauna species threatened with extinction.	Assess the risk of extinction of species and publish the lists of threatened species.
Target2-Action24	State Environmental Agencies (OEMAs)	Implementation and Maintenance of the Biota Project.	Implement an information system that allows the organization, storage and spatial analyses for the full use of spatial data on biodiversity, in addition to supporting the management of scientific production in INEA protected areas and their spatial interface (foreseeing integration with SiBBr).

Responsibility for the Action	Possible partners	Start date	Conclusion date	Interface with other targets	"Is there a cost estimate? (yes or no)"
Ministry of Health	Public Health Studies Nucleus of the University of Brasília (NESP/UnB)	2014	2019	18	YES
Ministry of Health	State and Municipal Health Secretariats	2014	no estimate	18	YES
Ministry of Health	Department	2017	2019	1, 18	YES
Ministry of Health	DataSUS/MS	2017	2019	18	NO
Ministry of Health	Secretariats of Health, Cerest, Basic Health Care, Health Surveillance and Social Control of States and Municipalities.	2017	2019	18	YES
Ministry of Health	Occupational health specialists, Researchers and Experts.	2017	2019	18	NO
ENSP, Fiocruz	MS, Petrobrás	Continuous Action	Continuous Action	4, 8	NO
FASE/Fiocruz	MS	Continuous Action	Continuous Action	18	NO
Institute of Communication, Scientific Information and Health Technology (ICICT)/Fiocruz	SVS-MS	Continuous Action	Continuous Action	8	NO
Vice-Presidency of Environment and Health Care - VPAAS; Observatory of Sustainable and Healthy Territories of Bocaina (OTSS)/Fiocruz	Forum of Traditional Communities of Angra dos Reis, Paraty (RJ) and Ubatuba (SP) and Fiocruz, supported by Funasa, ENSP/ Fiocruz; Sustainable and Healthy Territories of the Semi-arid - DIREB-Fiocruz Brasília	2016	Continuous Action	18	NO
Directorate of Fauna Protection/IEF-MG	Academia, ONG, OSCISP	waiting for bidding process	18 months after the launch of activities	19	YES
Directorate of Fauna Protection/IEF-MG	Academia, NGO, OSCISP	waiting for bidding process	12 months after the launch of activities	19,6	NO
INEA-RJ	-	2015	2016	1	YES

Target 2

By 2020, at the latest, biodiversity values, geo-diversity values, and socio-diversity values have been integrated into national and local development and poverty reduction and inequality reduction strategies, and are being incorporated into national accounting, as appropriate, and into planning procedures and reporting systems.

Target-Action	Group/segment	Action	Objective
Target2-Action25	State Environmental Agencies (OEMAs)	Development of the EEZ of the state of Goiás.	Systematize and generate valid and indispensable information for the sustainable planning and regularization of the territory of Goiás, harmonizing the economic, social and environmental relationships that exist in it, to contribute to a more efficient process of use and occupancy of the available natural resources, and applied according to local characteristics.
Target2-Action26	State Environmental Agencies (OEMAs)	Municipal Plans for the Atlantic Forest	Support the municipalities of Paraná state in the process of developing and implementing the Municipal Plans for the Conservation and Recuperation of the Atlantic Forest, with the objective of ensuring the effectiveness of the protection and conservation of this biome, which is considered National Heritage.
Target2-Action27	State Environmental Agencies (OEMAs)	Forest Inventory of the state of Paraná	1. Carry out an inventory of the composition, horizontal and vertical structure of remaining forest fragments (regeneration, species distribution, timber stocks, carbon); 2. Assess the density of species of the threatened native flora, providing a basis for effective conservation strategies; 3. Identify the most important species from the social, economic and cultural perspective, and their current and potential uses.
Target2-Action28	State Environmental Agencies (OEMAs)	Development and implementation of the Ecological Economic Zoning - EEZ	Carry out the territorial, environmental and economic planning and organization of the state.
Target2-Action29	State Environmental Agencies (OEMAs)	Update of the socio-economic aspects of the Ecological-Economic Zoning of the Coastal Zone of the Ceará State.	Carry out a detailed and integrated analysis of the coastal region, considering the impacts resulting from human actions and the support capacity of the local environment, establishing the compatible uses and activities according to the characteristics (potential and restrictions) of each defined area.
Target2-Action30	State Environmental Agencies (OEMAs)	Implementation of the Productive Backyards.	Promote food security of the rural families, particularly those that develop their agricultural and livestock activities based on family labor.
Target2-Action31	State Environmental Agencies (OEMAs)	Coordination between State and Municipalities	Conserve remaining fragments of Atlantic Forest and Cerrado, as well as water catchment areas.
Target2-Action32	State Environmental Agencies (OEMAs)	Carry out biodiversity analyses and studies, map of priority areas for conservation, map or priority areas for restoration, map of ecosystem services, map of ecological corridors, and conceptual revision of the State Protected Areas System.	1. Support territorial planning and management. 2. Inform the second approach to the EEZ and State Protected Areas System.
Target2-Action33	State Environmental Agencies (OEMAs)	Development of the 2nd approach to the EEZ - carry out studies on biodiversity, socio-economy, indicator system and scenarios in the final integration of the zoning process.	Construct and detail scenarios and prognoses considering the biodiversity component in the analyses and integration of conservation and sustainable use actions into the territorial planning.
Target2-Action34	State Environmental Agencies (OEMAs)	Promote local actions for biodiversity	1. Build an overview of the local biodiversity initiatives; 2. Enhance the Biodiversity Directive of the PMVA, in agreement with the Aichi Targets and Decision X/22 (COP 10).
Target2-Action35	State Environmental Agencies (OEMAs)	Management of knowledge on the biodiversity of São Paulo.	Promote studies to assess ecosystem services provided by São Paulo biodiversity to inform the proposition of public policies (TEEB-SP).
Target2-Action36	State Environmental Agencies (OEMAs)	Development and implementation of the São Paulo Strategy for reducing pressure on biodiversity.	Contribute to the incorporation of biodiversity conservation and sustainable use into the state's EEZ.
Target2-Action37	Civil Society (NGOs)	Develop the Ecological-Economic Zoning of MS.	Carry out a study or establish parameters for the appropriate use and occupancy of the territory, harmonizing in a sustainable way the economic activities, environmental conservation and the fair distribution of social benefits in MS.
Target2-Action38	Civil Society (NGOs)	Contribute to the process of designing state public policies in the Amazon on the sustainable and participatory use of biodiversity.	Exercise positive influence on the state secretariats of the Amazon states in the design of regulation for the sustainable use of biological resources by rural populations, inside or outside protected areas.
Target2-Action39	Civil Society (NGOs)	Creation of the Environmental Protection Area of Contrafortes do Ferrabraz (MA 003).	Consolidate environmental protection in the region of Contrafortes do Ferrabraz.
Target2-Action40	Academia	Mapping of the socio-ecological dynamics in the area surrounding the Rio Doce State Park - PERD.	Modelling scenarios of sustainable management for the area surrounding the PERD.

Responsibility for the Action	Possible partners	Start date	Conclusion date	Interface with other targets	"Is there a cost estimate? (yes or no)"
SECIMA - GO	UFG	-	2018	19	YES
ITCG/SEMA-PR	SOS Mata Atlântica	-	2018	5, 11, 17	YES
ITCG/SEMA-PR	Brazilian Forest Service	42339	42795	1, 7, 12, 15, 19	NO
SEMA-AM	SEPLANCTI, SPF, SEPROR, IDAM, IPAAM, MMA, Municipal Governments, TERRA LEGAL	2016	2020	12, 14	YES
COBIO/SEMA - CE	CODES/SEMA, SEMACE, FUNCEME, SPU	2016	2019	19	YES
COBIO/SEMA - CE	EMATERCE/SDA	2017	2018		YES
SEMA - PR	SEAB, ITCG, IAP, Municipal Governments	Continuous Action	Continuous Action	5, 11, 14, 15	NO
SEMADE- MS, IMASUL - MS	Neotrópica Foundation of Brazil, UFMS, Fibracon Consulting Services	2013	2014	12, 14, 15, 18	YES
SEMADE - MS, IMASUL	Universities, NGOs	2012	2014	19	YES
Coordination of Biodiversity and Natural Resources, Coordination of Environmental Education/SMA - SP, Secretary's Office of SMA-SP and GreenBlue Municipality Program.	NGO SOS Mata Atlântica / ICLEI - Local Governments for Sustainability	2016	2020	17	YES
Coordination of Biodiversity and Natural Resources/SMA - SP	Secretariat of Agriculture and Supply, through the Coordination of Integral Technical Assistance - CATI, Conservation International of Brazil – CI Brasil, German International Cooperation Agency (GIZ) and Ministry of the Environment.	2013	2020	1, 17, 20	YES
Office of the Secretary, Coordination of Environmental Planning, Biodiversity and Ecological-Economic Zoning Working Group/SMA-SP	-	2016	2020	9, 10, 12, 13	YES
Neotrópica Foundation of Brazil, UFMS	UFMS, UFGD, State Government	2013	2016	19	NO
IDSM - AM	State governments of Amazonas and Pará (and possibly other states of the Amazon Region).	24/06/1905	Continuous Action	6, 7, 18	NO
Araçá-Piranga Socio-Environmental Center	RBMA Committee, Municipalities of Bacia do Caí and Vale do Sinos/SEMA-RS/ICMBio and local communities	2018	2020	7, 5	YES
PELD Site: Atlantic Forest and Lake System of the Medium Doce River - MG, Site 4	IGC/UFMG	2017	2020	19	YES

Target 3

By 2020, at the latest, incentives harmful to biodiversity, including the so-called perverse subsidies, are eliminated, phased out or reformed in order to minimize negative impacts. Positive incentives for the conservation and sustainable use of biodiversity are developed and applied, consistent and in harmony with the CBD, taking into account national and regional socio economic conditions.

Target-Action	Group/segment	Action	Objective
Target3-Action1	MMA Secretariats	Support the development and implementation of a tool for analyzing the financial risk of investments and financing operations related to the Natural Capital.	1. Offer elements to allow decision makers in finance - both in corporations and in the financial sector - to formally and explicitly consider the risks associated to natural resources and ecosystem services in their processes of identification, analysis and assessment of risks. 2. Offer subsidies for reflection on public policies on command and control, and economic incentives in Brazil, for the incorporation of natural resources and ecosystem services in the private sector decision making processes.
Target3-Action2	MMA Secretariats	Development of proposal for revising credit to finance forest management and sustainable agricultural practices.	Create incentives for the conservation of biodiversity and ecosystem services in private areas.
Target3-Action3	MMA Secretariats	Integration of ecosystem services into Corporate Management.	Apply the results of the Corporate Directives for the Economic Valuation of Ecosystem Services and develop tools to allow corporations to integrate the value of ecosystem services into their management processes.
Target3-Action4	MMA Secretariats	Integration of ecosystem services into Ecological-Economic Zoning (Regional-Local TEEB Project)	Develop a methodological proposal for integrating ecosystem services into the methodology for developing Ecological-Economic Zoning, with the objective of strengthening the environmental dimension and the sustainability principle of this instrument.
Target3-Action5	Agencies Connected to MMA	Strategies for defining the watershed of the Cinzas River as a Special Management Unit.	"Recommendations for the environmental sector: strategies to 1. Reforest riparian areas given the reduced vegetation cover observed in this watershed. 2. Create protected areas to increase control over soil use and occupation. 3. Implement hydro-environmental programs, such as the protection of water catchment areas, conservation of soil and water, and payment for ecosystem services. 4. for the agricultural sector: apply soil and water conservation and erosion control techniques. These strategies are presented based on the current condition of the Cinzas River watershed as shown in the Integrated Water Resources Plan of the Paranapanema Water Resources Management Unit (RIRH), as an area of restricted use was created on the borders of the watershed, preventing interventions that could cause the damming of the natural flow of the rivers, thus impacting the lotic section."
Target3-Action6	Agencies Connected to MMA	Development of studies to assess the effects of the implementation of hydroelectric enterprises in the Paraguai Hydrographic Region, to support the development of the Water Resources Plan of the Paraguai Hydrographic Region.	Implement water resources management based on research on hydrological dynamics aspects, water quality associated to the sustainability of fish diversity and related socio-economic aspects.
Target3-Action7	Agencies Connected to MMA	Implementation of the Environmental Regularization Programs (PRA).	The implementation of PRAs by states will promote the recuperation and expansion of vegetation cover, thus contributing to the conservation of species of the Brazilian flora.
Target3-Action8	Agencies Connected to MMA	Regulation and management of the Environmental Reserve Quotas (CRA).	The objective of establishing CRA was to create a positive incentive for the conservation of remaining forest fragments. These CRAs may be used to compensate the absence of Legal Reserve, as long as specific legal conditions are met relating to the date of loss of the forest cover and the ecological equivalence between the ecological characteristics of the area represented by the CRA and the area to be compensated. In general terms, CRAs may be used for compensation between rural properties in the same biome and state. SFB is evaluating the possibility for CRA to also function as remuneration in Payment for Ecosystem Services.
Target3-Action9	Institutes/ Institutions connected to Ministries	Coordination of the Working Group on Agricultural Chemicals - Fiocruz	Implement institutional policies for addressing the impacts caused by agricultural chemicals on health, as part of a series of commitments made by Fiocruz for the combat to agricultural chemicals under the Permanent Campaign Against Agricultural Chemicals and in Favor of Life.

Responsibility for the Action	Possible partners	Start date	Conclusion date	Interface with other targets	"Is there a cost estimate? (yes or no)"
SBio/MMA, Center of Sustainability Studies of the Getúlio Vargas Foundation.	CNI	2016	2017	20	NO
SBio/MMA	PUC-Rio, UNEP, SFB, banks	2017 (estimate)	2022 (estimate)	2, 5, 11	NO
SBio/MMA, CNI	Boticário Foundation, Center of Sustainability Studies of the Getúlio Vargas Foundation.	2015	2018	20	NO
SRHQ/MMA	SBio/MMA, members of the CCZEE	2016	2018	2	NO
SPR/ANA	CBH Paranapanema/CBH Norte Pioneiro/ Paraná Environmental Institute /AGUASPARANA	01/01/2014 (Beginning of the development of the PIRH Paranapanema)	21/10/2016 (Approval of the PIRH Paranapanema)	4; 7	NO
SPR/ANA	Eliseu Alves Foundation	2016	2020	4	YES
SFB and states.	Rural land owners.	-	-	5;7; 11; 14; 15	NO
SFB, MMA	States, private sector and NGOs.	2017	-	5; 11	YES
Fiocruz	ABRASCO	Continuous Action	Continuous Action	8	-

Target 3

By 2020, at the latest, incentives harmful to biodiversity, including the so-called perverse subsidies, are eliminated, phased out or reformed in order to minimize negative impacts. Positive incentives for the conservation and sustainable use of biodiversity are developed and applied, consistent and in harmony with the CBD, taking into account national and regional socio economic conditions.

Target-Action	Group/segment	Action	Objective
Target3-Action10	Institutes/ Institutions connected to Ministries	Management of the National System of Toxic-Pharmacological Information - SINITOX	Coordinate the collection, compilation, analysis and dissemination of cases of intoxication and poisoning notified in the country.
Target3-Action11	Institutes/ Institutions connected to Ministries	Coordination of the National System of Innovation Networks in Biodiversity-Based Medicines (RedesFito)	"1. Promote innovation in biodiversity-based medicines, considering that biodiversity-based medicines are those that originate from the set of genes, species and ecosystems in each region. 2. Contribute to the implementation of Policies on Science, Technology and Innovation regarding innovation in medicines developed based on Brazilian biodiversity. 3. Contribute to the consolidation of the National Policy on Medicinal Plants and Phytotherapics - PNPMF."
Target3-Action12	Institutes/ Institutions connected to Ministries	Promote discussion on good practices on the use of the Ecological VAT (ICMS Verde) to promote environmental management in indigenous lands.	Carry out an inter-sectoral meeting to discuss the theme.
Target3-Action13	State Environmental Agencies (OEMAs)	Payment for Ecosystem Services	Implement a Conservation Credit System in the Timbó and Chapecó Ecological Corridors.
Target3-Action14	State Environmental Agencies (OEMAs)	Implementation of the system of Payment for Ecosystem Services from Biodiversity in properties within the Ecological Corridors Timbó and Chapecó.	Promote the conservation of areas in private properties within the Ecological Corridors Chapecó and Timbó.
Target3-Action15	State Environmental Agencies (OEMAs)	Implementation and management of the SIEE - Economic-Ecological Integration System.	1. Adjust agricultural production methods to make them more sustainable. 2. Promote the application of conservation-friendly agricultural practices in voluntary properties.
Target3-Action16	State Environmental Agencies (OEMAs)	Promote the conservation of areas in private properties within the Ecological Corridors Chapecó and Timbó.	Payment for Ecosystem Services from Biodiversity in properties within the Ecological Corridors Timbó and Chapecó.
Target3-Action17	State Environmental Agencies (OEMAs)	Implementation of the Green VAT (ICMS Ecológico)	Benefit the municipalities that develop environmental actions, such as Protected Areas and water catchment areas, through the provision of resources from the ICMS - Tax on the Trade of Merchandise and Services collected in the state.
Target3-Action18	State Environmental Agencies (OEMAs)	Implementation of the Green VAT (ICMS Ecológico)	Benefit the municipalities that develop environmental actions through the provision of resources from the ICMS - Tax on the Trade of Merchandise and Services.
Target3-Action19	State Environmental Agencies (OEMAs)	Implementation of the Green VAT (ICMS Ecológico)	Benefit the municipalities that develop environmental actions through the provision of resources from the ICMS - Tax on the Trade of Merchandise and Services, collected by states. The Green VAT is one of the criteria for granting these resources and acknowledges the municipalities that possess, for example, Protected Areas.
Target3-Action20	State Environmental Agencies (OEMAs)	Regulation of the Law on Ecosystem Services (Programs, Sub-programs and Projects).	Implement the incentive and payment for actions and projects that promote the maintenance, conservation, protection, monitoring and sustainable use of biodiversity in the Amazonas state.
Target3-Action21	State Environmental Agencies (OEMAs)	Implementation of the Forest Grant Program	Ensure the reduction of deforestation and reduction of greenhouse gas emissions, in addition to direct gains for riverside communities living within Protected Areas, social benefits at the community level, support to the formation of associations, production activities and sustainable income generation.

Responsibility for the Action	Possible partners	Start date	Conclusion date	Interface with other targets	"Is there a cost estimate? (yes or no)"
Institute of Communication, Scientific Information and Health Technology - ICICT/ Fiocruz	MS	Continuous Action	Continuous Action	8	-
"Biodiversity and Health Management Nucleus (NGBS/Farmanguinhos/Fiocruz)"	Far-Manguinhos- Fiocruz, Anvisa, Embrapa, Esalq	Continuous Action	Continuous Action	13	-
Funai	MMA, Indigenous Organizations, Organizations working with Indigenous Peoples	2016	2019	2, 11, 18	NO
FATMA - SC	-	2016	-	2, 11, 14, 15, 20	NO
FATMA - SC	EPAGRI, State Secretariat of Sustainable Development - SDS, State Secretariat of Agriculture	2015	-	14, 15, 20	YES
FATMA - SC	EPAGRI, State Secretariat of Agriculture	2014	-	7, 14, 15	YES
FATMA - SC	EPAGRI, State Secretariat of Sustainable Development - SDS, State Secretariat of Agriculture	2015	-	14, 15, 20	YES
INEA - RJ	CEPERJ Foundation	Continuous Action	Continuous Action	2, 20	-
NATURATINS - TO	NATURATINS, SEMARH	Continuous Action	Continuous Action	20	NO
SECIMA - GO	-	Continuous Action	Continuous Action	20	-
SEMA - AM	IDESAM, FAS, FVA, UFAM	2016	2020	5, 11	YES
FAS/SEMA -AM	Community Associations	2015	2020	2, 5,11, 14, 15	YES

Target 3

By 2020, at the latest, incentives harmful to biodiversity, including the so-called perverse subsidies, are eliminated, phased out or reformed in order to minimize negative impacts. Positive incentives for the conservation and sustainable use of biodiversity are developed and applied, consistent and in harmony with the CBD, taking into account national and regional socio economic conditions.

Target-Action	Group/segment	Action	Objective
Target3-Action22	State Environmental Agencies (OEMAs)	Expansion of the Green Municipality Seal Program	Institutional strengthening of municipalities, with the objective of implementing the process of decentralizing environmental management to improve the environmental resources in the state of Ceará.
Target3-Action23	State Environmental Agencies (OEMAs)	Regulation of the Payment for Ecosystem Services (SEMA Resolution 080/2015) and implementation of the Payment for Ecosystem Services process for the Private Reserves of the Natural Heritage - PSA/RPPN.	Institute directives and norms for the implementation of projects on Payment for Ecosystem Services earmarked to Private Reserves of the Natural Heritage (RPPN) in the state of Paraná, and provide financial compensation - through the payment - to the owners of RPPNs whose areas provide ecosystem services related to the conservation of biodiversity and water resources and that, consequently, generate benefits to the entire society.
Target3-Action24	State Environmental Agencies (OEMAs)	Revision of indexes and destination of resources from the Green VAT.	1. Reduce or increase the Green VAT indexes that define the amounts to be received by municipalities, according to the evaluation system. 2. Direct ICMS resources to municipalities for the creation and regularization of Protected Areas, aiming at increasing incentives and protected areas.
Target3-Action25	State Environmental Agencies (OEMAs)	Management and enhancement of the Green VAT.	Improve the system for evaluation of the application of Green VAT resources, instituting the preparation of municipal diagnoses and municipal socio-environmental development plans for protected areas, thus promoting planning that targets actions of environmental management, sustainable agriculture and responsible rural tourism that value the historical-cultural heritage.
Target3-Action26	State Environmental Agencies (OEMAs)	Consolidation and strengthening of the management of the State Green VAT Program.	1. Approve norms for strengthening the Program, particularly the State Decree Nº 14.366, of 29 December 2015, which rules on the aspects of the State Protected Areas Cadaster and Green VAT, and establishes directives for sharing the percent of the income share defined by the State Constitution. 2. Define new qualitative evaluation criteria for Protected Areas, particularly regarding the preparation of management plans, implementation of environmental education projects, and disposal of solid waste.
Target3-Action27	State Environmental Agencies (OEMAs)	Management of knowledge on São Paulo biodiversity	Promote studies to evaluate ecosystem services provided by biodiversity in São Paulo to inform the proposition of public policies (TEEB-SP).
Target3-Action28	State Environmental Agencies (OEMAs)	Promote the sustainable use of biodiversity in agriculture, aquaculture and forestry activities.	Identify actions/strategies for the protection of ecosystem services provided by pollinators to be incorporated into protocols with production sectors, settlements of the agrarian reform and quilombola territories.
Target3-Action29	Civil Society (NGOs)	Support to the implementation of the Green VAT (ICMS Ecológico).	1. Benefit the municipalities that develop environmental actions through the provision of resources from the ICMS - Tax on the Trade of Merchandise and Services, collected by states. 2. Promote studies on the valuation of Protected Areas, particularly the RPPNs belonging to the Boticário Group Foundation.
Target3-Action30	Civil Society (NGOs)	"Support the integration of ecosystem services into the Ecological-Economic Zoning (Regional-Local TEEB Project)"	Develop a methodological proposal for integrating ecosystem services into the methodology for developing Ecological-Economic Zoning, with the objective of strengthening the environmental dimension and the sustainability principle of this instrument.
Target3-Action31	Civil Society (NGOs)	Implementation of the Beautiful Oasis Program - Producers of Biodiversity	1. Unite the tourism segment and the rural producers for the common good of nature conservation, through a Payment for Ecosystem Services (PES) mechanism. 2. Ensure the maintenance of natural beauty and benefit local economy.

Responsibility for the Action	Possible partners	Start date	Conclusion date	Interface with other targets	"Is there a cost estimate? (yes or no)"
CODES/SEMA - CE	COBIO/SEMA, SEMA - CE, CAGE- CE, IFCE, UFCE, SETUR, SEBRAE, OAB	2016	2018	11	YES
SEMA - PR	IAP, SIMEPAR - PR	-	2018	5, 11, 14	YES
SEMA - PR, IAP - PR	Municipal Governments	Continuous Action	Continuous Action	11, 12, 14	-
SEMA - PR, IAP - PR	SEMA - PR	Continuous Action	Continuous Action	5,11	-
SEMADE - MS, IMASUL	Municipal Governments	2000	Continuous Action	11	NO
Coordination of Biodiversity and Natural Resources/SMA -SP	Secretariat of Agriculture and Supply, through the Coordination of Integral Technical Assistance - CATI, Conservation International of Brazil – CI Brasil, German International Cooperation Agency (GIZ) and Ministry of the Environment.	2013	2020	1, 17, 20	YES
Coordination of Biodiversity and Natural Resources, GTAPE - PDRS (Working and Monitoring Group on Strategic Projects - Sustainable Rural Development Project)/SMA -SP	Secretariat of Agriculture and Supply	2016	2020	3, 4, 6, 8, 13, 16, 18	YES
Boticário Foundation	TNC, MMA, OEMAs	2006	Continuous Action	20	NO
Boticário Foundation, GIZ, TNC	SBio/MMA, members of the CCZEE, Boticário Group Foundation	2006	2017	2	NO
Neotrópica Foundation of Brazil	Boticário Group Foundation	2013	2017	5,7, 11, 14, 15.	YES

Target 3

By 2020, at the latest, incentives harmful to biodiversity, including the so-called perverse subsidies, are eliminated, phased out or reformed in order to minimize negative impacts. Positive incentives for the conservation and sustainable use of biodiversity are developed and applied, consistent and in harmony with the CBD, taking into account national and regional socio economic conditions.

Target-Action	Group/segment	Action	Objective
Target3-Action32	Civil Society (NGOs)	Implementation of the State Program on Payment for Ecosystem Services	Promote the adoption of conservation-friendly management practices in rural properties, aiming at the conservation of soil and water, foreseeing the remuneration of participating rural landowners based on the benefits generated in their properties.
Target3-Action33	Civil Society (NGOs)	Creation of Financial Incentives and S Seal of Sustainability	Promote sustainable actions and practices directed at reducing the environmental impacts of ventures, civil works and activities with local impact.
Target3-Action34	Civil Society (NGOs)	Implementation of the Program on Payment for Ecosystem Services (PSA) – Soil and Water	Promote sustainable development and the maintenance and expansion of the availability of ecosystem services and goods.
Target3-Action35	Civil Society (NGOs)	Creation of a Wildlife Refuge at the core of the APA dos Contrafortes do Ferrabraz (MA 003)	Establishment of an Ecological Corridor in the APA.
Target3-Action36	Civil Society (NGOs)	Continuation of the Muriqui Prize	Acknowledge institutions, individuals and corporations that positively contribute to the conservation, sustainable use and knowledge of the Atlantic Forest.
Target3-Action37	Civil Society (NGOs)	Acknowledgement and titling of Advanced Posts of the RBMA	Acknowledge institutions, individuals and corporations that positively contribute to the conservation, sustainable use and knowledge of the Atlantic Forest.
Target3-Action38	Civil Society (NGOs)	Implementation of the Atlantic Forest Market Seal linked to the RBMA Atlantic Forest Market Program.	Identify, qualify and promote sustainable products, services and businesses in the Atlantic Forest based on the implementation of sustainability principles, directives and indicators, granting the Atlantic Forest Market Seal to these ventures.
Target3-Action39	Academia	Control of biological invasions in the Rio Doce State Park - PERD	Assess the reproductive biology of fishes, for management purposes.

Responsibility for the Action	Possible partners	Start date	Conclusion date	Interface with other targets	"Is there a cost estimate? (yes or no)"
Neotrópica Foundation of Brazil	Homem Pantaneiro Institute, State Government	2016	Continuous Action	5,7, 11, 14, 15.	NO
SVDS/ICLEI	-	2015	2016	14	NO
SVDS/ICLEI	SVDS, SMDEST, CATI, EMBRAPA	2017	2020	14	YES
Araçá-Piranga S. A. Center	RBMA Committee, Municipalities of the watersheds of Caí and Vale do Sinos, SEMA-RS, ICMBio and local communities	2018	2020	7	YES
Atlantic Forest Biosphere Reserve	RBMA Network, Atlantic Forest Network, research and learning institutions, federal, state and municipal governments, private sector and society	Annual	Annual	12, 14	YES
Atlantic Forest Biosphere Reserve	RBMA Network, Atlantic Forest Network and partner institutions.	Continuous Action	Continuous Action	12, 14	YES
Atlantic Forest Biosphere Reserve	RBMA Network, Atlantic Forest Network and partner institutions.	Continuous Action	Continuous Action	1, 4, 5, 7, 8, 11, 13, 14, 15, 18	NO
PELD Site: Atlantic Forest and Lake System of the Medium Doce River-MG, Site 4	UFSJ	2017	2020	9	YES

Target 4

By 2020, at the latest, governments, private sector and stakeholders at all levels have taken steps to achieve or have implemented plans for sustainable production and consumption to mitigate or prevent negative impacts from the use of natural resources.

Target-Action	Group/segment	Action	Objective
Target4-Actiont1	MMA Secretariats	Launching of the 2nd Cycle of the Action Plan for Sustainable Production and Consumption - PPCS	Promote in Brazil a strong and continuous process of increasing actions aligned with the concept of sustainable production and consumption, promoting the integration of these efforts to address climate change, combatting poverty, economic development and conservation of biodiversity and natural resources.
Target4-Actiont2	MMA Secretariats	Implementation of the "Priority Education for Sustainable Consumption" of the Action Plan for Sustainable Production and Consumption - PPCS.	1. Create public awareness regarding the impacts of the levels of consumption and promote more sustainable consumption patterns. 2. Offer distance-learning courses on sustainable production and consumption, and children and consumption.
Target4-Actiont3	MMA Secretariats	Continuation of the implementation of the Environmental Agenda in Public Administration - A3P (face-to-face and distance-learning training as continuous action).	1. Reduce and rationalize the use of natural resources in public administration. 2. Offer face-to-face and distance-learning training as continuous action.
Target4-Actiont4	Agencies Connected to MMA	Management and monitoring of 100% of the federal forest concession contracts.	Enable the production of 1.3 million m³ of timber under Sustainable Forest Management Plans in areas under forest concession, and ensure the market availability of sustainable timber originating from federal public forests, with origin traceability.
Target4-Actiont5	Agencies Connected to MMA	Support to projects on sustainable management of forest resources and restoration of native vegetation, through the National Forestry Development Fund (FNDF).	Offer financial support to projects aiming at the adoption of sustainable forestry practices and environmental regularization.
Target4-Actiont6	Agencies Connected to MMA	Designation of 3.5 million hectares of Federal Public Forests under forestry concession for expanded sustainable production.	Publish the forest concession public bids for the Flonas of Jamari, Jacundá, Saracá-Taquera, Altamira, Caxiuanã, Crepori, Itaituba I and II, Amana, Amapá, Humaitá, Balata-Tufari and Iquiri and APA Tapajós, and execute the forestry concession contracts.
Target4-Actiont7	Institutes/ Institutions connected to Ministries	Environmental Management of the Campuses - Fiocruz	Promote campaigns for reducing the consumption of energy and water, well-being, collection of batteries and recycling.
Target4-Actiont8	State Environmental Agencies (OEMAs)	Promotion of the sustainable use of biodiversity in agriculture, aquaculture and forestry activities.	Increase the agriculture-prone area of the state committed to agroecological practices.
Target4-Actiont9	State Environmental Agencies (OEMAs)	Development of the Forestry and Community Management Plan	Implement multiple-use forestry management plans in the areas of settlements from the agrarian reform in the region of the Lower Jaguaribe, to combat deforestation in the state and build the capacity of the resident population and workers for the rational use of the region's natural resources.
Target4-Actiont10	State Environmental Agencies (OEMAs)	Continuation of the implementation of the Solid Waste Management Plans in the schools of Paraná.	Protection of public health and environmental quality; encouragement to the adoption of sustainable patterns of production and consumption of goods and services.
Target4-Actiont11	State Environmental Agencies (OEMAs)	Implementation of the Protected Area Management Quality Seal Program	1. Define the level of performance that the protected area must comply with, according to its creation instrument, management category and objectives established in the Management Plan. 2. Assess the technical and managerial capacity of the protected area manager or manager candidate.
Target4-Actiont12	State Environmental Agencies (OEMAs)	A3P - Environmental Agenda in Public Administration/CE	Aims at implementing sustainable socio-environmental management within governmental administrative activities and operations, and has the foremost objective of minimizing environmental impacts caused by administrative or operational activities.
Target4-Actiont13	State Environmental Agencies (OEMAs)	Continuation of the implementation and management of the Paraná State Solid Waste Program.	1. Eliminate dumps in the state of Paraná. 2. Promote the adequate segregation and reduction of generated solid waste.

Responsibility for the Action	Possible partners	Start date	Conclusion date	Interface with other targets	"Is there a cost estimate? (yes or no)"
SAIC/MMA	Members of the PCS Management Committee, comprised of representatives of government, civil society and private sector.	2011	Continuous Action	"8, 15 "	-
SAIC/MMA	SENAI-BA	2016	2016	"8, 15 "	YES
"SAIC/MMA"	Federal, state and municipal governments across the 3 governmental bodies	Continuous Action	Continuous Action	"8, 15 "	-
SFB	ICMBio, IBAMA	2007	2020	1, 2, 3, 5, 7, 11,	YES
SFB	Climate Fund, NGOs, Foundations, State Governments, Support Agencies.	2012	-	3;5;7;11	YES
SFB	ICMBio, IBAMA,	2007	2020	1, 2, 3, 4, 5, 7, 11, 12, 14, 15, 19	YES
DIRAC/ Fiocruz	-	Continuous Action	Continuous Action	-	-
SMA - SP	-	2016	2020	13	YES
CODES/SEMA - CE	COBIO/CEDIB/SEMA, SEMACE, Residents' Associations, Caixa Econômica Federal, Universities.	2016	2018	7	YES
SEMA - CE	SEED	Continuous Action	Continuous Action	8	-
COBIO/CEDIB/SEMA - CE	PGE, Universities, SEPLAG	2017	2019	1,11	NO
COEAS/SEMA - CE	SECULT, SEDUC, SEFAZ, SEJUS, SRH, SSPDS, URCA, UVA, SEINFRA, CGE, SDA, SETUR, SEPLAG, GABGOV, CIDADES	2016	2019	1,7,8	YES
SEMA - PR	Municipal Governments, FIEP, Private Sector	Continuous Action	Continuous Action	8	-

Target 4

By 2020, at the latest, governments, private sector and stakeholders at all levels have taken steps to achieve or have implemented plans for sustainable production and consumption to mitigate or prevent negative impacts from the use of natural resources.

Target-Action	Group/segment	Action	Objective
Target4-Actiont14	State Environmental Agencies (OEMAs)	Implementation of the Public Registry of Greenhouse Gas Emissions - Paraná Climate Seal	1. Disseminate knowledge on the Carbon Footprint of Corporations. 2. Encourage economic actors to account the emission of greenhouse gases, aiming at their reduction and competitive transition to a low-emission economy. 3. Maintain the public informed on the efforts applied by government and economic actors to address the challenges of climate change. 4. Create a database on emission of greenhouse gases and allow analyses that can inform the design of public policies for emissions reduction.
Target4-Actiont15	State Environmental Agencies (OEMAs)	Continuation of the implementation and management of the Reverse Logistics Program	Reduce the inadequate disposal and improve/optimize the reuse and recycling of post-consumption products.
Target4-Actiont16	State Environmental Agencies (OEMAs)	Development and implementation of the Tocantins Jurisdictional Program of Ecosystem Services and Emissions Reduction	Evaluate the Tocantins potential and viability for the implementation of a jurisdictional program addressing ecosystem services and the reduction of emissions in the state.
Target4-Actiont17	State Environmental Agencies (OEMAs)	Support to local biodiversity actions.	Develop an overview of the local biodiversity initiatives.
Target4-Actiont18	State Environmental Agencies (OEMAs)	Promote local biodiversity actions	Enhance the Biodiversity Directive of the PMVA, in agreement with the Aichi Targets and Decision X/22 (COP 10).
Target4-Actiont19	State Environmental Agencies (OEMAs)	Implementation of the Program on Environmental Regularization of Rural Properties	Increase the area of the territory of São Paulo registered in CAR and undergoing environmental regularization process.
Target4-Actiont20	Civil Society (NGOs)	Promote the intensification of pastures through economic viability analyses and sustainable production arrangements.	Increase pasture productivity with the purpose of freeing areas for ecological restoration and other land uses (thus preventing pressure for new deforestation). Emphasis on the states of MT, PA and TO.
Target4-Actiont21	Civil Society (NGOs)	Promotion of heart-of-palm /Assai palm and mate production within Ecological Corridors	Ensure socio-economic development within Ecological Corridors.
Target4-Actiont22	Civil Society (NGOs)	Expansion of the RBMA Atlantic Forest Market Program	Identify, qualify and promote sustainable products, services and businesses in the Atlantic Forest based on the implementation of sustainability principles, directives and indicators for the good management of areas and species.
Target4-Actiont23	Civil Society (NGOs)	Expansion of the RBMA Sustainable Tourism Program	"1. Promote the capacity building of local communities and around Protected Areas for the development of sustainable activities, based on monitoring actions, environmental education and support to scientific research. 2. Identify, qualify and promote products and services in the Atlantic Forest to value their relationship with the natural environment and sustainable management of ventures."
Target4-Actiont24	Civil Society (NGOs)	Continuation of the implementation and management of the Project on Environmental Assets of the VC-RBM-SBE Technical Cooperation	Contribute to the conceptual and methodological advancement of the planning and management of properties belonging to territorial-based corporations, such as mining, silviculture, agriculture and livestock, energy and others, with the purpose of designing Sustainable Territorial Management Plans (PGTS) for these properties.
Target4-Actiont25	Civil Society (NGOs)	"Implementation of an independent technical panel to promote scientific assessments of mining activities in Brazil."	"1. Promote best practices in key economic sectors to mitigate or prevent negative impacts on natural systems, focusing on mining activities in Brazil. 2. Monitor impacts and jointly define solutions to balance economic benefits and conservation."
Target4-Actiont26	Academia	Promote the sustainable use and management of native vegetation.	Promote the consumption of products and services originating from the sustainable management of native vegetation.
Target4-Actiont27	Academia	Implementation of the sustainable management of forests in the Amazon-Cerrado transition	Identify, describe, evaluate the dynamics parameters and propose models of sustainable forestry management of native tree species in the Amazon-Cerrado transition.

Responsibility for the Action	Possible partners	Start date	Conclusion date	Interface with other targets	"Is there a cost estimate? (yes or no)"
SEMA - PR, CMC	FIEP	Continuous Action	Continuous Action	1	-
SEMA- PR, Production Sectors	SEMA - PR	Continuous Action	Continuous Action	8	-
SEMARH - TO	China Green	2017	2020	3, 5, 7, 14, 15	NO
Coordination of Biodiversity and Natural Resources, Coordination of Environmental Education, SMA Secretary's Office (SP) and GreenBlue Municipality Program.	NGO SOS Mata Atlântica/ICLEI - Local Governments for Sustainability	2016	2020	17	YES
Coordination of Biodiversity and Natural Resources, SMA Secretary's Office (SP) and GreenBlue Municipality Program.	-	2016	2020	17	YES
Coordination of Biodiversity and Natural Resources and Secretariat of Agriculture and Supply SMA (SP)	Secretariat of Agriculture and Supply	2016	2020	3, 4, 5, 7, 13	YES
Agroicone	INPUT Project, PCI MT Strategy, TNC, BID	1st semester /2015	not defined	11,14,15	NO
Araçá-Piranga S. A. Center and EMATER	Municipal governments and SEMA/RS	2019	2020	"5, 7 "	YES
Atlantic Forest Biosphere Reserve	RBMA Network, Atlantic Forest Network and partner institutions.	Continuous Action	Continuous Action	1, 3, 5, 7, 8, 11, 13, 14, 15, 18	NO
Atlantic Forest Biosphere Reserve	RBMA Network, Atlantic Forest Network and partner institutions.	Continuous Action	Continuous Action	1, 3, 5, 7, 8, 11, 13, 14, 15, 18	NO
Atlantic Forest Biosphere Reserve	RBMA Network, Atlantic Forest Network and partner institutions.	Continuous Action	Continuous Action	1, 3, 5, 7, 8, 11, 13, 14, 15, 18	NO
IUCN	Mining corporations, universities and research institutes.	2017	2017	14	YES
PELD Site: Southern Grasslands, MMA	Embrapa, Universities, NGOs	2016	2020	1, 3, 5, 7, 11, 14, 15, 18, 19, 20	NO
PELD Site: Cerrado - Amazon Forest Transition, Site 15	University of Leeds (England)	2017	2020	2, 3, 7	YES

Strategic Objective B

Reduce the direct pressures on biodiversity and promote sustainable use

6 targets | 36 institutions | 174 actions

National Targets: 5 to 10

5. Reduce native habitat loss

36 actions

- Monitoring programs
- Fragmentation reduction
- Field actions for data validation

6. Sustainable fisheries

20 actions

- Participatory management
- Evaluation of the status of threatened species

7. Sustainable management in agriculture, silviculture, livestock, aquaculture and extractive activities

60 actions

- Territorial management and BMPs
- Introduction of native species in reforestation initiatives

8. Pollution control (including from excess nutrients)

21 actions

- Monitoring water and soil quality
- Selective waste collection Programs

9. Control of invasive alien species

29 actions

- Monitoring mechanism
- National Strategy on IAS

10. Reduce pressure on coral reefs

8 actions

- Research and monitoring actions in marine ecosystems
- Expand protected area

Comparison of the actions in the Action Plan with the components of the National Targets described in the 5th National Report to the CBD

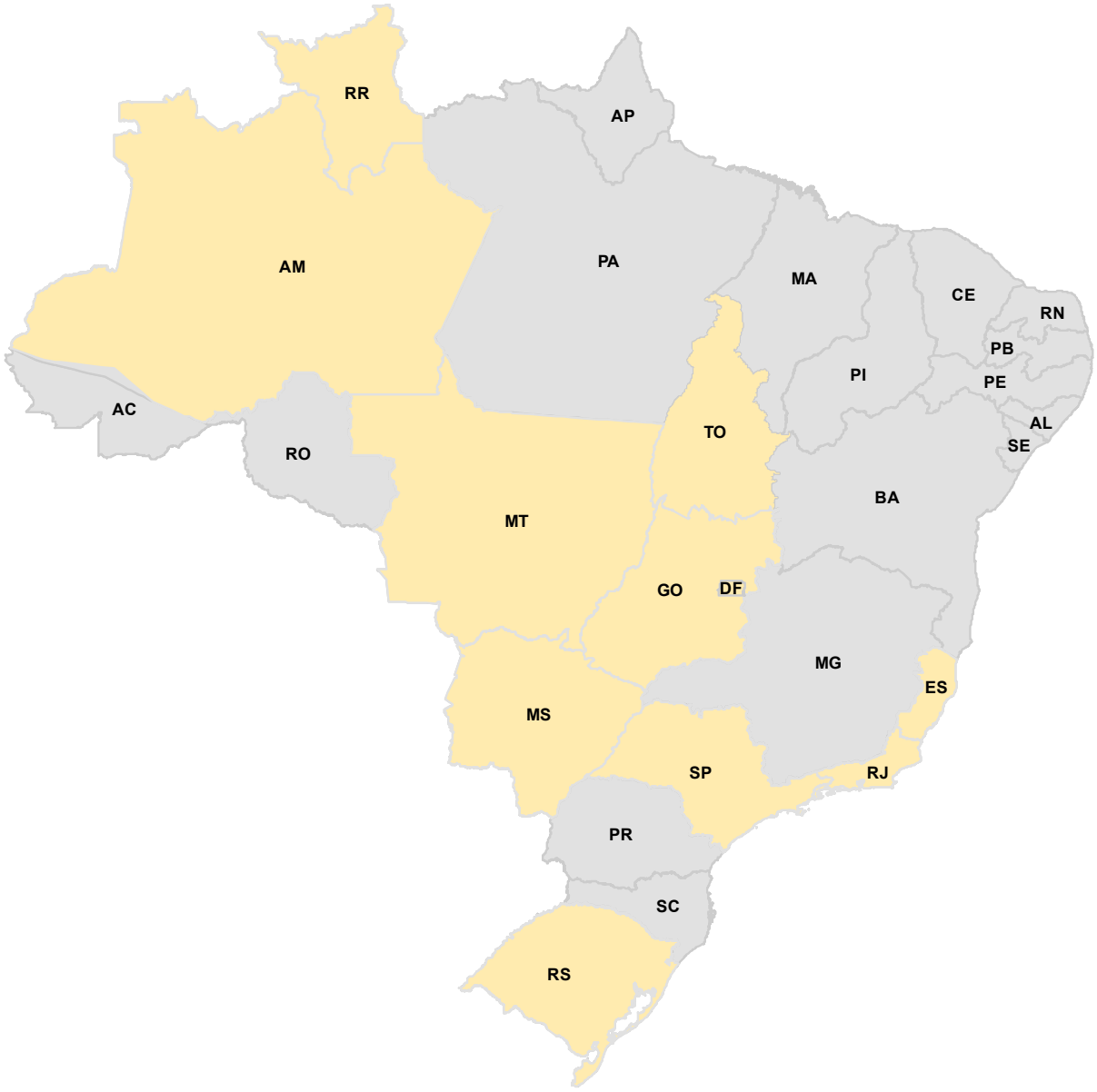
Target 5: By 2020, the rate of loss of native habitats is reduced by at least 50% (in comparison with the 2009 rate) and, as much as possible, brought close to zero, and degradation and fragmentation is significantly reduced in all biomes.		
Parts of the Target		**Nº of actions**
Total actions for the Target		36
Number of actions for part 1: Reduction of the rate of loss of native habitats by at least 50% (in comparison with the 2009 rate) in the **Amazon**.	Reduction of the rate of loss of native habitats	8
Number of actions for part 2: Reduction of the rate of loss of native habitats by at least 50% (in comparison with the 2009 rate) in the **Cerrado**.		
Number of actions for part 3: Reduction of the rate of loss of native habitats by at least 50% (in comparison with the 2009 rate) in the **Atlantic Forest, Caatinga, Pantanal and Pampas**.		
Number of actions for part 4: Significant reduction of degradation and fragmentation in the **Amazon**.	Fragmentation reduction	7
Number of actions for part 5: Significant reduction of degradation and fragmentation in the **other biomes**.		
Number of actions for part 6: Rate of habitats loss, as much as possible, brought close to zero.	Rate of habitats loss, as much as possible, brought close to zero	23

Target 6: By 2020, all stocks of any aquatic organism are managed and harvested sustainably, legally and applying ecosystem based approaches, so that overharvesting is avoided, recovery plans and measures are in place for depleted species, fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems, and the impacts of fisheries on stocks, species and ecosystems are within safe ecological limits, when scientifically established.	
Parts of the Target	**Nº of actions**
Total actions for the Target	**20**
Number of actions for part 1: The management and harvest of all stocks of any aquatic organism are sustainable, legal and apply ecosystem based approaches, so that overharvesting is avoided.	6
Number of actions for part 2: Plans and measures for the recuperation of depleted species are in place.	1
Number of actions for part 3: Fisheries activities have no significant adverse impact on threatened species and vulnerable ecosystems.	6
Number of actions for part 4: Impacts of fisheries activities on stocks, species and ecosystems are within safe ecological limits, when scientifically established.	7

Target 7: By 2020, the incorporation of sustainable management practices is disseminated and promoted in agriculture, livestock production, aquaculture, silviculture, extractive activities, and forest and fauna management, ensuring conservation of biodiversity.	
Parts of the Target	**Nº of actions**
Total actions for the Target	**60**
Number of actions for part 1: Sustainable management practices are disseminated and promoted for incorporation in **agriculture and livestock**, ensuring conservation of biodiversity.	18
Number of actions for part 2: Sustainable management practices are disseminated and promoted for incorporation in **aquaculture**, ensuring conservation of biodiversity.	3
Number of actions for part 3: Sustainable management practices are disseminated and promoted for incorporation in **silviculture**, ensuring conservation of biodiversity.	18
4. Sustainable management practices are disseminated and promoted for incorporation in **extractive activities, and forest and fauna management**, ensuring conservation of biodiversity.	22
Actions that address all parts:	26
Target 8: By 2020, pollution, including from excess nutrients, has been brought to levels that are not detrimental to ecosystem function and biodiversity.	
Parts of the Target	**Nº of actions**
Total actions for the Target	**21**
Number of actions for part 1: Reduction of pollution, including from excess nutrients, to levels that are not detrimental to ecosystem function and biodiversity.	21
Target 9: By 2020, the National Strategy on Invasive Alien Species is fully implemented, with the participation and commitment of states and the elaboration of a National Policy, ensuring the continuous and updated diagnosis of species and the effectiveness of Action Plans for Prevention, Contention and Control.	
Parts of the Target	**Nº of actions**
Total actions for the Target	**29**
Number of actions for part 1: By 2020, the National Strategy on Invasive Alien Species is fully implemented, with the participation and commitment of states and the elaboration of a National Policy ...	12
Number of actions for part 2: ... ensuring the continuous and updated diagnosis of species and the effectiveness of Action Plans for Prevention, Contention and Control.	10
Number of actions that address both parts:	6
Target 10: By 2015, the multiple anthropogenic pressures on coral reefs, and other marine and coastal ecosystems impacted by climate change or ocean acidification are minimized, so as to maintain their integrity and functioning.	
Parts of the Target	**Nº of actions**
Total actions for the Target	**8**
Number of actions for part 1: By 2015, the multiple anthropogenic pressures on coral reefs, and other marine and coastal ecosystems impacted by climate change or ocean acidification are minimized, so as to maintain their integrity and functioning.	8

Distribution of sectors/segments contributing to objective B:

Sectors	TOTAL ADHERENT INSTITUTIONS	INSTITUTIONS THAT CONTRIBUTE TO OBJECTIVE B	%
MMA Secretariats	3	3	100%
Agencies connected to MMA	4	4	100%
Ministries, Special Secretariats and Public Corporations	4	2	50%
Institutes/ Institutions connected to Ministries	6	2	33%
State Environmental Agencies (OEMAs)	14	12	85%
Civil Society (NGOs and similar organizations)	11	7	63%
Financing Agencies and Private Sector	1	0	0%
Academia	10	6	60%



States of the proposing institutions contributing to objective B

Target 5

By 2020, the rate of loss of native habitats is reduced by at least 50% (in comparison with the 2009 rate) and, as much as possible, brought close to zero, and degradation and fragmentation is significantly reduced in all biomes.

Target-Action	Group/segment	Action	Objective
Target5-Action1	MMA Secretariats	Design and implementation of the 3rd phase of the Action Plan for the Prevention and Control of Deforestation and Fire in the Cerrado - PPCerrado.	Reduce the deforestation rate and forest degradation, as well as the occurrence of agricultural and forest fire in the Cerrado biome, through the coordination of actions and partnerships among the federal, state and municipal governments, organized civil society, private sector and academia.
Target5-Action2	MMA Secretariats	Implementation of the Program on the Environmental Monitoring of Brazilian Biomes (MMA Administrative Ruling nº 365, of 27 November 2015)	1. Develop periodic mapping of deforestation and land use in all Brazilian biomes, providing official information with standardized and comparable methodology. 2. Promote coordination among the various agencies of the federal government that work on initiatives of satellite monitoring of vegetation cover and land use. 3. Ensure the optimization of the use of financial and human resources. 4. Provide information to support public policies on biodiversity and climate, with the Cerrado as priority.
Target5-Action3	Agencies Connected to MMA	Assess the conservation status of species of the Brazilian fauna.	Periodically assess the conservation status of species of the Brazilian fauna, identifying and locating the main threatened species, the important areas for maintaining species and compatibility with anthropic activities. These assessments are also the basis for designing the National Action Plans for threatened species.
Target5-Action4	Institutes/ Institutions connected to Ministries	Permanent monitoring of the indigenous lands with the highest deforestation rates	1. Satellite monitoring of the 20 indigenous lands presenting the highest deforestation rates. 2. Promote the exchange of geo-referenced information with other governmental and non-governmental institutions that work in indigenous lands, aiming at technological improvement and reduction of effort.
Target5-Action5	Institutes/ Institutions connected to Ministries	Revert the intrusion in indigenous lands	Promote the complete removal of occupants in 10 indigenous lands to ensure full possession by indigenous peoples.
Target5-Action6	State Environmental Agencies (OEMAs)	Promote the protection and restoration of the remaining Atlantic Forest fragments.	Generation of technical, analytical and managerial subsidies to allow municipalities to be protagonists in the protection and restoration of remaining forest fragments of the Atlantic Forest.
Target5-Action7	State Environmental Agencies (OEMAs)	Reduction of forest fragmentation.	Reduce fragmentation of remaining forest patches, as well as promote the connection of forest fragments.
Target5-Action8	State Environmental Agencies (OEMAs)	Management of knowledge on vegetation cover	Support IEF to carry out the Continuous Monitoring of Native Vegetation Cover.
Target5-Action9	State Environmental Agencies (OEMAs)	Map the Vegetation Cover and land use in the area encompassed by the Atlantic Forest	Identify the vegetation formations and associated ecosystems, as well as land use in the target area to guide governmental environmental management.
Target5-Action10	State Environmental Agencies (OEMAs)	Forest Inventory of Permanent Plots	Measure forest fragments in Minas Gerais to characterize and sample inventoried areas, with the analysis of floristic composition and definition of physiognomic groups, take sufficient samples to validate the interferences in the phyto-sociological structure of fragments, uniformity, diameter and height structure, plastic species, growth trends.
Target5-Action11	State Environmental Agencies (OEMAs)	Monitoring of forest blocks regarding Forest Restoration and areas subject to the Forest Tax	Monitor the vegetation cover of areas under forest restoration and planted and native forests.
Target5-Action12	State Environmental Agencies (OEMAs)	Monitoring the State's Vegetation Cover	Monitoring areas where the vegetation cover was affected to inform enforcement actions, as well as to inform the Environmental Regularization of Atlantic Forest areas degraded after 22 July 2008, legal reserves, APP and other intervened areas within the state territory of Minas Gerais.

Responsibility for the Action	Possible partners	Start date	Conclusion date	Interface with other targets	"Is there a cost estimate? (yes or no)"
DFCD/SMCF/MMA	MMA Secretariats and connected agencies, MAPA, MCTIC, MD, President's Office/Special Secretariat of Family Agriculture, MDIC, MI, MME, MT, MTE, MP, MRE, MF, among others, states, NGOs, production sector and Municipalities.	2016	2019	7, 11,14, 15	YES
SBio/MMA, SECEX/MMA DPCD/SMCF/MMA	Inpe, Embrapa, Ibama, MCTIC, universities and others	2016	2020	7, 14, 15, 19	YES
DIBIO/ICMBio	Research and learning institutions, IUCN	2009	Continuous Action	Targets 1, 12	NO
Funai	MMA, ICMBIO, IBAMA, MS/ SESAI, IBGE, INPE, INCRA	2016	2019	14	NO
Funai	MJ/SENASP/DPF, IBAMA, INCRA, MD and SGPR	2016	2019	14, 18	NO
IEF - MG, Academia, NGO, OSCIP, Municipal Governments		2015	2020	YES	The cost is included in the cost presented for item 15.3 (promotion of forestry)
IEF - MG, Academia, NGO, OSCIP, Municipal Governments		Continuous Action	Continuous Action	YES	The cost is included in the cost presented for item 15.3 (promotion of forestry)
Directorate of Fauna Protection/IEF - MG	IEF	Waiting for the strengthening of GEMOG (Jan/18)	Continuous Action	-	YES
Directorate of Fauna Protection /IEF - MG	IEF	Waiting for bidding process	12 months after the launch of activities	-	YES
Directorate of Fauna Protection /IEF - MG	IEF	Waiting for the strengthening of GEMOG (Jan/18)	Annual monitoring (new measurements and systematic visits to fragments)	-	YES
Directorate of Fauna Protection /IEF - MG	IEF	Waiting for the strengthening of GEMOG	Continuous Action	-	YES
Directorate of Fauna Protection /IEF - MG	-	2015	Continuous Action	-	YES

Target 5

By 2020, the rate of loss of native habitats is reduced by at least 50% (in comparison with the 2009 rate) and, as much as possible, brought close to zero, and degradation and fragmentation is significantly reduced in all biomes.

Target-Action	Group/segment	Action	Objective
Target5-Action13	State Environmental Agencies (OEMAs)	Mapping Vegetation Cover and land use in the areas covered by Cerrado and Caatinga	Identify the vegetation formations and associated ecosystems as well as land use in the target areas, to inform governmental environmental management.
Target5-Action14	State Environmental Agencies (OEMAs)	Mapping of degraded permanent preservation areas (water APPs and legal reserves), regular riverbeds of water courses, marginal lagoons, and definition of the borders of water APPs in the state of Minas Gerais	1. Identify and map the water APP and RL areas, cultivated or non-cultivated natural reserves, concerning the consolidated land use or areas modified by vegetation suppression with exposed soil under degradation and erosion process, such as associated aquatic ecosystems (springs and water emergence areas; river banks of natural perennial or intermittent water courses; borders of natural lakes and lagoons; mangroves; restingas; veredas; permanently marshy and waterlogged areas).
Target5-Action15	State Environmental Agencies (OEMAs)	Mapping land use and cover, focusing on buffer zones of Protected Areas, biodiversity corridors, RL and APPs	1. Allow increased efficiency in the management of the State Protected Areas System. 2. Inform the implementation of public policies for the conservation of biodiversity.
Target5-Action16	State Environmental Agencies (OEMAs)	Implementation of the Keeping an Eye on the Green Project	1. Prepare the map pf land use and vegetation cover at the 1:25,000 scale for the Watershed of the Paraíba do Sul River. 2. Identify the changes in Atlantic Forest vegetation and support environmental enforcement actions.
Target5-Action17	State Environmental Agencies (OEMAs)	Continue the implementation of the Plan for the Prevention and Combat to Deforestation	1. Periodically and systematically monitor the forest carbon stocks of the state of Amazonas. 2. Reduce illegal deforestation and the gas emissions associated to deforestation, fire and agricultural burning in the state. 3. Integrate actions of deforestation control, territorial planning and regularization, environmental control and promotion of production activities in the state.
Target5-Action18	State Environmental Agencies (OEMAs)	Continuation of the implementation of the Fire Combat Plan - (PEPCQ-AM)	1. Support the implementation of actions for monitoring, control, prevention and combat to agricultural burning through partnerships with the federal, state and municipal governments and civil society. 2. Create awareness among urban and rural populations about the risks, health problems and negative environmental impacts caused by fire. 3. Create pacts with municipalities for the prevention and control of deforestation and burning. 4. Intensify environmental control actions associated to burning activities. 5. Strengthen operational and administrative activities of the Military Fire Department of the Amazonas.
Target5-Action19	State Environmental Agencies (OEMAs)	Implementation of the Project on Afforestation, Reforestation and Environmental Education	Recuperating degraded ecosystems, green areas, and devastated native species result in the sequestration of atmospheric CO2, thus reducing the concentration of this gas and consequently playing an important role in combatting the greenhouse effect.
Target5-Action20	State Environmental Agencies (OEMAs)	Promote the reduction of the clearcutting of forests	Ensure the halting of forest loss through clearcutting of native forest vegetation.
Target5-Action21	State Environmental Agencies (OEMAs)	Coordination with traditional communities for environmental monitoring, through response to denunciations.	Expand the enforcement network through partners/ collaborators.
Target5-Action22	State Environmental Agencies (OEMAs)	Enhancement of the enforcement/ monitoring system	Reduce the loss of remaining fragments of natural grasslands still threatened with conversion (due to monitoring difficulties, given that their conversion does not generate timber to be transported, as well as the difficulties to identify changes through the analysis of satellite images).
Target5-Action23	State Environmental Agencies (OEMAs)	Uniformization of the map base of the state	Enable the correct mapping of native vegetation cover in PR.
Target5-Action24	State Environmental Agencies (OEMAs)	Creation and implementation of the RSBIOMonitora – Decree nº 52.096 of 27 November 2014	Assess the conservation status of the pampas biome, at a historical scale, through 16 indicators.

Responsibility for the Action	Possible partners	Start date	Conclusion date	Interface with other targets	"Is there a cost estimate? (yes or no)"
Directorate of Fauna Protection /IEF - MG	IEF, SEMAD, Codemig and ALMG (Parliamentary Amendment)	2018	12 months after the launch of activities	-	YES
Directorate of Fauna Protection /IEF - MG	IEF and FHIDRO	Waiting for the bidding process	13 months after the launch of activities	-	YES
IMASUL - MS	Geoambiente, a company specialized in remote sensing and geographical information systems	2016	2016	11	YES
SEA/INEA-RJ	-	2016	2018	19	YES
SEMA-AM	Sepror; IDAM; Fire Department; SEMMAS; IPAAM	2011	Continuous Action	15	NO
SEMA-AM	Sepror; IDAM; Fire Department; SEMMAS; IPAAM; Labor Unions	2015	Continuous Action	15	NO
COBIO/CEDIB/SEMA - CE	COEAS/SEMA, UECE. UFC, Secretariat of Cities, SEPLAG, PGE, Others	2016	2019	12,13,15	YES
SEMA - PR, IAP - PR	Municipalities	Continuous Action	Continuous Action	12	NO
SEMA - PR, IAP - PR	Municipalities, Traditional Communities and Environmental Police	Continuous Action	Continuous Action	18	NO
SEMA - PR, IAP - PR	SEMA, Municipalities and Environmental Police	Continuous Action	Continuous Action	12	NO
SEMA- PR, ITCG	-	Continuous Action	Continuous Action	11, 19	NO
SEMA, PR, RS Biodiversity Project	FEPAM, FZB and UFRGS	Under implementation	Repeated every 4 years	14,19	NO

Target 5

By 2020, the rate of loss of native habitats is reduced by at least 50% (in comparison with the 2009 rate) and, as much as possible, brought close to zero, and degradation and fragmentation is significantly reduced in all biomes.

Target-Action	Group/segment	Action	Objective
Target5-Action25	State Environmental Agencies (OEMAs)	Mapping vegetation and land use in the Pampas biome, base year 2009 (completed) and base year 2015.	Update the vegetation mapping of the Pampas biome by spatializing the remaining natural vegetation formations and the transformations that occurred in the landscape due to anthropic use.
Target5-Action26	State Environmental Agencies (OEMAs)	Implementation of the environmental monitoring program	Develop periodical mapping of deforestation and land use, burning occurrences and forest fires in the state.
Target5-Action27	State Environmental Agencies (OEMAs)	Implementation of the São Paulo Strategy for Reducing Pressure on Biodiversity - Alignment with the state EEZ.	Contribute to the incorporation of biodiversity conservation and sustainable use into the state's EEZ.
Target5-Action28	State Environmental Agencies (OEMAs)	Promotion of local biodiversity actions	Develop and implement support actions to municipalities to achieve the Aichi Targets at the local scale, focusing on the management of wildlife.
Target5-Action29	State Environmental Agencies (OEMAs)	Implementation of the São Paulo Strategy for Reducing Pressure on Biodiversity - Hunting and Illegal Trade of Wildlife	Design and implement the Plan to Combat Hunting and Illegal Trade of Wildlife.
Target5-Action30	State Environmental Agencies (OEMAs)	Implementation of the São Paulo Strategy for Reducing Pressure on Biodiversity - Zero Illegal Deforestation	Implement the State Program on Zero Illegal Deforestation and promote the reduction of the deforestation rate.
Target5-Action31	Civil Society (NGOs)	Control of Vegetation Burning Activities	Control at least 90% of the fire occurrences that affect Legally Protected Natural Heritage sites and Protected Areas.
Target5-Action32	Civil Society (NGOs)	"Implementation of the Program on the Environmental Monitoring of Brazilian Biomes (MMA Administrative Ruling nº 365, of 27 November 2015)."	1. Develop periodic mapping of deforestation and land use in all Brazilian biomes, providing official information with standardized and comparable methodology. 2. Promote coordination among the various agencies of the federal government that work on initiatives of satellite monitoring of vegetation cover and land use. 3. Ensure the optimization of the use of financial and human resources. 4. Provide information to support public policies on biodiversity and climate, with the Cerrado as priority.
Target5-Action33	Civil Society (NGOs)	Protection of important natural areas	Establish protection mechanisms for 100% of the areas identified as very high priority for conservation.
Target5-Action34	Civil Society (NGOs)	Mitigation of irregular occupation of risk areas	Mitigate or revert the occupation of risk areas and APPs.
Target5-Action35	Civil Society (NGOs)	Atlantic Forest Mosaics and Ecological Corridors Program	1. Promote the integrated and participatory management of protected areas to optimize the use of material, technical and human resources, as well as the advancement of policies among PA responsible agencies and local society. 2. Support the processes of creation, adjustment of borders and categories of protected areas to achieve better territorial planning and regularization and harmonization of conservation needs and sustainable development. 3. Support the design and implementation of various projects for the recognition, strengthening and exchange of mosaics in the Atlantic Forest.
Target5-Action36	Civil Society (NGOs)	Biosphere Reserves	1. Support the processes for revising and expanding the existing Biosphere Reserves and their management structures. 2. Support the processes for recognizing new Biosphere Reserves and their implementation process.

Responsibility for the Action	Possible partners	Start date	Conclusion date	Interface with other targets	"Is there a cost estimate? (yes or no)"
SEMA - RS, UFRGS - RS		Under implementation	2017	19	NO
SEMARH - TO, NATURATINS	UFT	2017	2020	14, 9	NO
Secretary's Office, Coordination of Environmental Planning and Working Group on Biodiversity and Ecological-Economic Zoning, SMA - SP	-	2016	2020	9, 10, 12, 13	YES
Coordination of Biodiversity and Natural Resources, Secretary's Office of SMA-SP and GreenBlue Municipality Program	NGO SOS Mata Atlântica / ICLEI - Local Governments for Sustainability	2017	2020	17	YES
Coordination of Environmental Enforcement/ Coordination of Biodiversity and Natural Resources/SMA -SP, Environmental Police, FPZSP, Forestry Foundation, Forestry Institute	-	2016	2020	9, 10, 12 and 13	YES
Coordination of Environmental Enforcement/SMA -SP, CETESB and Forestry Institute.	-	2016	2020	14, 15	YES
Civil Defence, SVDS/ ICLEI	FJPO, Mayor's Office, Municipal Guard, Fire Department and SMSP/COFIT	2017	2022	15	NO
Boticário Foundation	"Inpe, Embrapa, Ibama, MCTIC, universities, Boticário Group Foundation"	1991	2020	11,12,14,19	
SVDS/ICLEI	SVDS, SMAJ, SEPLAN, Mayor's Office and SMDEST	2017	2026	15	NO
Araçá-Piranga S. A. Center	Municipal Governments and Universities	2019	2020	2	YES
Atlantic Forest Biosphere Reserve	MMA, GIZ, RBMA Network, Protected Areas Mosaics Network – REMAP, Atlantic Forest Network, Biosphere Reserves Network, institutions that manage protected areas, research and learning institutions, federal, state and municipal governments, and private sector.	Continuous Action	Continuous Action	3, 6, 7, 10, 11, 12, 14, 15, 18	NO
Atlantic Forest Biosphere Reserve	MMA, RBMA Network, Atlantic Forest Network, Biosphere Reserves Network, research and learning institutions, federal, state and municipal governments, and private sector.	Continuous Action	Continuous Action	3, 6, 7, 10, 11, 12, 14, 15, 18	NO

Target 6

By 2020 all stocks of any aquatic organism are managed and harvested sustainably, legally and applying ecosystem based approaches, so that overharvesting is avoided, recovery plans and measures are in place for depleted species, fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems, and the impacts of fisheries on stocks, species and ecosystems are within safe ecological limits, when scientifically established.

Target-Action	Group/segment	Action	Objective
Target6-Action1	MMA Secretariats	Reduce the threat of extinction of aquatic species from Brazilian biodiversity.	Design and implement Recuperation Plans for fish and aquatic invertebrates threatened with extinction.
Target6-Action2	MMA Secretariats	Implementation of the Shared Management System of the Sustainable use of Fisheries Resources.	Evaluate and propose measures for the planning and regularization of fisheries activities to mitigate by-catch of aquatic fauna and seek the sustainable use of stocks.
Target6-Action3	MMA Secretariats	Strengthening of the fisheries control and monitoring systems.	Support the development and implementation of the electronic system of the Origin Document of Fisheries Catch - DOP, and restructuring and expansion of the National Program for the Satellite Tracking of Fisheries Vessels - PREPS.
Target6-Action4	State Environmental Agencies (OEMAs)	Continue the implementation of the Program on Participatory Management of Fisheries Resources in Floodplain Habitats of the Brazilian Amazon.	1. Provide technical and scientific information. 2. Promote pilot initiatives and encourage the multiplication of experiences of participatory fisheries management (for consumption, sport or ornamental) of over 12 freshwater species in the Amazon (particularly in white water rivers), based on the good practices developed by the states of Pará and Amazonas in the last 20 years.
Target6-Action5	State Environmental Agencies (OEMAs)	Carry out research for the development of social technologies to support the participatory management of fisheries resources.	Develop fishing and processing technologies to add value to the initial loop or the fisheries chain with the use of solar energy, to enhance the sanitary quality of the product, conquer new markets and obtain better prices to be paid to the producer.
Target6-Action6	State Environmental Agencies (OEMAs)	Establishment and operation of the norm on Zero Quota for fisheries in Goiás.	1. Conserve the aquatic fauna in the rivers and lakes of the state of Goiás. 2. Establish the prohibition for transporting catch from sport, amateur and underwater fisheries in the watersheds of Goiás, with penalty to those caught on the act of transporting any species.
Target6-Action7	State Environmental Agencies (OEMAs)	Design and regulation of legal framework for the control and monitoring of aquatic organisms.	Promote the control and monitoring of aquatic organisms.
Target6-Action8	State Environmental Agencies (OEMAs)	Regulation of the Fisheries Agreements.	Carry out the planning and regularization of 15 fisheries sites.
Target6-Action9	State Environmental Agencies (OEMAs)	Design and implement Fisheries Management Plans.	Implement 10 fisheries agreements.
Target6-Action10	State Environmental Agencies (OEMAs)	Support Fisheries Management in the state of Amazonas	Provide annual support to the management activities of pirarucu in Protected Areas, and to areas under Fisheries Agreements regulated by the state.
Target6-Action11	State Environmental Agencies (OEMAs)	Consolidation of the GEF-MAR/CE Project	Develop the Management Plan of the State Marine Park.
Target6-Action12	State Environmental Agencies (OEMAs)	Expand the Clean Beach Certification	Encourage the coastal municipalities to adopt effective beach protection measures and to use instruments of the environmental policy to ensure the protection, conservation and restoration of the natural heritage.
Target6-Action13	State Environmental Agencies (OEMAs)	Research the impacts of mining on fish fauna	1. Identify the impacts on fishes caused by mining activities through the dredging of rivers. 2. Support and recommend the definition of mitigation and compensation measures to be considered when analyzing the environmental licensing requests.

Responsibility for the Action	Possible partners	Start date	Conclusion date	Interface with other targets	"Is there a cost estimate? (yes or no)"
DESP/SBio/MMA	Ibama, ICMBio	2014	Continuous Action. Planned in PPA 2016-2019	12	YES
DESP/SBio/MMA, MAPA	Ibama, ICMBio	2009	2019	12	NO
DESP/SBio/MMA	Ibama, ICMBio	Continuous Action	Continuous Action	1	YES
IDSM - AM	DEMUC, SEPAq-PA, MPA (currently MAPA), WCS, Univ. St. Andrews, IPI, SAPOPEMA, INPA, Embrapa	1998	Continuous Action	2, 7, 18	NO
IDSM - AM	UFPA, USAID/USFS, ICMBio	2014	2019	2, 7, 18	YES
SECIMA - GO	-	2013	2019	12	-
SEMA-AM	IPAAM	2017	2020	7, 12	NO
SEMA-AM	SEPROR, IPAAM, IDAM and FAS	2015	2020	7, 13	YES
SEMA-AM	SEPROR, IPAAM, IDAM and FAS	2015	2020	7, 14	YES
SEMA-AM	IDSM-AM, IDS Fonte Boa; Piagaçu Institute; IDAM; FAZ; ASPROC and Mothers of Protected Areas Associations.	2015	2020	7, 11	YES
COBIO/CEDIB/SEMA - CE	ICMBio, FUNBIO, MME	2016	2019	1, 12	YES
CODES/SEMA - CE	COBIO, COEAS/SEMA, Communities around Protected Areas and Others.	2016	2018	5, 8	NO
SEMA -PR, IAP-PR	-	Continuous Action	Continuous Action	12	-

Target 6

By 2020 all stocks of any aquatic organism are managed and harvested sustainably, legally and applying ecosystem based approaches, so that overharvesting is avoided, recovery plans and measures are in place for depleted species, fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems, and the impacts of fisheries on stocks, species and ecosystems are within safe ecological limits, when scientifically established.

Target-Action	Group/segment	Action	Objective
Target6-Action14	State Environmental Agencies (OEMAs)	Implement the Fisheries Control System of Mato Grosso do Sul - SCPesca/MS	1. Inform the management and conservation of fish fauna. 2. Obtain systematic data on professional artisanal, amateur (sport) and commercial fishing, and catch trade. 3. Generate annual statistics and bulletins based on the data series, and identify the main biological and socio-economic trends of the activity. 4. Guide the regulations for the control and conservation of fish fauna.
Target6-Action15	State Environmental Agencies (OEMAs)	Regulation of the fish stocks reserve areas.	Regulate the areas identified as relevant for the preservation of the fish fauna and aquatic biodiversity, through: 1. specific legislation, establishing geographical limits; 2. specification of fishing methods, defining the movement of vessels; or yet 3. completely forbidding fisheries activities in the rivers of the state of MS.
Target6-Action16	State Environmental Agencies (OEMAs)	Promote the sustainable use of biodiversity in agriculture, aquaculture and forestry activities.	Identify actions/strategies for the protection of ecosystem services provided by pollinators, for incorporation into protocols with production sectors, settlements of the agrarian reform and quilombola territories.
Target6-Action17	State Environmental Agencies (OEMAs)	Promote the sustainable use of biodiversity in agriculture, aquaculture and forestry activities.	Design the fisheries management and planning and organization plans for the species included in the annex II of Decree nº 60133/14.
Target6-Action18	Civil Society (NGOs)	Continue the implementation of the +Sustainable Fisheries Program	Develop a mechanism to value and promote sustainable fisheries in areas under management in Brazil.
Target6-Action19	Civil Society (NGOs)	Collect information to inform the Revision of the Regulatory Framework for the Uçá Crab	Propose the revision and updating of the regulatory framework for the uçá crab (Ucides cordatus).
Target6-Action20	Academia	Environmental Monitoring Program of the Upper Paraná River Floodplain	"1. Detect time and space patterns of the structure of aquatic populations and communities. 2. Identify the effects of flow regulation and retention of solids and nutrients by reservoirs on the integrity of the floodplain. 3. Assess specific effects of continuous changes related to global warming. 4. Select and monitor parameters that function as indicators of environmental quality."

Responsibility for the Action	Possible partners	Start date	Conclusion date	Interface with other targets	"Is there a cost estimate? (yes or no)"
SEMADE- MS, IMASUL-MS	Brazilian Agricultural Research Corporation - Embrapa Pantanal, Military Environmental Police - MS	1994	Continuous Action	7, 8, 9, 11	NO
SEMADE- MS, IMASUL-MS	Military Environmental Police - PMA/MS	1996	Continuous Action	7, 8, 9, 12	NO
Coordination of Biodiversity and Natural Resources/SMA-SP, GTAPE - PDRS (Working and Monitoring Group on Strategic Projects - Sustainable Rural Development Project/SMA -SP)	Secretariat of Agriculture and Supply	2016	2020	3, 4, 6, 8, 13, 16, 18	YES
Coordination of Biodiversity and Natural Resources and Secretariat of Agriculture and Supply, Fisheries Institute/SMA-SP.	-	2016	2020	3, 4, 6, 8, 13, 16, 19	YES
CI	CONFREM, ICMBio, Local Fishermen Associations, Ecotrust	2014	2020	12	YES
CI, ICMBio	UNDP, GEF	2015	2017	12	YES
PIAP Site, PELD Site: Floodplain of the Upper Paraná River, Site 6 – Nupélia, PEA, UEM	CNPq, Araucária Foundation	2016	2020	8, 9, 11, 12, 13, 15	NO

Target 7

By 2020 the incorporation of sustainable management practices is disseminated and promoted in agriculture, livestock production, aquaculture, silviculture, extractive activities, and forest and fauna management, ensuring conservation of biodiversity.

Target-Action	Group/segment	Action	Objective
Target7-Action1	MMA Secretariats	Publication of educational materials on the importance of the conservation and sustainable use of pollinators, with emphasis on bees.	Promote the knowledge and sustainable use of biodiversity species.
Target7-Action2	MMA Secretariats	Design and implementation of capacity building strategies on good practices for the management of sustainable extractive activities.	1. Disseminate knowledge and train multipliers, Rural Technical Assistance Agents, extractive workers and small rural producers. 2. Design and dissemination of the good practices manuals for the management of sustainable extractive activities.
Target7-Action3	MMA Secretariats	Systematization and dissemination of environmental solutions, technologies and practices for the recuperation of degraded areas and for sustainable rural production to all Brazilian biomes through the WebAmbiente System.	Facilitate access to technologies and practices for the recuperation of degraded areas and sustainable rural production in all national biomes through the dissemination of the most indicated species and techniques to rural producers and other interested audiences.
Target7-Action4	MMA Secretariats	Implement management instruments for public policies in rural territories selected to promote the environmental regularization of the territory.	Promote the application of the Environmental and Productive Zoning - ZAP and of the Sustainability Indicators for Agroecosystems - ISA in selected territories and develop an action plan to promote the environmental regularization of these territories.
Target7-Action5	MMA Secretariats	Develop and implement a multi-criteria analysis tool to evaluate the contribution of agriculture to environmental conservation.	1. Carry out diagnostics on the contribution of agriculture to environmental conservation, based on the variables of carbon stock, biodiversity and water; 2. Support the decision making of public managers on the definition, adjustments and enhancement of environmental policies targeting the sustainable development of the rural sector.
Target7-Action6	MMA Secretariats	Implement, in Brazil, the FAO Agro-environmental Policy Directives for Latin American and Caribbean countries.	1- Develop a strategy for the implementation, in Brazil, of the Agro-environmental Policy Directives for Latin American and Caribbean countries. 2- Develop a proposal for indicators for Agro-environmental Policies.
Target7-Action7	Agencies Connected to MMA	Water and soil conservation in 2,000 hectares (initial area).	Promote the conservation of water and soil through the dissemination of techniques and technologies that target water infiltration in the soil, avoiding soil loss and sedimentation of water catchment areas.
Target7-Action8	Agencies Connected to MMA	Modernization, operation and maintenance of the National Hydro-meteorological Network under ANA's responsibility (continuous action)	Generate highly reliable hydrological data, such as surface water level, flow, sediments and quality in the entire country, in addition to rainfall data, applying cutting edge technology, for the management of water resources and scientific research.
Target7-Action9	Agencies Connected to MMA	Identification of priority areas for the conservation of Water Resources under the Paranapanema Integrated Water Resources Plan (PIRH Paranapanema).	Guide the development of a study to identify priority areas for the conservation of water resources, for the application of the Payment for Ecosystem Services mechanism within the Paranapanema Water Resources Management Unit.
Target7-Action10	Agencies Connected to MMA	Support the sustainable management in RESEX, RDS, FLONA and sustainable settlements of the agrarian reform.	Promote the exploitation of natural resources in such a way as to cause the least possible environmental impact, ensuring the recuperation, regeneration and recuperation of ecosystems.
Target7-Action11	Agencies Connected to MMA	Promote community-based forestry production	Promote synergies among governmental institutions and donors, and the provision of technical assistance and capacity building on the set of themes related to sustainable forestry management and the forest recuperation production chain, with the purpose of promoting the economic development of rural and traditional communities in combination with practices for the conservation of native forests.
Target7-Action12	Agencies Connected to MMA	Implementation of Sustainable Forestry Development Centers in at least 2 Brazilian biomes (Amazon and Cerrado)	Offer educative actions for the sustainable forestry production through the management of native forests and silviculture of native species.
Target7-Action13	Agencies Connected to MMA	Development of Forestry Management Plans for the Caatinga and Amazon	Promote the sustainable forest timber management and consumption in the production chains of furniture, civil works, and for energy purposes, among others.
Target7-Action14	Agencies Connected to MMA	Implementation of the Rural Environmental Cadaster	Integrate the environmental information of rural properties, constructing databases for environmental control, monitoring and planning.
Target7-Action15	Ministries, Special Secretariats and Public Corporations	Implementation of the ABC Program - Low Carbon Agriculture	Increase agricultural and livestock productivity, while reducing the associated carbon emissions and supporting forest restoration.

Responsibility for the Action	Possible partners	Start date	Conclusion date	Interface with other targets	"Is there a cost estimate? (yes or no)"
SBio/MMA	EMBRAPA and Public Universities, FUNBIO (GEF pollinators)	2014	2017	1	YES
DRSD/SEDR/MMA	MAPA, SEAD/CC, ICMBio, INCRA, Federal Technical Institutes, Universities, Rural Technical Assistance Agencies, NGOs	2015	2020	1, 4	YES
DRSD/SEDR/MMA	Embrapa Units, UnB, Ecological Research Institute - IPE, IPEF, Sema-SP, Sema-MT, Forestry Institute - SP, Chico Mendes Institute.	2013	2018	14, 15, 19	YES
DRSD/SEDR/MMA	MMA and connected agencies, SEAD, MAPA	At planning phase	At planning phase	14, 15, 19	YES
DRSD/SEDR/MMA	MMA and connected, SEAD, MAPA	At planning phase	At planning phase	14, 19	YES
DRSD/SEDR/MMA	MMA, MAPA, MDS, SEAD and SEGOV	Under development	2018	14, 19	YES
ANA	State and municipal governments and NGOs	2017	2020		NO
ANA	State agencies, Brazilian Geological Service (CPRM), hired corporations	"Jan/2016 "	"Dec/2016 (continuous action)"	7, 17	YES
SPR/ANA	UNESP-Presidente Prudente/CBH Paranapanema/CBHs Affluents	2017	2018	4	NO
ICMBio and INCRA	MMA, Ibama and others	Continuous Action	Continuous Action	14	-
SFB	ANATER, SEADE, MDS, INCRA, State governments, Providers of rural technical assistance (public and private)	2017	2020	4; 5; 11; 14	YES
SFB	Universities, NGOs, Institutes for professional training.	2016	2020	5; 11; 15	YES
SFB and states	Ibama, OEMAS, Incra, Industry Associations and Municipalities	Continuous Action	Continuous Action	11,14	-
SFB, OEMAs	DECO/SBio and Municipalities	2016	-	11, 14, 15	-
MAPA	Several	Continuous Action	Continuous Action	4,14, 15	-

Target 7

By 2020 the incorporation of sustainable management practices is disseminated and promoted in agriculture, livestock production, aquaculture, silviculture, extractive activities, and forest and fauna management, ensuring conservation of biodiversity.

Target-Action	Group/segment	Action	Objective
Target7-Action16	Institutes/ Institutions connected to Ministries	Implementation of integrated strategies for the certification of products originating from indigenous peoples and communities.	Submit indigenous products to organic certification processes
Target7-Action17	Institutes/ Institutions connected to Ministries	Coordination for the acquisition of food products from indigenous production for consumption in indigenous schools through the Food Acquisition Program (PAA).	1. Value and share knowledge on the traditional indigenous dietary culture. 2. Increase the volume of resources available for the acquisition of indigenous production through the PAA.
Target7-Action18	Institutes/ Institutions connected to Ministries	Structuring of local production arrangements, based on value chains, access to markets and income generation.	Coordinate, promote and support the structuring of 4 local production arrangements.
Target7-Action19	Institutes/ Institutions connected to Ministries	Structuring of a support and financing mechanism for projects specifically designed for indigenous peoples and organizations.	Provide subsidies to small and medium size projects, specifically targeting indigenous peoples and organizations, through the Support Working Group (MMA, MDS, MJ, MDA and FUNAI).
Target7-Action20	Institutes/ Institutions connected to Ministries	Promotion of the exchange of traditional supplies and practices of indigenous agriculture and diet.	Support, in coordination with partner institutions, the carrying out of 4 exchange events of traditional supplies and practices of the indigenous agriculture and diet.
Target7-Action21	Institutes/ Institutions connected to Ministries	Consolidation of successful experiences of community-based tourism in indigenous lands.	Consolidate 4 successful experiences of community-based touristic activities in indigenous lands.
Target7-Action22	Institutes/ Institutions connected to Ministries	Dissemination of knowledge on experiences of sustainable ethnotourism and ecotourism initiatives.	Carry out exchange events on experiences of sustainable ethnotourism and ecotourism initiatives.
Target7-Action23	Institutes/ Institutions connected to Ministries	Enable and encourage the implementation of projects focusing on the conservation of agrobiodiversity.	Coordinate and promote, in coordination with partner institutions, public calls for proposals of projects focusing on the conservation of agrobiodiversity in indigenous lands.
Target7-Action24	Institutes/ Institutions connected to Ministries	Provide incentives for the implementation of projects that apply agroecological practices in indigenous lands.	Support the implementation of 40 projects in indigenous lands.
Target7-Action25	Institutes/ Institutions connected to Ministries	Design and implement a plan to support indigenous peoples in their initiatives for raising medium and large size animals.	1. Design a plan to support environmentally sustainable initiatives. 2. Carry out an inventory of indigenous lands that hold medium and large size animals.
Target7-Action26	State Environmental Agencies (OEMAs)	Promote the sustainable use of biodiversity in agriculture, aquaculture and forestry activities.	1. Promote the incorporation of biodiversity-related themes into rural technical assistance and extension actions in the state. 2. Implement the State Program of Silviculture with Native Species.
Target7-Action27	State Environmental Agencies (OEMAs)	CAR - Analysis of the 600,000 rural properties registered in the system.	Validate the information presented at the time of property registration.
Target7-Action28	State Environmental Agencies (OEMAs)	CAR - Management of the rural properties already registered in CAR - Approximately 600,000 rural properties in 2016.	Manage the cadaster system to insert corrections, division of land plots, unification of land plots and new registrations.
Target7-Action29	State Environmental Agencies (OEMAs)	Implementation of CAR in the state of Goiás.	Integrate environmental data and information of rural properties, building databases for environmental control, monitoring and planning.

Responsibility for the Action	Possible partners	Start date	Conclusion date	Interface with other targets	"Is there a cost estimate? (yes or no)"
Funai	MDA, MAPA, INPI, IPHAN and Indigenous Organizations	2016	2019	18	NO
Funai	MDA, MDS and CONAB	2016	2019	18	NO
Funai	MMA, MDA, Indigenous Organizations and Organizations working with indigenous peoples	2016	2019	18	NO
Funai	MMA, MDS, MDA, MJ and Indigenous Organizations	2016	2019	18	NO
Funai	MMA, MDA, MDS, MAPA, Indigenous Organizations and Organizations working with indigenous peoples	2016	2019	18	NO
Funai	MTUR, MMA and Indigenous Organizations	2016	2019	18	NO
Funai	MTUR, MMA and Indigenous Organizations	2016	2019	18	NO
Funai	Indigenous Organizations	2016	2019	18	NO
Funai	Indigenous Organizations and Organizations working with indigenous peoples	2016	2019	18	NO
Funai	Indigenous Organizations and Organizations working with indigenous peoples	2016	2019	18	NO
Coordination of Biodiversity and Natural Resources; SMA- SP and ITESP (Land Institute Foundation of the State of São Paulo); Coordination of Biodiversity and Natural Resources; Cetesb.	Secretariat of Agriculture and Supply	2016	2020	3, 4, 6, 8, 13, 16, 18	-
Management Unit of Legal Reserves Management + Regional units, IEF - MG	EMATER + hired corporations	jul/17	jul/22	YES	YES
Management Unit of Legal Reserves Management + Regional units, IEF - MG	IEF Regional Units and SUPRAMs, SFB, SEAPA, SEDA, FAEMG, FETAEMG, AMM, EPAMIG and UFLA.	mai/14	dez/17	YES	YES
SECIMA - GO	MMA	-	2016	11, 14, 15	-

Target 7

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Target-Action	Group/segment	Action	Objective
Target7-Action30	State Environmental Agencies (OEMAs)	Support to the use of sustainable agriculture practices.	Implement Demonstration Units of Cultivation without Burning in production areas of family producer's properties.
Target7-Action31	State Environmental Agencies (OEMAs)	Implementation of the Ecological Brooms Project of Upper Negro River.	1. Promote economic alternatives for the piassava palm fiber collectors of the Negro River region. 2. Promote the combat to working conditions similar to slavery.
Target7-Action32	State Environmental Agencies (OEMAs)	Development and implementation of Business Plans for non-timber resources. Carry out exchange events, Implement Demonstration Units.	Support the implementation of projects for the management of non-timber products (extraction, processing, storage and commercialization of phyto-cosmetics and phyto-medicines).
Target7-Action33	State Environmental Agencies (OEMAs)	Preparation of Protected Areas Management Plans	Update and present the information that justify the participatorily agreed decisions, to inform the strategic planning, zoning and action programs that incorporate the ecosystem services of Protected Areas.
Target7-Action34	State Environmental Agencies (OEMAs)	Preparation and implementation of the Community Forest Management Plan	1. Implement multiple-use forestry management plans in the settlement areas of resettlement of the agrarian reform in the Lower Juaguaribe plan. 2. Combat deforestation in the state. 3. Build the capacity of resident populations for the rational use of the region's natural resources.
Target7-Action35	State Environmental Agencies (OEMAs)	Implementation of the ABC Plan - Low Carbon Emission Agriculture	1. Encourage the adoption of the "Integration Crop, Livestock and Forest (ILPF)" system. 2. Increase agricultural production in a sustainable manner. 3. Reduce the emission of greenhouse gases, and reduce deforestation.
Target7-Action36	State Environmental Agencies (OEMAs)	Implementation of the CAR Project in the municipalities of the state of Mato Grosso do Sul	1. Enhance the environmental management and regularization infrastructure. 2. Build the capacity of public agents to implement the CAR. 3. Promote and support information recording and validation in CAR.
Target7-Action37	State Environmental Agencies (OEMAs)	Establish a protocol for the sustainable use of carandá (Copernicia alba) in the Pantanal and in the Paraguai watershed in the state of Mato Grosso do Sul.	1. Fill the information gap on the carandá (Copernicia alba), native species of the Pantanal with high economic potential. 2. Create protocols for the species' sustainable use in the state of Mato Grosso do Sul. 3. Prevent the introduction of alien grass species in pastures.
Target7-Action38	Civil Society (NGOs)	Promote grazing intensification through economic viability analyses and sustainable production arrangements.	Increase pasture productivity to free areas for ecological restoration and other land uses (thus preventing pressure for new deforestation). Emphasis on the states of MT, PA and TO.
Target7-Action39	Civil Society (NGOs)	Support the non-timber products production chain in Protected Areas of Amapá state.	Provide subsidies for the management of non-timber products in Amapá's FLONA and FLOTA.
Target7-Action40	Civil Society (NGOs)	Promote timber management inside Protected Areas of the state of Amapá.	Provide subsidies for timber management through forest concessions inside Protected Areas.
Target7-Action41	Civil Society (NGOs)	Support the management of non-timber forest products in the Resex Tapajós Arapiuns	Promote the environmental sustainability of the production of non-timber forest products in the Resex Tapajós Arapiuns.
Target7-Action42	Civil Society (NGOs)	Promote the timber production chain in the Tapajós Region.	Support the community-based timber management in the Flonas of Tapajós, Itaituba I, Crepori, Trairão and Resex Tapajós Arapiuns.
Target7-Action43	Civil Society (NGOs)	Promote the creation of the Palm Dialogue Platform	1. Promote the sustainable production and certification of the palm oil production through the generation and integration of scientific and socio-economic information, in partnership with universities and research centers, corporations, non-governmental organizations and local producers' associations. 2. Promote the agreement and collaboration among all members of the palm production chain in the state of Pará.
Target7-Action44	Civil Society (NGOs)	Implementation of Sustainable Forest Mosaics in the Central Atlantic Forest Corridor	Promote forest certification in eucalyptus farms and provide incentives for the adoption of best practices in silviculture and other agricultural activities.
Target7-Action45	Civil Society (NGOs)	Provide incentives to the implementation of best agricultural practices in the Paraguaçu River watershed (Bahia).	Provide incentives to the adoption of sustainable agricultural practices by rural producers in the region of the Upper Paraguaçu River (BA), seeking harmonization between agricultural production and the conservation and sustainable use of biodiversity.

Responsibility for the Action	Possible partners	Start date	Conclusion date	Interface with other targets	"Is there a cost estimate? (yes or no)"
SEMA-AM	IDAM, SEPROR	2017	2021	18	YES
SEMA-AM	SEPROR, ADS, FVA, MPF, IDAM, FPS, MTE	2016	2020	2	YES
SEMA-AM	IDAM and SEPROR	2017	2020	2, 13	YES
COBIO/SEMA - CE	SETUR, COEAS/SEMA, Universities and Others	2016	2019	1, 4	YES
CODES/SEMA - CE	COBIO/CEDIB/SEMA, Sema, Residents' Associations, Caixa Econômica Federal, Universities.	2016	2018	19	YES
SEMA - PR, SEAB	EMBRAPA and IAP	Continuous Action	Continuous Action	15	-
SEMADE - MS, IMASUL -MS	Agraer	2015	2017	Target 15	YES
SEMADE -MS, UFMS/Post-Graduation in Biotechnology	National Wetlands Institute	2014	2017	Targets 1, 11, 15, 19	YES
Agroicone	INPUT Project, PCI MT Strategy, TNC, IDB	1st Semester 2015	Not yet defined	11, 14, 15	NO
CI	FFEM, Daikin, Walmart, Amapá State Government, Amapá State Forests Institute	2012	2017	11	YES
CI	FFEM, Amapá State Government, KFW, Amapá State Forests Institute	2012	2016	11	YES
CI	BNDES, ICMBIO, SFB, COOMFLONA	2017	2020	11	YES
CI	BNDES, ICMBIO, SFB, COOMFLONA	2017	2020	11	YES
CI	Agropalma, Abrapalma	2016	-	1	YES
CI and ICMBio	Veracel, Fibria, Suzano, South and Extreme South of Bahia Forest Forum, ABAF, ASPEX	2017	2020	4, 5	YES
CI and ICMBio	Sema, Inema, MPE-BA, Paraguaçu Watershed Committee, Chapada Forte Consortium, BNDES, Agropolo	2017	2020	4, 5	NO

Target 7

By 2020 the incorporation of sustainable management practices is disseminated and promoted in agriculture, livestock production, aquaculture, silviculture, extractive activities, and forest and fauna management, ensuring conservation of biodiversity.

Target-Action	Group/segment	Action	Objective
Target7-Action46	Civil Society (NGOs)	Promote sustainable production in the Matopiba region.	1. Promote sustainable agricultural production practices in the Cerrado, Matopiba Region. 2. Promote integration between agricultural production and the conservation of biodiversity.
Target7-Action47	Civil Society (NGOs)	Promote innovation in processes and products from the Forests with Araucaria Trees	"Add value to the remaining fragments of Forests with Araucaria Trees, through the implementation of a sustainable production pattern for pine nuts and mate."
Target7-Action48	Civil Society (NGOs)	Implementation of the Canaã Project - provide incentives for Community-Based Tourism and implementation of Agroforestry Systems.	1. Mobilize local communities for the implementation of community-based ecotourism in the buffer area of the Serra da Bodoquena National Park. 2. Build capacity among settlers from settlements of the agrarian reform for the implementation of Agroforestry Systems and Silviculture-Livestock Systems. 3. Carry out educational activities for conservation.
Target7-Action49	Civil Society (NGOs)	Implementation of Participatory Biological Resources Management Programs in the periodically flooded forests of the Brazilian Amazon.	Build models, promote pilot initiatives and encourage the replication of participatory management systems to be adopted by river-side communities (indigenous, caboclas, quilombolas, etc.), for traditionally used biological resources such as: fisheries resources, timber forest products, non-timber forest products, and energy sources from the periodically flooded forests of the Brazilian Amazon, including the mangroves of the Pará coastline. Carry out this activity initially in Protected Areas, taking into consideration the traditional knowledge associated with the scientific knowledge.
Target7-Action50	Civil Society (NGOs)	Introduction of native species into silvicultural practices	Provide alternatives to the use of eucalyptus and cassia trees in regional silviculture.
Target7-Action51	Civil Society (NGOs)	Expansion of the RBMA Atlantic Forest Market.	Identify, qualify and promote sustainable products, services and businesses in the Atlantic Forest based on the implementation of sustainability principles, directives and indicators for good management of areas and species.
Target7-Action52	Civil Society (NGOs)	Continuation of the implementation and dissemination of the Sustainable Territorial Management Plan (PGTS) and expansion of adhesion by new corporations of other units of those that are already participants.	"Expand the use of the planning and decision making tool (PGTS) to characterize, value and implement the sustainable use and conservation of environmental assets."
Target7-Action53	Civil Society (NGOs)	Development and implementation of management plans	Conclusion of the management plans of the two Environmental Protection Areas and two Municipal Natural Parks in 5 years.
Target7-Action54	Civil Society (NGOs)	Implementation of the Program on Payment for Soil Conservation and Recuperation - PES Soil	Promote sustainable development and the maintenance and expansion of the availability of ecosystem services and goods.
Target7-Action55	Academia	Scientific development for the sustainable use and management of native non-forest vegetation, particularly grasslands and savannas, in all Brazilian biomes.	1. Develop sustainable grazing management practices for the native vegetation in grasslands and savannas in Protected Areas, Legal Reserves and remaining fragments outside protected areas. 2. Contribute to the conservation of native biodiversity and ecosystem services (increase of soil carbon stocks and water production and aesthetic landscape value). 3. Contribute to enhance the efficiency and profitability of livestock production systems.
Target7-Action56	Academia	Development and implementation of Management Plans for the periodically flooded grasslands of Pantanal.	1. Increase livestock productivity. 2. Rehabilitation of southern grasslands by supporting grassland restoration and its associated biodiversity.
Target7-Action57	Academia	Development and implementation of a sustainable Management Plan for forests in the Amazon-Cerrado transition.	Identify, describe and assess the dynamics parameters and propose sustainable forest management models for species of native trees in the Amazon-Cerrado transition.
Target7-Action58	Academia	Propose strategies and practices for the recuperation of degraded APP and RL areas in the Amazon-Cerrado transition.	1. Develop an ecological and silvicultural profile of native forest species of economic interest. 2. Propose strategies for the recuperation of degraded areas.
Target7-Action59	Academia	Implement socio-environmental initiatives to promote the added value of goods produced by family agriculture.	1. Promote workshops on ways to add value to goods produced in rural properties around Protected Areas. 2. Reduce pressure on PA resources.
Target7-Action60	Academia	Promote positive incentives for the sustainable use of native plants for commercialization.	1. Promote workshops and training events for the collection of seeds and sustainable processing of products (ice-creams, jams, etc.) produced from native plants. 2. Improve the life quality of low-income communities.

Responsibility for the Action	Possible partners	Start date	Conclusion date	Interface with other targets	"Is there a cost estimate? (yes or no)"
CI, ICMBio	MMA, ICMBio, GEF, UNDP, SRB, FBCN,	2017	2019	4, 5, 11 and 14	YES
Boticário Foundation	CERTI - Araucária Foundation	2012	Continuous Action	3, 4	-
Neotrópica Foundation of Brazil	National Environment Fund; ICMBio - Serra da Bodoquena National Park; MS Rural Development and Extension Agency (AGRAER); UFMS - Campus Aquidauana	2016	2017	1, 13, 14, 15, 18	YES
IDSM -AM	IBAMA, ICMBio, INPA, MPEG, UFAM, UFPA, UFRA, IPAAM, DEMUC, SEPAq-PA, SEMA-PA, SFB	1998	-	2, 6, 18	NO
Araçá-Piranga S. A. Center and Emater - RS	Municipal Governments and Universities in the region	2020	2022	Target 4	YES
Atlantic Forest Biosphere Reserve	RBMA Network, Atlantic Forest network and partner institutions.	Continuous Action	Continuous Action	1, 3, 5, 8, 11, 13, 14, 15, 18	NO
Atlantic Forest Biosphere Reserve	Votorantim Cimentos, IBRAM, Vale and other corporate segments	Continuous Action	Continuous Action	1, 2, 4, 5, 8, 9, 10, 11, 12, 13, 14, 15, 18	NO
Municipal Secretariat for Green, Environment and Sustainable Development (SVDS), ICLEI SAMS - Secretariat for South America	SVDS, FJPO, SEPLAN, SMAJ, Mayor's Office, SMF, SECOM, SMA - SP	2016	2021		YES
SVDS/ICLEI	SVDS, SMDEST, CATI, EMBRAPA	2017	2020		YES
MCTIC, CNPq, through the programs PELD and INCT, UFRGS and FAPERGS, PELD Site: Southern Grasslands	MMA, Universities, Embrapa, FAPs	2016	2020	1, 2, 3, 4, 5, 11, 14, 15, 18, 19, 20	NO
PELD Site northern Pantanal, Site 12, SBio/MMA and states	INCT Wetlands, Universities, private sector	2016	2020	2,5,9,12,14, 15, 19	NO
PELD Site Cerrado- Amazon Forest Transition, Site 15	University of Leeds (England)	2017	2020	15, 19	YES
PELD Site Cerrado- Amazon Forest Transition, Site 15	University of Leeds (England)	2017	2020	15, 19	YES
PELD Site Cerrado- Amazon Forest Transition, Site 15	Neighborhood Associations and Municipal Governments	2014	2020	1, 3, 4, 18, 19	YES
PELD Site Cerrado- Amazon Forest Transition, Site 15	Socio-environmental Institute (ISA), Xingu Seeds Network, Neighborhood Associations and Municipal Governments	2016	2020	1, 2, 3, 4	YES

Target-Action	Group/segment	Action	Objective
Target8-Action1	MMA Secretariats	Definition of strategies to reduce the release of mercury into the aquatic habitats, based on the national inventory of mercury emissions and dumping.	Protect aquatic organisms through the implementation of activities for minimizing mercury dumping.
Target8-Action2	MMA Secretariats	Development and implementation of legislation on the cadaster and control of industrial chemical substances.	Create and implement the cadaster of industrial chemical substances and the tools for analyzing the risk of dangerous chemical substances (which include assessment of impacts on the biota), to inform the establishment of risk management measures for these chemicals, thus minimizing the release of dangerous substances in the environment.
Target8-Action3	MMA Secretariats	Control the phosphorus content in the composition of detergents	Prevent the eutrophication of natural ecosystems through the reduction of phosphorus concentrations. Phosphorus is a cumulative element and a nutrient that limits phytoplankton growth.
Target8-Action4	MMA Secretariats	Implementation of the National Implementation Plan (NIP) of the Stockholm Convention on Persistent Organic Pollutants (POPs)	Protect human health, the biota and the environment from the persistent organic pollutants, through the environmentally appropriate disposal of POPs substances stocks and residues identified in Brazil, implementation of strategies for reducing the release of non-intentional POPs from national sources, and manage the POPs contaminated areas.
Target8-Action5	Agencies Connected to MMA	Promote the re-evaluation of active ingredients in already registered agricultural chemicals for which there are clues indicating that they may cause damage to the environment, and that are associated to harmful effects on bees.	Re-evaluate agricultural chemicals under suspicion of causing environmental damage and, according to the verified studies and results, establish restrictions or prohibition of the registration of these active ingredients.
Target8-Action6	State Environmental Agencies (OEMAs)	Development and implementation of the State Solid Waste Plan	Promote the management of solid waste in the state of Amazonas.
Target8-Action7	State Environmental Agencies (OEMAs)	Development and implementation of the Solid Waste Plan and of Selective Collection in the Metropolitan Region of Manaus.	Promote the integrated management and selective collection of solid waste on the Metropolitan Region of Manaus.
Target8-Action8	State Environmental Agencies (OEMAs)	Development of the Plans for the Recuperation of Degraded Areas (PRAD) for open dumps of the state of Ceará	1. Obtain information from municipal representatives to identify dumps and prepare diagnoses and studies. 2. Carry out inventories and technical analyses to inform the preparation of proposed solutions.
Target8-Action9	State Environmental Agencies (OEMAs)	State Solid Waste Plan	Enable the state to program and implement activities capable of transforming the current situation (in this case, the management of solid waste without a plan) into the expected condition desired by the population and viable for the governmental agencies, converted into improvements and advancements increasing the effectiveness and efficiency of waste management.
Target8-Action10	State Environmental Agencies (OEMAs)	Implement selective waste collection in the three strategic watersheds.	Develop selective waste collection plans for the 81 municipalities within the watersheds of Salgado, Acaraú and Metropolitan.
Target8-Action11	State Environmental Agencies (OEMAs)	"Implementation of the Project on Obsoletes"	Incinerate agricultural chemicals collected from rural properties.
Target8-Action12	State Environmental Agencies (OEMAs)	Revitalization of the Iguaçu River	1. Ensure sufficient water quality and quantity for the population and promote sustainable development in the 109 municipalities of Paraná that comprise the watershed. 2. Revitalize the watershed of the Iguaçu River, strongly focusing on basic sanitation, particularly to re-establish the efficiency of the collection network, treatment of domestic and industrial wastewater, and identify and minimize non-point source contamination.
Target8-Action13	State Environmental Agencies (OEMAs)	"Implementation of the Project on Strengthening the Paraná State Commission on P2R2 - Integrated Action for Prevention, Preparedness and Rapid Response to Emergencies with Dangerous Chemical Products."	1. Prevent accidents involving dangerous chemicals and their impacts, particularly on water resources. 2. Prepare response to emergencies with dangerous products, to mitigate impacts on the environment and human health. 3. Evaluate and monitor damage resulting from disasters with dangerous products, preserving lives, human health and the environment.

Responsibility for the Action	Possible partners	Start date	Conclusion date	Interface with other targets	"Is there a cost estimate? (yes or no)"
SRHQ/MMA	OEMAS, private sector	2018	-	4	NO
SRHQ/MMA	Industry associations	2020	-	4	NO
SRHQ/MMA	Industry associations	Continuous Action	-	4	NO
SRHQ/MMA, OEMAs, institutions listed on NIP, private sector	NGOs	2020	-	4, 7	NO
IBAMA	Anvisa, MAPA	Continuous Action	-	4	NO
SEMA - AM	State Committee on Solid Waste, Municipal Secretariats and MMA	2016	2018	-	YES
SEMA - AM	State Committee on Solid Waste, Municipal Secretariats of the Metropolitan Region of Manaus and MMA	2016	2018	-	YES
CODES/SEMA-CE	COBIO/SEMA, Communities around Protected Areas and Others	2016	2018	5	YES
CODES/SEMA - CE	SEMACE, Universities, NGOs, District Attorney's Office, workers' associations	2016	2019	1,3,4	NO
CODES/SEMA - CE	SEMACE, Residents' associations, Universities and Others.	2016	2018	8	YES
SEMA - PR	SEAB	-	Continuous Action	-	NO
SEMA - PR	Municipal Governments, Sanepar, SEPL, Comec, IAP, Águas Paraná	-	Continuous Action	14	YES
SEMA - PR	Civil Defence, DE, Concession companies	-	Continuous Action	1	NO

Target-Action	Group/segment	Action	Objective
Target8-Action14	State Environmental Agencies (OEMAs)	Implementation of the Program Paraná without Dumps	Implement waste treatment and final disposal systems, at the municipal or regional level, allowing the energy valuation in waste treatment, promoting the use of gas and other subproducts in the implementation of sanitary landfills and the recuperation of areas degraded by the inadequate disposal of waste.
Target8-Action15	State Environmental Agencies (OEMAs)	Implementation of the São Paulo Strategy for reducing pressure on biodiversity.	Contribute to the improvement of water quality in priority watersheds for the conservation of biodiversity.
Target8-Action16	Civil Society (NGOs)	Implementation of the Program Observ'água	1. Implement an integrated biomonitoring system in the Formoso river watershed, in Bonito, MS. 2. Periodically analyze, at 40 monitoring sites, the levels of agricultural chemicals and heavy metals in sediments and fauna. 3. Carry out the analysis of bioindicators and landscape to understand how these factors affect local biodiversity.
Target8-Action17	Civil Society (NGOs)	Develop and implement social technologies for enhanced quality of life and production in the Amazon floodplains.	Develop research and experiments, and implement prototypes and pilot models of social technologies, for the use of alternative energy sources (solar and wind) for domestic use and for production, to contain the contamination by effluents and liquid and solid wastes.
Target8-Action18	Civil Society (NGOs)	Implementation of the program for wastewater collection, removal and treatment (PMSB,2013)	Improve sanitary conditions for the population, providing quality wastewater infrastructure to the regions, raising the rate of collection and treatment to 100%.
Target8-Action19	Civil Society (NGOs)	Implementation of the program on drainage and management of rainwater (PMSB,2013)	Control and mitigate the impacts resulting from natural events such as heavy rains, preserving the population's well-being and the development of socio-economic activities.
Target8-Action20	Civil Society (NGOs)	Implementation of the program on cleaning and management of solid waste (PMSB,2013)	1. Achieve universal solid waste collection in the municipality, reaching 100% of the rural area. 2. Improve the efficiency of urban collection, management of civil works waste, and health services.
Target8-Action21	Academia	Carry out studies and evaluation of the effects of degradation on hydrodynamic processes.	Evaluate the sedimentation processes and rate.

Responsibility for the Action	Possible partners	Start date	Conclusion date	Interface with other targets	"Is there a cost estimate? (yes or no)"
SEMA - PR	-	-	Continuous Action	-	
SMA Secretary's Office, Cetesb (Directorate E), and Coordination of Environmental Planning/SMA -SP	-	2016	2020	9, 10, 12, 13	YES
Neotrópica Foundation, UFMS	UFMS, Municipal Government, UFGD, UCDB, USP	2015	-	7, 14	YES
IDSM - AM	UFPA, FINEP, Google Inc., USAID, GBMF	2013	2019	2, 18	YES
SANASA /ICLEI	SVDS, SANASA, SMSP, SEINFRA, SMS, SMDEST, SEHAB, SEPLAN	2013	2022	-	YES
SEINFRA/ICLEI	SVDS, SANASA, SMSP, SEINFRA, SMS, SMDEST, SEHAB, SEPLAN	2013	2033	-	YES
"SMSP/ICLEI"	SVDS, SANASA, SMSP, SEINFRA, SMS, SMDEST, SEHAB, SEPLAN	2013	2033	-	YES
PELD Site: Atlantic Forest and Lake System of the Medium Doce River-MG, Site 4	UFOP, UFSJ, IFMG	2017	2020	-	YES

Target 9

By 2020, the National Strategy on Invasive Alien Species is fully implemented, with the participation and commitment of states and the elaboration of a National Policy, ensuring the continuous and updated diagnosis of species and the effectiveness of Action Plans for Prevention, Contention and Control.

Target-Action	Group/segment	Action	Objective
Target9-Action1	MMA Secretariats	Revise and update the legal framework related to the control of the introduction and reintroduction of alien species, and develop and edit the inventories of invasive alien species by habitat (marine, freshwater and terrestrial).	Revise and update the legal framework related to the control of the introduction and reintroduction of alien species, and develop and publish the official national lists of invasive alien species by habitat (marine, freshwater and terrestrial).
Target9-Action2	Agencies Connected to MMA	Implement a system for detecting invasive alien species in Protected Areas	Carry out rapid response upon detection, to avoid the invasion of alien species in Protected Areas.
Target9-Action3	Agencies Connected to MMA	Monitoring of IAS in Protected Areas	Evaluate the impact caused by IAS and propose mitigation and control measures.
Target9-Action4	Ministries, Special Secretariats and Public Corporations	Implementation of various actions for the control of the vector Aedes aegypti	1. Eliminate the young form of the Aedes aegypti. 2. Control the remaining vector Aedes aegypti. 3. Spatial control of the vector Aedes aegypti.
Target9-Action5	Institutes/ Institutions connected to Ministries	"Update the National Report on Invasive Alien Species that affect human health"	Revise and update the 1st National Report on Invasive Alien Species that affect human health, prepared in 2006.
Target9-Action6	State Environmental Agencies (OEMAs)	Structure the legal and normative framework on the use of species included in the Official List of Invasive Alien Species in the state of Santa Catarina	1. Support the control and eradication of biological invasions. 2. Regulate the controlled use of invasive alien species in production activities.
Target9-Action7	State Environmental Agencies (OEMAs)	Develop and publish a rule for the introduction of alien species in the state of SC.	Establish technical procedures for requesting the introduction of alien species to the state of Santa Catarina, adopting the risk analysis methodology.
Target9-Action8	State Environmental Agencies (OEMAs)	Development and implementation of plans for the control and eradication of invasive alien species in state Protected Areas	Control biological invasions already present to minimize the growing impacts on natural habitats, with the objective of maintaining ecosystem services.
Target9-Action9	State Environmental Agencies (OEMAs)	Systematize and disseminate public information on invasive alien species	Prepare informative materials on invasive alien species.
Target9-Action10	State Environmental Agencies (OEMAs)	Build the capacity of technical staff and partners on invasive alien species.	Provide capacity building for staff from FATMA and partner institutions on invasive alien species.
Target9-Action11	State Environmental Agencies (OEMAs)	Implement the action plan for the control of biological invasions of Pinus spp in the Medium Coastline of Rio Grande do Sul	Control the invasion of Pinus sp.
Target9-Action12	State Environmental Agencies (OEMAs)	Develop a Proposal for a State Management Program for Invasive Alien Species.	Establish and implement public policies for the control of invasive alien species in Rio Grande do Sul.
Target9-Action13	State Environmental Agencies (OEMAs)	Define municipal directives for the management of invasive alien species	Establish priority actions for municipal management in the control of invasive alien species.
Target9-Action14	State Environmental Agencies (OEMAs)	Revision and updating of the List of Alien Species (AS)	Inform the decision making for the control and protection of native threatened species.

Responsibility for the Action	Possible partners	Start date	Conclusion date	Interface with other targets	"Is there a cost estimate? (yes or no)"
DESP/SBio/MMA	ICMBio, JBRJ, Ibama		Continuous action. Included in PPA 2016-2019	12	NO
ICMBio, IBAMA, State Institutes	Universities, NGOs, Society, Forestry Police	2017	-	12	NO
ICMBio, Universities, NGOs, State Institutes,	Society, NGOs	2017	-	12	NO
Brazilian states and municipalities - through the Ministry of Health	State Health Secretariats (SES) and Municipal Health Secretariats	2017	2017	Target of the National Coordination and Control Room for Addressing Microcephaly - (SNCC)	NO
Institutional Program on Biodiversity & Health - Presidency of Fiocruz	Universities and research centers	2017	2019	1, 19	-
FATMA - SC	-	2015	2017	-	YES
FATMA - SC	-	2016	2017	-	YES
FATMA - SC	Universities and NGOs working with the co-management of state Protected Areas	2017	2020	11	YES
FATMA - SC	-	2015	2016	1	YES
FATMA - SC	-	2015	2016	14	YES
Fepam - RS	SEMA, FZB, municipal governments	2014	-	14	NO
Fepam - RS	SEMA, FZB	2014	-	14	NO
Fepam - RS	SEMA, FZB	2014	-	14	NO
IAP - PR, SEMA-PR	Horus Institute	-	Continuous action.	6	NO

Target 9

By 2020, the National Strategy on Invasive Alien Species is fully implemented, with the participation and commitment of states and the elaboration of a National Policy, ensuring the continuous and updated diagnosis of species and the effectiveness of Action Plans for Prevention, Contention and Control.

Target-Action	Group/segment	Action	Objective
Target9-Action15	State Environmental Agencies (OEMAs)	Assessment of the Invasive Alien Species (IAS)	Acknowledge the invasive alien species in each state and in the country, publishing the lists in the Official Gazette.
Target9-Action16	State Environmental Agencies (OEMAs)	Forbid the use of alien species in environmental recuperation projects	1. Control or remove IAS that impact biodiversity, ecosystems and watersheds. 2. Prevent the entry of IAS in Protected Areas.
Target9-Action17	State Environmental Agencies (OEMAs)	Establish and implement IAS control and eradication plans in Protected Areas	1. Control or remove IAS that impact biodiversity, ecosystems and watersheds. 2. Prevent the entry of IAS in Protected Areas.
Target9-Action18	State Environmental Agencies (OEMAs)	Replace alien species with native species in landscaping and urban tree planting	1. Control or remove IAS that impact biodiversity, ecosystems and watersheds. 2. Prevent the entry of IAS in Protected Areas.
Target9-Action19	State Environmental Agencies (OEMAs)	Creation of the Alien Species Control Committee	Propose the means to control, monitor and prevent the proliferation of species of alien fauna in the state of Minas Gerais.
Target9-Action20	State Environmental Agencies (OEMAs)	Enforcement and control of the movement of IAS in national and state borders (ports, post office, airports and customs sites) within the country, between watersheds and ecosystems.	1. Prevent the entry of IAS in the country and states.
Target9-Action21	State Environmental Agencies (OEMAs)	Implementation of the State Program for the Valuation of Native Plant Species, according to State Law Nº 16.002 of 02/05/16	1- Gradually replace the invasive alien plant species with native species. 2. Provide incentives to the municipalities of the state of Ceará to prepare their Tree Planting Plans. 3. Promote the creation, maintenance and development of tree nurseries with native species in the state of Ceará.
Target9-Action22	State Environmental Agencies (OEMAs)	Implementation of the State Program for the Eradication of Alien Species in the state of Paraná	"Prevent the introduction of new invasive alien species and carry out actions for the control and eradication of those already present in the state."
Target9-Action23	State Environmental Agencies (OEMAs)	Restoration of areas degraded by invasion of species in Full Protection Protected Areas.	Carry out 100% restoration in areas of eradication of invasive alien species, particularly the reforestation areas with Pinus sp and Eucalyptus sp (which represent 130ha of Full Protection Protected Areas).
Target9-Action24	State Environmental Agencies (OEMAs)	Establish an Integrated Action Plan for the control of invasive alien species of fish.	Reduce the impact caused by invasive alien species of fish on the loss of biodiversity.
Target9-Action25	State Environmental Agencies (OEMAs)	Implementation of the São Paulo Strategy for Reducing Pressure on Biodiversity - Alien Species	Enhance the state strategy on potentially invasive alien species.
Target9-Action26	Civil Society (NGOs)	Management of invasive alien plant species	1. Increase biodiversity in recuperated areas and areas under recuperation. 2. Increase the number of recuperated areas to obtain greater biodiversity. Encourage private landowners to recuperate priority private areas.
Target9-Action27	Civil Society (NGOs)	Eradication of invasive species in the Protected Areas of the Contrafortes do Ferrabraz Mosaic.	Recuperate areas degraded by invasive species.
Target9-Action28	Civil Society (NGOs)	Promote the production of data for the National Policy on Invasive Species.	Generate lists of invasive aquatic and terrestrial species in the region of the Lagamar Mosaic.
Target9-Action29	Civil Society (NGOs)	"Development and implementation of an integrated information system to facilitate the preventive detection of invasive species by governmental and enforcement agencies."	"Identify the expansion pathways of the distribution of invasive species, prioritize the control of already established species, and prevent the introduction of new ones."

Responsibility for the Action	Possible partners	Start date	Conclusion date	Interface with other targets	"Is there a cost estimate? (yes or no)"
State Secretariats of the Environment, IBAMA	ICMBio, IBAMA, EMBRAPA, Universities, Atlantic Forest Network 1/UERJ	2017	2019	7, 12, 14	NO
Secretariat of the Environment, IBAMA, EMBRAPA	Universities, NGOs, Society, Forestry Police, EMBRAPA, Associations of seedling producers, Atlantic Forest Network 1/UERJ	2017	-	7, 12, 14	NO
Secretariat of the Environment, IBAMA, ICMBio	Universities, NGOs, Society, Forestry Police, Atlantic Forest Network 1/UERJ	2017	-	7, 12, 14	NO
Secretariat of the Environment, IBAMA, Municipal Governments	Universities, NGOs, Society, Forestry Police, EMBRAPA, Associations of seedling producers, Atlantic Forest Network 1/UERJ	2017	-	7, 12, 14	NO
Directorate of Fauna Protection - IEF -MG	Academia, NGO, OSCISP	Publication of the resolution that created the committee - expected for March 2017	No deadline	19,6,2	NO
Secretariats of the Environment, Federal and State enforcement agencies, Environmental Police	Ministry of Agriculture, IBAMA, Federal Revenue, Infraero, Atlantic Forest Network 1/UERJ	2017	2020	12	NO
COBIO/SEMA - CE	SEMACE, Universities, NGOs	2016	2019	1	NO
SEMA- PR, IAP - PR	Horus Institute	2014/2014	Continuous action.	6	NO
SEMA- PR, IAP - PR	SEMA - PR	-	Continuous action.	14, 15	NO
SEMA- PR, IAP - PR	Horus Institute	Continuous action	Continuous action.	14	NO
Coordination of Biodiversity and Natural Resources/SMA -SP	Secretariat of Agriculture and Supply, Botany Institute	2016	Continuous action.	7	YES
SVDS/ ICLEI	SMSP, SVDS, SME, SECOM, FJPO, COMDEMA, Partnership with University, CMDRA	2017	2019	14, 15	NO
Araçá-Piranga S. A. Center - RS	SEMA/RS and Universities in the region	2020	2022	2, 7	YES
Paraná Atlantic Forest Network	Paraná Environmental Institute	2016	2020	1	YES
IUCN	Ministry of the Environment and connected agencies, FUNBIO.	-	-	19	NO

Target 10

By 2015, the multiple anthropogenic pressures on coral reefs, and other marine and coastal ecosystems impacted by climate change or ocean acidification are minimized, so as to maintain their integrity and functioning.

Target-Action	Group/segment	Action	Objective
Target10-Action1	Agencies Connected to MMA	Enhancement of the monitoring of marine and coastal biodiversity.	Generate qualified information for evaluating the effectiveness of conservation actions, such as influencing policies and decision making, both at the local and regional scale.
Target10-Action2	Agencies Connected to MMA	Carry out scientific research on marine habitats.	1. Develop and expand the studies and research on marine habitats, such as reef ecosystems. 2. Carry out the mapping of the coral reef habitats of the Abrolhos Bank and Brazilian Equatorial Margin. 3. Characterize the biodiversity associated to the coral reefs of the Abrolhos Bank and Brazilian Equatorial Margin. 4. Generate inputs for the systematic planning of the management and expansion of marine protected areas. 5. Build the capacity of specialists for mapping and characterizing the marine biodiversity. 6. Manage the information system to make data and images available on mapping, biodiversity and conservation actions. 7. Estimate the ecosystem services provided by reef formations.
Target10-Action3	Agencies Connected to MMA	Estimate the effect of acidification on coral reefs.	Estimate the effect of acidification on key organisms of the coral reefs (corals and rhodoliths).
Target10-Action4	State Environmental Agencies (OEMAs)	BIG Project - Ecosystem Management of the Ilha Grande Bay	Achieve the conservation and sustainability of the marine ecosystem of the Ilha Grande Bay and its associated terrestrial ecosystems, through a long-term coordination and management strategy.
Target10-Action5	State Environmental Agencies (OEMAs)	Implementation of the selective collection of solid waste in the three strategic watersheds.	Develop plans for the selective collection of solid waste for the 81 municipalities within the watersheds of Salgado, Acaraú and Metropolitan.
Target10-Action6	State Environmental Agencies (OEMAs)	Implementation of a State Protocol for the Care of Beached Marine and Coastal Tetrapod Fauna.	Appropriate care, rehabilitation and destination of the marine and coastal tetrapod fauna beached on the state's coastline.
Target10-Action7	State Environmental Agencies (OEMAs)	Promotion of the sustainable use of biodiversity in agriculture, aquaculture and forestry activities.	1. Identify actions/strategies for the protection of ecosystem services provided by pollinators to be incorporated into protocols with production sectors, settlements of the agrarian reform, and quilombola territories. 2. Develop the fisheries management, planning and regularization plans for species included in annex II of Decree nº 60133/14.
Target10-Action8	Civil Society (NGOs)	"Support to the enhancement of marine and coastal biodiversity monitoring"	Generate qualified information for assessing the effectiveness of conservation actions, such as influencing policies and decision making, both at the local and regional scale.
Target10-Action9	Civil Society (NGOs)	Support to the creation of protected areas, such as PAs under SNUC, and acknowledgement of Marine Biosphere Reserves.	Support the process of creating coastal and marine protected areas, through the identification of potential areas to that end, political and institutional coordination, coordination of studies, and proposition of protected areas.

Responsibility for the Action	Possible partners	Start date	Conclusion date	Interface with other targets	"Is there a cost estimate? (yes or no)"
ICMBio	DECO/SBio/MMA, Boticário Group Foundation	-	2020	1, 5, 19	-
JBRJ	UFRJ, UFES, UNIFESP, UFABAC, UFRRJ, ANP, MCTIC, CAPES, IBAMA, ICMBio, FAPERJ	2010	2020	11,19	YES
JBRJ	UFRJ, UFES, MCTIC, CAPES, FAPERJ	2012	2019	19	
INEA-RJ, FAO	-	2011	2017	12	YES
CODES/SEMA - CE	SEMA-CE, Residents' Associations, Universities and Others.	2016	2018	8	YES
SEMA - PR	UFPR/CEM, SSP, Civil Defence, Coastal Municipalities, Fire Department, Unespar	2015	2017	12	NO
Coordination of Biodiversity and Natural Resources and Secretariat of Agriculture and Supply/ Fisheries Institute/SMA-SP	-	2016	2020	3, 4, 6, 8, 13, 16, 19	YES
Boticário Foundation	ICMBio, DECO/SBio/MMA	1991	Continuous action	5	-
Atlantic Forest Biosphere Reserve	MMA, GIZ, RBMA Network, Atlantic Forest Network, Network of Biosphere Reserves, institutions responsible for protected areas management, research and learning institutions, federal, state and municipal governments, and private sector.	Continuous action	Continuous action	1, 5, 6, 7, 11, 12, 14, 15	NO

Strategic Objective C

Improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity

3 targets | 35 institutions | 143 actions

National Targets: 11 to 13

11. Expand and implement systems of Protected Areas

92 actions

- Integration of PAs (CNUC)
- Development and implementation of management plans
- Assessment of biodiversity protection effectiveness
- Support studies and projects (mosaics, fragmentation and SCP)

12. Avoid the extinction of species

34 actions

- Monitoring of species
- Regional activities
- Updating lists of threatened species

13. Conservation of agrobiodiversity (genetics)

17 actions

- Support to research on genetic diversity
- Data systematization

Comparison of the actions in the Action Plan with the components of the National Targets described in the 5th National Report to the CBD:

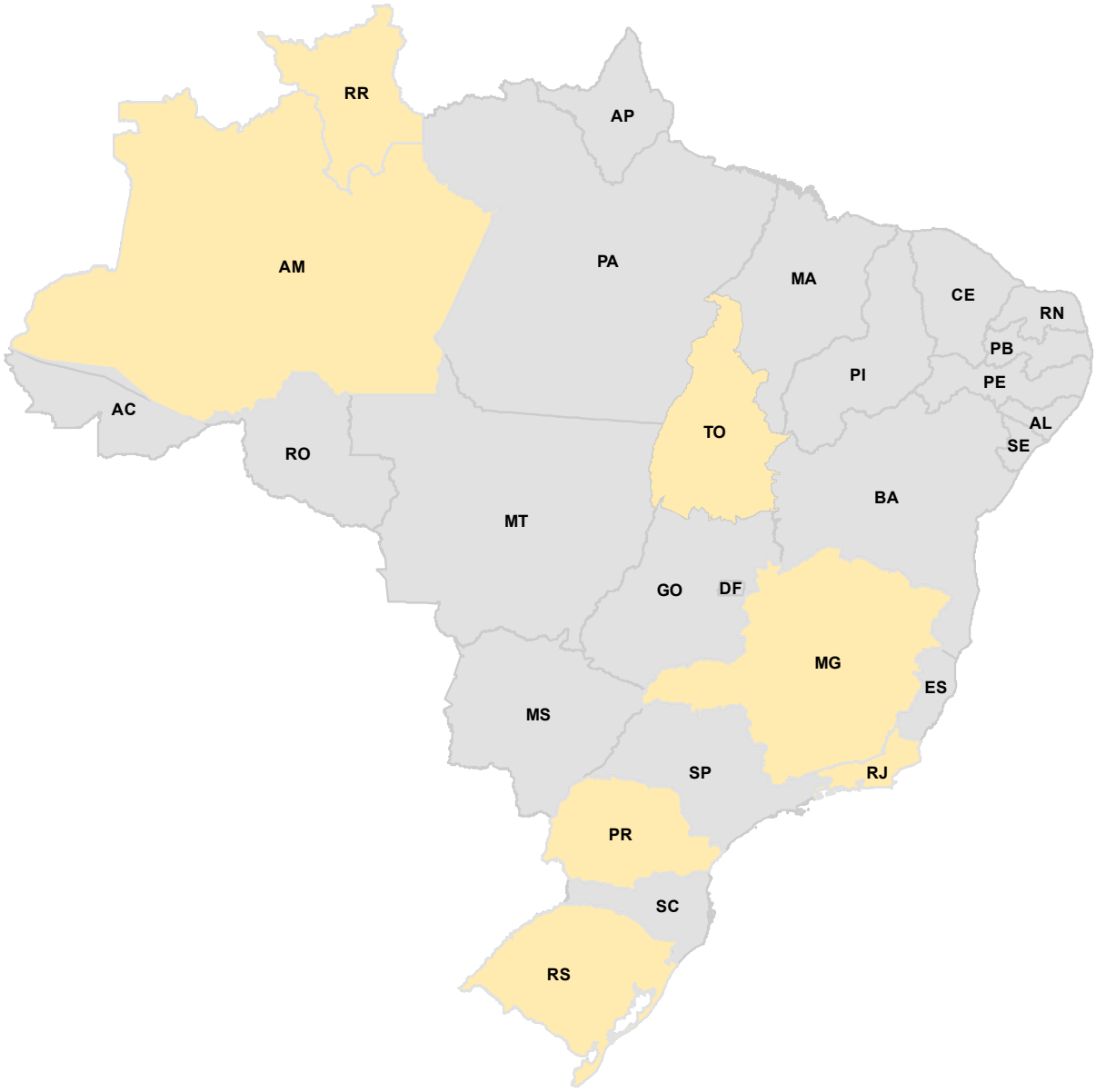
Target 11: By 2020, at least 30% of the Amazon, 17% of each of the other terrestrial biomes, and 10% of the marine and coastal areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through protected areas foreseen under the SNUC Law and other categories of officially protected areas such as Permanent Protection Areas, legal reserves, and indigenous lands with native vegetation, ensuring and respecting the demarcation, regularization, and effective and equitable management, so as to ensure ecological interconnection, integration and representation in broader landscapes and seascapes		
Parts of the Target		**Nº of actions**
Total actions for the Target		**92**
Number of actions for part 1: Conservation of 30% of the Amazon through systems of protected areas foreseen under the SNUC Law and other categories of officially protected areas such as Permanent Protection Areas, legal reserves, and indigenous lands with native vegetation...	Conservation through protected areas	37
Number of actions for part 2: Conservation of 17% of each terrestrial biome through systems of protected areas foreseen under the SNUC Law and other categories of officially protected areas such as Permanent Protection Areas, legal reserves, and indigenous lands with native vegetation...		
Number of actions for part 3: Conservation of 10% of the marine and coastal areas through systems of protected areas foreseen under the SNUC Law and other categories of officially protected areas such as Permanent Protection Areas, legal reserves, and indigenous lands with native vegetation...		
Number of actions for part 4: ...ensuring and respecting the demarcation, regularization, and effective and equitable management...	Demarcation, regularization and management of protected areas	49
Number of actions for part 5: ... so as to ensure ecological interconnection, integration and representation in broader landscapes and seascapes.	ecological interconnection, integration and representation in landscapes and seascapes	12

Target 12: By 2020, the risk of extinction of threatened species has been significantly reduced, tending to zero, and their conservation status, particularly of those most in decline, has been improved.	
Parts of the Target	**Nº of actions**
Total actions for the Target	**34**
Number of actions for part 1: By 2020, the risk of extinction of threatened species has been significantly reduced, tending to zero...	11
Number of actions for part 2: ...and their conservation status, particularly of those most in decline, has been improved.	12
Number of actions that address both parts:	11

Target 13: By 2020, the genetic diversity of microorganisms, cultivated plants, farmed and domesticated animals and of wild relatives, including socio-economically as well as culturally valuable species, is maintained, and strategies have been developed and implemented for minimizing the loss of genetic diversity.	
Parts of the Target	**Nº of actions**
Total actions for the Target	**17**
Number of actions for part 1: The genetic diversity of microorganisms, cultivated plants, farmed and domesticated animals and of wild relatives, including socio-economically as well as culturally valuable species, is maintained...	8
Number of actions for part 2: ...and strategies have been developed and implemented for minimizing the loss of genetic diversity.	5
Number of actions that address both parts:	5

Distribution of sectors/segments contributing to objective C:

Sectors	TOTAL ADHERENT INSTITUTIONS	INSTITUTIONS THAT CONTRIBUTE TO OBJECTIVE C	%
MMA Secretariats	3	3	100%
Agencies connected to MMA	4	2	50%
Ministries, Special Secretariats and Public Corporations	4	1	25%
Institutes/ Institutions connected to Ministries	6	5	83%
State Environmental Agencies (OEMAs)	14	13	92%
Civil Society (NGOs and similar organizations)	11	8	72%
Financing Agencies and Private Sector	1	0	0%
Academia	10	3	30%



States of the proposing institutions contributing to objective C

Target 11

By 2020, at least 30% of the Amazon, 17% of each of the other terrestrial biomes, and 10% of the marine and coastal areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through protected areas foreseen under the SNUC Law and other categories of officially protected areas such as Permanent Protection Areas, legal reserves, and indigenous lands with native vegetation, ensuring and respecting the demarcation, regularization, and effective and equitable management, so as to ensure ecological interconnection, integration and representation in broader landscapes and seascapes.

Target-Action	Group/segment	Action	Objective
Target11-Action1	MMA Secretariats	Integration of the Amazon protected areas system (GEF Landscapes Project)	Protect globally important biodiversity and implement policies and actions targeting the promotion of the sustainable use of landscapes and the restoration of native vegetation cover in the Amazon Region.
Target11-Action2	MMA Secretariats	Expansion of the National Protected Areas System in the Caatinga, Pantanal and Pampas (GEF Terrestrial Project)	1. Create new protected areas. 2. Strengthen PA management.
Target11-Action3	MMA Secretariats	Implementation of the New National Cadaster of Protected Areas	Enhance the current CNUC platform to address the new information demands of the MMA, necessary for SNUC coordination, and adjust the platform to accessibility, inter-operation of systems, and technology standards.
Target11-Action4	MMA Secretariats	Capacity building of staff for the preparation of management plans - Lifeweb project	Consolidation of the national directives for management plans, followed by the development of courses on the preparation of management plans (distance learning).
Target11-Action5	MMA Secretariats	Strengthening and coordination of Biosphere Reserves	Strengthen the Brazilian Biosphere Reserves and the Brazilian Commission for the "Man and the Biosphere" Program - COBRAMAB. Promote, under COBRAMAB and sub-national forums of the MaB, actions for management strengthening and increasing the effectiveness of nature conservation in protected areas, through the integration of initiatives developed through sectoral policies under the Program, such as Science and Technology, Agrarian Development, Agriculture, Education, among others.
Target11-Action6	MMA Secretariats	Coordination of the integrated management of Protected Areas through Mosaics of Protected Areas	Develop and disseminate integrated management tools and good practices, to support the implementation of actions at the Protected Areas Mosaics, thus increasing the effectiveness of conservation and the management efficiency of areas.
Target11-Action7	MMA Secretariats	Implementation of the Amazon Region Protected Areas Program - ARPA	1. Consolidate at least 60 (sixty) million hectares of Protected Areas in the Amazon, to ensure biodiversity conservation. 2. Contribute to their sustainable development in a decentralized and participatory way.
Target11-Action8	MMA Secretariats	Expansion of the marine protected areas system (GEF-Mar Project)	Increase the Marine and Coastal Protected Areas to 5% of the Brazilian marine and coastal zone (equivalent to 175,000 km²).
Target11-Action9	MMA Secretariats	Implement environmental and territorial management instruments in quilombola territories.	1. Support environmental and territorial management projects in quilombola communities. 2. Develop a legal framework to support environmental and territorial management in quilombola territories.
Target11-Action10	MMA Secretariats	Support to the implementation of the PNGATI	Fund the development and implementation of Territorial and Environmental Management Plans - PGTA in Indigenous Lands.
Target11-Action11	MMA Secretariats	Identification of unquestionable federal areas to support the destination and environmental management of territories of Traditional Peoples and Communities - PCTs and family rural producers.	Develop and apply a modelling methodology for the identification and definition of unquestionable federal areas for destination and support to the regularization, environmental management and monitoring of territories of family agriculture producers and Traditional Peoples and Communities.
Target11-Action12	Agencies connected to MMA and OEMAs	Preparation and implementation of Management Plans for state and federal Protected Areas.	Ensure the more effective management of Protected Areas and incorporate themes on climate change and adaptation based on ecosystems in their planning.
Target11-Action13	Agencies Connected to MMA	Development of proposals for the creation of protected areas	Ensure the conservation of biological diversity and the maintenance of the livelihoods of traditional populations.
Target11-Action14	Agencies Connected to MMA	Enhance the procedures for the preparation of management plans for federal Protected Areas	Develop a procedure to guide the preparation of effective management plans for the conservation of biodiversity and sustainable use of natural resources, in less time and at lower costs.
Target11-Action15	Agencies Connected to MMA	Preparation and implementation of Management Plans for state and federal Protected Areas	Ensure the more effective management of Protected Areas and incorporate themes on climate change and adaptation based on ecosystems in their planning.
Target11-Action16	Agencies Connected to MMA	Application of the Management Analysis and Monitoring System (SAMGe) to the protected areas of the national system.	Annual application of the SAMGe, to monitor and evaluate the management and effectiveness of protected areas, and verify if the public policy is being achieved.

Responsibility for the Action	Possible partners	Start date	Conclusion date	Interface with other targets	"Is there a cost estimate? (yes or no)"
DAP/SBio/MMA	DPCD/SMCQ, ICMBio, OEMAs. Colombia and Peru, FUNBIO	2016	2021	5, 12	YES
DAP/SBio/MMA	ICMBio, OEMAs, FUNBIO, communities around Protected Areas and Municipalities	2017	2021	1, 5, 12, 15	YES
DAP/SBio/MMA	State, municipal and federal PA management agencies, Ibama, DECO	2018	2018	19	YES
DAP/SBio/MMA	ICMBio, state and municipal protected area management agencies, Enap, FGV, Academia	-	2018	5, 7, 14, 15	YES
DAP/SBio/MMA	Ministries and other institutions that comprise the COBRAMAB and Managerial Councils and Regional or State Committees of the Biosphere Reserves, particularly the state environmental management agencies.	-	2020		NO
DAP/SBio/MMA	DAP/SBio ICMBio, state and municipal agencies responsible for protected areas management, Enap, FGV, Academia.	-	-	-	Currently, actions of this agenda are being funded by non-governmental partners. The MMA is providing support through the payment of travel expenses.
DAP/SBio/MMA	State and municipal management agencies, ICMBio	-	2020	5, 12	YES
DAP/SBio/MMA	MAPA, ICMBio, state management agencies	-	2020	5, 10, 12	YES
DEX/SEDR/MMA	Quilombola organizations; SEPPIR/MJ; INCRA; ICMBio; FCP/MINC	2015	2020	1, 2, 4, 14, 15, 16, 17, 18	NO
DEX/SEDR/MMA and Funai	-	2017	2020	1, 2, 4, 14, 15, 16, 17, 18	-
SEDR/MMA	SPU/GIZ	2015	2018	14, 18	NO
States and ICMBio	MMA, research institutions and Municipalities	-	2018	12, 14, 15	-
COCUIC/CGCAP/DIMAN/ ICMBio and MMA.	GEF, ARPA	2017	-	all	NO
COMAN/CGCAP/DIMAN/ ICMBio	USAID, US Parks Service, US Forest Service, GIZ, KfW, ARPA.	2016	2018		NO
COMAN/CGCAP/DIMAN/ ICMBio and MMA	MMA, Brazilian Forest Service, Supporting Projects (ARPA, KfW, GIZ, GEF, USAID, PNUD, etc.), research institutions, NGOs and Municipalities.	2016	2020	12, 14, 15	NO
DMAG/CGCAP/DIMAN/ ICMBio	MMA/SBio/DAP, IPAM, state and municipal environmental agencies, NGO	2017	-	1, 2, 3, 6, 7, 9, 10, 13, 17, 18,	NO

Target 11

By 2020, at least 30% of the Amazon, 17% of each of the other terrestrial biomes, and 10% of the marine and coastal areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through protected areas foreseen under the SNUC Law and other categories of officially protected areas such as Permanent Protection Areas, legal reserves, and indigenous lands with native vegetation, ensuring and respecting the demarcation, regularization, and effective and equitable management, so as to ensure ecological interconnection, integration and representation in broader landscapes and seascapes.

Target-Action	Group/segment	Action	Objective
Target11-Action17	Agencies Connected to MMA	Development of Co-existence Agreements and other instruments that promote shared management at Indigenous Lands and federal Protected Areas when overlapping exists.	Develop and implement, with the participation of indigenous peoples and Funai, joint administration plans for overlapping areas between Indigenous Lands and federal Protected Areas.
Target11-Action18	Agencies Connected to MMA	Preparation and implementation of Management Plans for state and federal Protected Areas according to an enhanced model.	Ensure the more effective management of Protected Areas and incorporate themes on climate change and adaptation based on ecosystems in their planning.
Target11-Action19	Ministries, Special Secretariats and Public Corporations	Support to the preparation and implementation of Management Plans for state and federal Protected Areas	Ensure the more effective management of Protected Areas and incorporate themes on climate change and adaptation based on ecosystems in their planning.
Target11-Action20	Institutes/ Institutions connected to Ministries	Management of the Fiocruz Atlantic Forest Campus	Conserve 506 hectares of Atlantic Forest in the urban environment.
Target11-Action21	Institutes/ Institutions connected to Ministries	Technical-scientific support to the ICMBio Action Plans and the management of protected areas	Carry out basic research on taxonomic groups of interest. Provide data and information from SISS-Geo for species in all states, and in more detail for the Tapajós-Arapiuns Extractive Reserve - PA, Serra do Condurú State Park-BA, Serra dos Órgãos National Park-RJ. Provide support to the management of the Pedra Branca State Park-RJ, Serra do Condurú State Park-BA, Serra da Capivara National Park - PI, Serra das Confusões National Park-PI, Serra dos Órgãos National Park - RJ, and participation in the PAN-MAMAC, PAN-XINGU, Serra do Cipó National Park. Action Plans - Mammals, Franciscana dolphins, Penguins, Rodents, Primates.
Target11-Action22	Institutes/ Institutions connected to Ministries	Delimitation of indigenous lands in the various biomes	Carry out the delimitation of 20 indigenous lands in the various biomes.
Target11-Action23	Institutes/ Institutions connected to Ministries	Mapping and temporal-spectrum analysis of the federal full protection protected areas in the Caatinga biome.	Map, analyze and characterize 14 federal full protection protected areas in the Caatinga biome.
Target11-Action24	State Environmental Agencies (OEMAs)	Evaluate the effectiveness of state Protected Areas	Identify pressures and threats, as well as the effectiveness of Protected Areas.
Target11-Action25	State Environmental Agencies (OEMAs)	Prepare the Management Plan of the Serra do Tabuleiro State Park.	Strengthen the Protected Area management.
Target11-Action26	State Environmental Agencies (OEMAs)	Prepare the Management Plan of the Rio Vermelho State Park.	Strengthen the Protected Area management.
Target11-Action27	State Environmental Agencies (OEMAs)	Creation of the Rio Ricardo Protected Area, between the municipalities of Joinville and Campo Alegre, and create the Wildlife Refuge Raulinoa echinata	1. Protect a remaining fragment of broadleaf evergreen forest in area with probable occurrence of threatened species. 2. Protect springs and water courses.
Target11-Action28	State Environmental Agencies (OEMAs)	Creation of the Serra do Rio do Rastro Protected Area	Create new protected areas.
Target11-Action29	State Environmental Agencies (OEMAs)	Creation of Protected Areas in a natural grasslands area.	1. Protect ecosystems not yet represented in the State Protected Areas System. 2. Conserve the typical biodiversity of the grasslands ecosystem. 3. Conserve a large number of threatened species that are not yet under legal protection in the state. 4. Expand the representativeness of state Protected Areas.
Target11-Action30	State Environmental Agencies (OEMAs)	Connect the Protected Areas to the remaining forest fragments of the Seasonal Forest	Become part of the transitional Executive Team to implement the Quarta Colônia Ecological Corridor.
Target11-Action31	State Environmental Agencies (OEMAs)	Institute new Special Areas under Regulated Use	Increase the areas of Aresur (faxinais) that possess their own production system based on community animal farming (area of native forest under collective use, while in private properties).

Responsibility for the Action	Possible partners	Start date	Conclusion date	Interface with other targets	"Is there a cost estimate? (yes or no)"
ICMBio	FUNAI	2016	2019	-	YES
ICMBio, States	MMA, research institutions	1991	2018	12,14,15	-
MCTIC	States and ICMBio, MMA, ICMBio, research institutions, PPBio, PELD	-	2018	12,14,15	YES
CFMA/Presidency - Fiocruz	INEA, municipal government of Rio de Janeiro	Continuous Action	Continuous Action	-	-
Institutional Program on Biodiversity & Health - Presidency of Fiocruz, IOC, CPqRR	ICMBio	Continuous Action	Continuous Action	12 and 19	-
Funai	MJ	2016	2019	5, 14, 15 and 18	-
Joaquim Nabuco Foundation	UFCG	2013	2017	-	YES
FATMA - SC	Santa Catarina University	2015	2018	12	YES
FATMA - SC	Hired consulting firm, civil society	2016	2017	-	YES
FATMA - SC	Hired consulting firm, civil society	2016	2017	-	YES
FATMA- SC	-	2008	2017	5, 12, 15	NO
FATMA - SC	-	2017	2018	5, 12, 15	-
FATMA - SC	-	2018	2019	5, 12, 15	NO
Fepam - RS	SEMA - RS, FZB	2016	Continuous Action	5	NO
IAP - PR	ITCG	-	Permanent	7	-

Target 11

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Target-Action	Group/segment	Action	Objective
Target11-Action32	State Environmental Agencies (OEMAs)	Development of environmental diagnoses based on updated cartographic base.	Propose the expansion of the protection of native habitats, particularly in the phyto-ecological regions of the Mixed and Semideciduous Broadleaf Forest, Cerrado biome and all associated ecosystems.
Target11-Action33	State Environmental Agencies (OEMAs)	Revision and strengthening of the State Cadaster of Protected Areas	Develop State Decree nº 14.366/2015, which rules on aspects of the State Cadaster of Protected Areas (CEUC) and creates the State Green VAT Program, and makes information available through the online Sisla/IMASUL system on the protected areas approved through the state cadaster and benefitted by the Green VAT Program.
Target11-Action34	State Environmental Agencies (OEMAs)	Formalization of a Technical Cooperation Agreement between IMASUL and WWF to carry out studies, research, training of staff working with biodiversity conservation and creation and management of protected areas.	Promote actions related to land tenure of regularized Protected Areas, promoting public use and the strengthening of the RPPNs program, and preparation of the 2nd phase of Rappam.
Target11-Action35	State Environmental Agencies (OEMAs)	Consolidation of the State Protected Areas System	Provide the State Protected Areas with an Effective Management System, through investments in land tenure regularization, enforcement, improvement of infrastructure, and strengthening of environmental education, recreation and nature tourism actions.
Target11-Action36	State Environmental Agencies (OEMAs)	Strengthening of Protected Areas planning and management in MS	Develop the "Methodological Guidelines for the Preparation of Management Plans for the MS Protected Areas", approved by IMASUL Administrative Ruling Nº 408, of 15 October 2014, which "Approves and publishes the Methodological Guidelines for the Preparation of Management Plans for State Protected Areas of Mato Grosso do Sul".
Target11-Action37	State Environmental Agencies (OEMAs)	Apply the Technical Cooperation Agreement between IMASUL and the municipal governments of Costa Rica and Paraíso for the creation and management of Protected Areas, as an environmental compensation measure.	Preparation of Management Plans for the municipal Protected Areas, and creation of new full protection PAs, under shared management.
Target11-Action38	State Environmental Agencies (OEMAs)	Prepare, revise and implement Management Plans of state Protected Areas.	Ensure the more effective management of PAs.
Target11-Action39	State Environmental Agencies (OEMAs)	Carry out preventive and repressive activities to reduce the occurrence of environmental crimes within and around state PAs.	Contribute to the strengthening of the State Protected Areas System.
Target11-Action40	State Environmental Agencies (OEMAs)	Preparation and implementation of Management Plans for state PAs.	Ensure the more effective management of PAs.
Target11-Action41	State Environmental Agencies (OEMAs)	Improvement of the State Cadaster of Protected Areas	Provide information to SECIMA related to the PAs of the state of Goiás, particularly for verification of compliance with requirements for the Green VAT.
Target11-Action42	State Environmental Agencies (OEMAs)	Implementation of the Cerrado Biosphere Reserve in Goiás	Implement the Cerrado Biosphere Reserve in Goiás.
Target11-Action43	State Environmental Agencies (OEMAs)	Implementation of the Management Plans for PAs in the state of Amazonas	1. Ensure the effectiveness of implementation of the Protected Areas. 2. Carry out the activities established in the Management Plans of 29 PAs.
Target11-Action44	State Environmental Agencies (OEMAs)	Implementation of Environmental Compensation Projects directed to PAs	Strengthen the state protected areas.
Target11-Action45	State Environmental Agencies (OEMAs)	Planning of ecological corridors in the state of Amazonas	Carry out the necessary studies for the creation of the Ecological Corridor of the Puraquequara and Tarumã Watershed.

Responsibility for the Action	Possible partners	Start date	Conclusion date	Interface with other targets	"Is there a cost estimate? (yes or no)"
IAP - PR	SEMA and ITCG	-	Permanent	5, 11 and 19	-
IMASUL - MS	Municipal Governments	2015	Continuous Action	3 and 19	NO
IMASUL - MS, WWF	NGOs, Universities	2016	2018	12, 14 and 15	NO
SEMADE/IMASUL - MS	NGOs, Universities	2015	2020	12, 14 and 15	YES
SEMADE, IMASUL - MS	Fibracon Consulting Services	2013	2014	-	YES
SEMADE, IMASUL - MS	Municipal Governments	2016	2018	12, 14 and 15	YES
INEA - RJ	-	2016	2020	12,14,15	YES
IPAAM - AM	IBAMA, ICMBio, Municipal Governments	2016	Continuous Action	-	NO
SECIMA - GO	-	-	2020	-	-
SECIMA -GO	-	-	2018	-	-
SECIMA -GO	-	-	-	-	-
SEMA-AM	IDESAM, FAS, IEB, IDSM, IPÊ, IPI, WWF, FVA, IDAM, SEPROR, Municipal Governments, Community associations "MOTHER" of PAs	2016	2020	-	YES
SEMA-AM	AADES, MURAKI, NGOs and private institutions	2015	2020	-	YES
SEMA-AM	-	2017	2021	-	YES

Target 11

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Target-Action	Group/segment	Action	Objective
Target11-Action46	State Environmental Agencies (OEMAs)	Planning of ecological corridors in the state of Amazonas	Prepare use plan, create and implement the advising council of the ecological corridor of the Ducke Reserve/Puraquequara.
Target11-Action47	State Environmental Agencies (OEMAs)	Implementation of the Program to support communities in Protected Areas	Promote community strengthening, encourage the organization and union of residents and the search of better life quality, as well as poverty combat and claiming of rights.
Target11-Action48	State Environmental Agencies (OEMAs)	Regulation and implementation of the Law on the Management of Public Forests	Create mechanisms for the use of state public forests for sustainable production.
Target11-Action49	State Environmental Agencies (OEMAs)	Implementation of the Amazon Region Protected Areas Program	Expand and strengthen the protected areas in the state of Amazonas.
Target11-Action50	State Environmental Agencies (OEMAs)	Implementation of the RPPN Service	Support the owners of urban and rural properties in the institution and implementation of RPPNs.
Target11-Action51	State Environmental Agencies (OEMAs)	Creation of the Program to Support Municipal Protected Areas in the state of Ceará	Support municipalities in the creation and implementation of PAs to improve management effectiveness in these places.
Target11-Action52	State Environmental Agencies (OEMAs)	Creation of the Tatajuba Extractive Reserve	Support all of the technical studies and carry out the necessary coordination for the implementation of the Protected Area on that site.
Target11-Action53	State Environmental Agencies (OEMAs)	Creation of Protected Areas in the State of Ceará	Regulate the Cocó State Park, which is a PA in the watershed of the rivers of the east shore of Ceará, containing mangrove and coastal tabuleiros areas important for the geodynamics of the Metropolitan Region of Fortaleza.
Target11-Action54	State Environmental Agencies (OEMAs)	Implementation of the Araucária Corridor	Develop strategic actions for the conservation of the Mixed Broadleaf Forest in the 139 municipalities along the Corridor (in the states of Paraná and Santa Catarina), through strategic planning, public policies, coordination and inter-institutional integration, guiding the 23 institutions that participate in this Corridor, as well as to influence the regional sustainable development in both states.
Target11-Action55	State Environmental Agencies (OEMAs)	Creation of the Management Council of the APA Escarpa Devoniana	Enable the participatory management of the APA Escarpa Devoniana to ensure, deepen and streamline the work of the Thematic Chambers (agriculture, silviculture, mining, tourism, historical-cultural heritage, and others as necessary). Regulate the control and eradication of invasive species that contaminate the natural grasslands.
Target11-Action56	State Environmental Agencies (OEMAs)	Indication and planning of ecological corridors in the Buffer Zone of the Espinilho State Park	Propose the ecological corridor of the espinilho.
Target11-Action57	State Environmental Agencies (OEMAs)	Expansion of the State Protected Areas System of the state of TO	Creation of new protected areas; Strengthening of PA management.
Target11-Action58	State Environmental Agencies (OEMAs)	Implementation of the Environmental Conformity and Ecological Restoration Program	1. Increase the area of the São Paulo territory registered in CAR and in process of environmental regularization. 2. Expand the area of the São Paulo territory covered by ecosystems undergoing restoration processes. 3. Implement the State Seeds Program.
Target11-Action59	State Environmental Agencies (OEMAs)	Implementation of the Protected Areas Consolidation Program	1. Enhance the management of protected areas in the state of São Paulo. 2. Expand the area of the São Paulo territory protected under PAs, considering particularly the representativeness of ecosystems.
Target11-Action60	State Environmental Agencies (OEMAs)	Enhancement of the Protected Areas Consolidation Program	Improve the management of protected areas in the state.

Responsibility for the Action	Possible partners	Start date	Conclusion date	Interface with other targets	"Is there a cost estimate? (yes or no)"
SEMA-AM	-	2017	2021	-	YES
SEMA - AM	FUNBIO/ARPA	2014	2019	2, 4 and 18	YES
SEMA - AM, ADS and IPAAM - AM	IDAM and SEPROR	2016	2020	7	YES
SEMA - AM, FUNBIO	-	2016	2017	2.2	YES
COBIO/CEDIB/SEMA - CE	SEMACE and NGOs	2017	2019	1,2,3,4	NO
COBIO/CEDIB/SEMA - CE	Municipal Governments	2017	2019	1,2,3,4,5,6,12	NO
COBIO/CEDIB/SEMA-CE	COBIO, Universities, Surrounding community, Municipal Parliament, local Municipal Government, IBAMA, SPU	2016	2019	1,4,5,19	NO
COBIO/CEDIB/SEMA - CE	Governor's Office, Sema, PGE, SPU, SETUR and Others	2016	2018	1,2,5	YES
SEMA - PR	IAP, ITCG, CBHs, Municipal Governments, NGOs, Rural Landowners, RPPNs	-	Permanent	1,2, 5 and 7	YES
IAP/SEMA - PR	-	42190	Not informed	2, 3, 7	-
SEMA - RS	FZB	Under implementation	-	5	-
SEMARH -TO, NATURATINS	SEMARH/NATURATINS	2017	2020	1,5,12,15	NO
Coordination of Biodiversity and Natural Resources and Secretariat of Agriculture and Supply; Coordination of Biodiversity and Natural Resources and CETESB; Forestry Institute/SMA -SP	Secretariat of Agriculture and Supply	2016	2020	3, 4, 5, 7, 13	YES
1. Forestry Foundation, Forestry Institute and Botany Institute. 2. Forestry Foundation, Forestry Institute, Mantiqueira Working Group and SIGAP (Protected Areas Information and Management System)/ SMA -SP	-	2016	2020	12	YES
Forestry Foundation, Forestry Institute and Botany Institute, SMA- SP	-	2016	2020	-	YES

Target 11

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Target-Action	Group/segment	Action	Objective
Target11-Action61	Civil Society (NGOs)	Implementation of the Transcarioca Trail	Implement a long track trail with 180 km connecting 7 protected areas.
Target11-Action62	Civil Society (NGOs)	Encourage the public use of protected areas along the Atlantic Forest Central Corridor	Increment ecological and adventure tourism, bird observation, scientific tourism, etc. in public and private protected areas of the Atlantic Forest Central Corridor.
Target11-Action63	Civil Society (NGOs)	Strengthening of the protected areas in the Matopiba region	Support to the management and protection of protected areas in the Matopiba region.
Target11-Action64	Civil Society (NGOs)	Creation of RPPNs in the Cerrado	Provide incentives to the creation and effective management of private reserves in the Cerrado biome.
Target11-Action65	Civil Society (NGOs)	Support to the Implementation and Expansion of the Network of Marine Protected Areas in the Abrolhos Region	1. Development of a Pact for the Conservation and Sustainable Use of the Abrolhos Region. 2. Advance the processes for the creation of Marine Protected Areas - AMPs in the region.
Target11-Action66	Civil Society (NGOs)	Creation and implementation of an endowment fund to support the environmental and territorial management of the Kayapó Indigenous Lands (Kayapó Fund)	1. Support the conservation of the Kayapó Indigenous Lands through territorial control and monitoring. 2. Support the sustainable use of biodiversity through the strengthening of production chains in the Kayapó Indigenous Lands. 3. Support the capacity strengthening of indigenous organizations. 4. Support the environmental and territorial management. 5. Support the political strengthening of the Kayapó people.
Target11-Action67	Civil Society (NGOs)	Creation and implementation of a financial mechanism to support PA management in Amapá (Amapá Fund)	Support the consolidation and maintenance of the Protected Areas and Indigenous Lands of the state of Amapá, with emphasis on seeking the long-term financial sustainability of these areas.
Target11-Action68	Civil Society (NGOs)	Creation and implementation of a financial mechanism to support the federal PAs connected to CR7 in Bahia and Espírito Santo (Abrolhos Land & Sea Fund)	Support the consolidation and maintenance of Protected Areas connected to CR7, located in Bahia and Espírito Santo, with emphasis on the promotion of public use of 7 PAs in the south region of Bahia.
Target11-Action69	Civil Society (NGOs)	Support to the implementation of the FLONAS of Crepori, Itaituba I, Trairão, and RESEX Tapajós Arapiuns	Provide support to the implementation of the Protected Areas of the Tapajós region.
Target11-Action70	Civil Society (NGOs)	"Support to the implementation of the FLONA Amapá and FLOTA Amapá"	Provide support to the implementation of the Protected Areas of the state of Amapá.
Target11-Action71	Civil Society (NGOs)	Support to the implementation of the Management Plans of state and federal PAs	Ensure the more effective management of Protected Areas and incorporate themes on climate change and adaptation based on ecosystems in their planning.
Target11-Action72	Civil Society (NGOs)	"Support to the expansion of the National Protected Areas System in the Caatinga, Cerrado, Pantanal and Atlantic Forest"	1. Create new protected areas. 2. Strengthen PA management.
Target11-Action73	Civil Society (NGOs)	Creation of three Protected Areas in Bonito, MS	1. Create three Protected Areas, together totaling over 6,900 hectares of protected areas under full protection categories, in areas of high biodiversity and provision of environmental services in Bonito, MS.
Target11-Action74	Civil Society (NGOs)	Implementation of the Project of the Bodoquena-Nabileque Transboundary Biodiversity Corridor	1. Implement the biodiversity corridor through the creation of protected areas and regularization of APPs and Legal Reserves, seeking connectivity between PAs and Indigenous Lands located in Paraguay, Bolivia and Brazil, integrating areas of high biological importance with representativeness of different biomes.
Target11-Action75	Civil Society (NGOs)	Implementation of the HYDDRA Project	1. Create municipal protected areas in key areas of the state of Mato Grosso do Sul. 2. Implement PAs and prepare Management Plan.
Target11-Action76	Civil Society (NGOs)	Development of policies for directing resources from SNUC environmental compensation to RPPNs protecting threatened species in the "CR" and "EN" categories, excluding those created as a result of environmental licensing processes.	Expand the surface area of important biodiversity areas under protection.
Target11-Action77	Civil Society (NGOs)	Establishment of the Protected Areas Management Foundation	Increase biodiversity in recuperated areas and areas under recuperation. Increase the number of recuperated areas to obtain greater biodiversity. Encourage landowners to recuperate private priority areas.
Target11-Action78	Civil Society (NGOs)	Preparation and implementation of management plans	Completion of management plans for the two Environmental Protection Areas and two Municipal Natural Parks in 5 years.

Responsibility for the Action	Possible partners	Start date	Conclusion date	Interface with other targets	"Is there a cost estimate? (yes or no)"
CI	ICMBio, Inea, SMAC/ PCRJ, Transcarioca Trail Movement, Carioca Mosaic	2014	2020	14,5	YES
CI	RPPN Rio do Brasil, ICMBio, Veracel, PM Porto Seguro, MPE of Bahia, Despertar Trancoso Association	2014	2020	14,5	YES
CI	MMA, ICMBio, GEF, UNDP, SRB, FBCN,	2017	2020	14,5,7	YES
CI	CEPF, ICMBio, CNRPPN, IEB	2017	2020	14,5	YES
CI	ICMBio, Coral Vivo, Baleia Jubarte Institute, Voz da Nartureza, RBMA, CONFREM, Associations of Local Fishermen, Universities	-	-	-	YES
CI-Brasil, BNDES/Amazon Fund and FUNBIO	Kayapó indigenous organizations (AFP, IR and IK), Funai, IBAMA, Federal Police	2011	Continuous Action	18, 20	NO
CI-Brasil and FUNBIO	SEMA, IEF, ICMBio, Funai	2016	Continuous Action	20	NO
CI-Brasil and FUNBIO	ICMBio	2016	Continuous Action	20	NO
ICMBio, Conservation International	Government of Pará, SFB, BNDES	2017	2020	-	YES
ICMBio, SEMA- AP, IEF and Conservation International	Conservation International, Government of Amapá, Daikin, FFEM, KfW, Walmart, GRET	2001	2018	-	YES
Boticário Foundation	States and ICMBio, MMA, research institutions	1991	2018	12,14,15	-
Boticário Foundation	DAP/SBio/MMA, ICMBio, OEMAs, communities around PAs	2014	2021	1,5,12,15	-
Neotrópica Foundation of Brazil	Municipal Government of Bonito	2015	2016	5, 12, 14, 15.	YES
Neotrópica Foundation of Brazil	-	2017	2019	5, 12, 14, 15.	NO
Neotrópica Foundation of Brazil; Nature and Culture International	Municipal Governments	2015	2018	5, 12, 14, 15.	YES
Biodiversitas Foundation, MMA, ICMBio	NGOs, academia, state and municipal governments	2017	2020	5,12,19	NO
SVDS/ICLEI	SVDS, FJPO, SMAJ, Mayor's Office	2016	2018	-	NO
SVDS/ICLEI	SVDS, FJPO, SEPLAN, SMAJ, Mayor's Office, SMF, SECOM, SMA	2016	2021	-	YES

Target 11

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Target-Action	Group/segment	Action	Objective
Target11-Action79	Civil Society (NGOs)	Land tenure regularization of the Municipal Natural Parks	1. Increase biodiversity in recuperated areas and areas under recuperation. 2. Increase the number of recuperated areas to obtain greater biodiversity. 3. Encourage landowners to recuperate private priority areas.
Target11-Action80	Civil Society (NGOs)	Protection of important natural areas	1. Increase biodiversity in recuperated areas and areas under recuperation. 2. Increase the number of recuperated areas to obtain greater biodiversity. 3. Encourage landowners to recuperate private priority areas.
Target11-Action81	Civil Society (NGOs)	Recuperation of degraded areas	1. Increase biodiversity in recuperated areas and areas under recuperation. 2. Increase the number of recuperated areas to obtain greater biodiversity. 3. Encourage landowners to recuperate private priority areas.
Target11-Action82	Civil Society (NGOs)	Management of the Legally Protected Natural Heritage (PNT) areas	1. Increase biodiversity in recuperated areas and areas under recuperation. 2. Increase the number of recuperated areas to obtain greater biodiversity. 3. Encourage landowners to recuperate private priority areas.
Target11-Action83	Civil Society (NGOs)	Implementation of the Contrafortes do Ferrabraz Protected Areas (MA 003)	Consolidate the protection of the Mountain Range of the Sinos and Caí Watersheds (MA 003).
Target11-Action84	Civil Society (NGOs)	Support to the implementation of the REVIS Lago Mole - Juruti	Provide support to the implementation of the Protected Area in Juruti.
Target11-Action85	Civil Society (NGOs)	Support to the creation and expansion of protected areas.	Support the protected areas creation process, through the identification of potential areas, political and institutional coordination, technical support and coordination of studies and proposition of areas.
Target11-Action86	Civil Society (NGOs)	Strengthening of the Core Zones of the RBMA	Strengthen the Core Zones of the RBMA, through the communication and dissemination of information that assist the management process and the relationship with the various audiences.
Target11-Action87	Civil Society (NGOs)	Provide support to the process of recognizing Mosaics and Ecological Corridors	1. Support the processes of integrated and participatory management of protected areas to improve territorial planning and organization and harmonization of conservation needs and sustainable development. 2. Promote exchange processes and the advancement of regulatory frameworks for mosaics and corridors in the Atlantic Forest.
Target11-Action88	Civil Society (NGOs)	Provide support to the process of recognizing Biosphere Reserves	Support processes for recognizing Biosphere Reserves such as the Marine and Pampas Biosphere Reserves.
Target11-Action89	Civil Society (NGOs)	Promotion of the creation and maintenance of PAs	Identify priority areas for the conservation of biodiversity in the region of the Lagamar Mosaic.
Target11-Action90	Civil Society (NGOs)	"Dissemination of good practices and development of capacity building programs for managers and other interested actors in municipal protected areas and other local land conservation measures, such as private reserves."	Improve governance of municipal protected areas and other local land conservation measures to promote management effectiveness and the participation of society, respecting the context and community practices.
Target11-Action91	Civil Society (NGOs)	"Development and implementation of courses on governance, conflict resolution and ecosystem management to support and increase the existing capacity building platforms for protected areas of the Amazon."	"Promote the capacity building of institutions and stakeholders to disseminate equity, participation and inclusion of women, youth and indigenous populations in the management instruments of protected areas."
Target11-Action92	Academia	Carry out the mapping and analysis of land use and occupation in the Doce River State Park - PERD and buffer zone	1. Improve information on land use and occupation in the PERD and its buffer zone. 2. Propose management techniques and the creation of ecological corridors.
Meta11-Ação93	Academia	Realização do mapeamento e análise do uso e ocupação do solo do Parque Estadual do Rio Doce - PERD e zona amortecimento.	1. Aprimorar as informações de uso e ocupação sobre o PERD e seu entorno 2. Propor técnicas de manejo e criação de corredores ecológicos.

Responsibility for the Action	Possible partners	Start date	Conclusion date	Interface with other targets	"Is there a cost estimate? (yes or no)"
SVDS/ICLEI	SVDS, FJPO, SMF, SMAJ, SEPLAN, Mayor's Office, SEHAB, SEMURB	2017	2026	-	YES
SVDS/ICLEI	SVDS, SMAJ, SEPLAN, Mayor's Office and SMDEST	2017	2026	-	NO
SVDS/ICLEI	SVDS, SMSP, SMF, SMDEST, SEPLAN, SEHAB, Consortium PCJ, SMA/SP, CATI, EMBRAPA, IAC, Rural Labor Union of Campinas, CMDRA	2016	2026	-	YES
SVDS/ICLEI	SVDS, SMC, CONDEPACC, SMAJ, SEPLAN, Partnership with Universities	2017	2026	-	NO
Araçá-Piranga S. A. Center	RBMA Committee, SEMA-RS and municipal governments	2020	2022	2, 3, 4	YES
Municipal Government of Juruti	Conservation International, Government of Pará, Alcoa Foundation	2015	-	-	NO
Atlantic Forest Biosphere Reserve	MMA, GIZ, RBMA Network, Atlantic Forest Network, Network of Biosphere Reserves, institutions responsible for protected areas management, research and learning institutions, federal, state and municipal governments and private sector.	Continuous Action	Continuous Action	1, 5, 6, 7, 11, 12, 14 and 15	NO
Atlantic Forest Biosphere Reserve	RBMA Network, Atlantic Forest Network, institutions responsible for protected areas management, federal, state and municipal governments and private sector.	Continuous Action	Continuous Action	1, 5, 6, 7, 11, 12, 14 and 15	NO
Atlantic Forest Biosphere Reserve	RBMA Network, Atlantic Forest Network, Network of Mosaics of Protected Areas – REMAP, institutions responsible for protected areas management, federal, state and municipal governments and private sector.	Continuous Action	Continuous Action	1, 5, 6, 7, 11, 12, 14 and 15	NO
Atlantic Forest Biosphere Reserve	RBMA Network, Atlantic Forest Network, Brazilian Network of Biosphere Reserves, institutions responsible for protected areas management, federal, state and municipal governments, research and learning institutions, NGO and civil society.	Continuous Action	Continuous Action	1, 5, 6, 7, 11, 12, 14 and 15	NO
Paraná Atlantic Forest Network	State, ICMBio	2016	2020	1	YES
IUCN	ICLEI, GIZ, Ministry of the Environment	2016	-	14 and 16	YES
IUCN	IUCN, ICMBio, FAO	2016	-	16 and 18	NO
PELD Site: Atlantic Forest and Lake System of the Medium Doce River-MG, Site 4	IGC/UFMG	2017	2020	19	YES
Sítio PELD: Mata Atlântica e Sistema Lacustre do médio Rio Doce-MG, Sítio 4	IGC/UFMG	2017	2020	19	SIM

Target 12

By 2020, the risk of extinction of threatened species has been significantly reduced, tending to zero, and their conservation status, particularly of those most in decline, has been improved.

Target-Action	Group/segment	Action	Objective
Target12-Action1	MMA Secretariats	Monitoring of the target species for the updating cycles of the Priority Areas	Monitor the dynamics/resilience of target species
Target12-Action2	MMA Secretariats	Increase the protection of fauna and flora in the Caatinga, Pantanal and Pampas (GEF Terrestrial Project)	1. Develop and implement action plans for threatened species. 2. Evaluate the risk of extinction of species. 3. Evaluate the effectiveness of Protected Areas (PAs) for the conservation of species.
Target12-Action3	MMA Secretariats	Implementation of the Convention on International Trade in Endangered Species of Wild Fauna and Flora – CITES.	Evaluate the impact of international trade on the species of fauna and flora threatened with extinction, with the purpose of proposing amendments to the CITES Annexes.
Target12-Action4	MMA Secretariats	Development and enhancement of rules related to the monitoring, management, destination and recuperation of fauna and flora resources.	"1. Reduce the extinction threat to Brazilian biodiversity species, recuperate their populations and promote knowledge and sustainable use. 2. Implement and monitor technical cooperation agreements for forest and fauna management and promote the capacity building of the agencies of the National Environment System - SISNAMA for the operation of the information systems (SINAFLOR, SISFAUNA)."
Target12-Action5	MMA Secretariats	Revision of legislation applicable to pollinators	Improve the production chain seeking to reconcile the use interests and the protection of pollinators.
Target12-Action6	MMA Secretariats	Implementation of the Convention on the Conservation of Migratory Species of Wild Animals – CMS.	Conserve, at the global scale, the migratory species of wild animals, encompassing terrestrial and aquatic species and birds.
Target12-Action7	MMA Secretariats	Reduce the threat of extinction of Brazilian biodiversity species, recuperate their populations and promote the knowledge and sustainable use.	1. Evaluate the conservation status and vulnerability of the Brazilian threatened fauna and flora species. 2. Publish the national list of threatened species. 3. Develop management instruments, including the development of ex situ conservation programs for threatened species and implement national action plans. Strengthen and expand biodiversity monitoring programs, with emphasis on threatened or special interest species.
Target12-Action8	Agencies Connected to MMA	Development, monitoring and implementation of National Action Plans for the conservation of threatened fauna.	1. Participatory development and agreement of strategies for reducing threats and for the conservation of fauna and fauna species included in the national lists of threatened species. 2. Carry out monitoring activities to follow the implementation of plans. 3. Implement, in collaboration with the PANs partners, the conservation actions included in the plans.
Target12-Action9	State Environmental Agencies (OEMAs)	Implementation of the Action Plan for Biodiversity Conservation at Pedra do Segredo - Caçapava do Sul/RS	Reduce pressure on the local biodiversity and conserve the natural environment.
Target12-Action10	State Environmental Agencies (OEMAs)	Enhancement of protected areas management in the state.	Implement the Program for the Consolidation of Protected Areas.
Target12-Action11	State Environmental Agencies (OEMAs)	Coordination with traditional communities	Carry out the planting and management of native plant species.
Target12-Action12	State Environmental Agencies (OEMAs)	Updating of the Red List of Threatened Species	Evaluate the threat status of the fauna and flora species in the state, allowing the monitoring of their vulnerability status evolution.
Target12-Action13	State Environmental Agencies (OEMAs)	Establish ecological corridors and improve landscape planning involving the private sector and society.	Protect threatened species taking into consideration the genetic heritage and gene flow.
Target12-Action14	State Environmental Agencies (OEMAs)	Participation in the National Action Plans - PAN Chelonia, PAN Bare-faced tamarin, PAN Jaguar	Promote the conservation of threatened species.
Target12-Action15	State Environmental Agencies (OEMAs)	Development of state rules, improving the federal rules in force.	Establish the directives for the use and management of wildlife in the territory of the state of Goiás.
Target12-Action16	State Environmental Agencies (OEMAs)	Development and regulation of state legal frameworks.	Promote the control of the over-exploitation of the threatened fauna and flora (copaiba, andiroba, titica vine, and cayman).
Target12-Action17	State Environmental Agencies (OEMAs)	Regulation of the capture of Piracatinga in fisheries activities.	Combat the killing of river dolphin species.
Target12-Action18	State Environmental Agencies (OEMAs)	Creation of the Wildlife Rescue Center (Centro de Triagem de Animais Silvestres - CETAS)	Promote the re-adaptation, management and reintroduction of rescued wildlife.
Target12-Action19	State Environmental Agencies (OEMAs)	Consolidation of the GEF-Terrestrial/CE Project	1- Create 2 PAs (Furna dos Ossos Park and APA Serras da Caatinga); 2 - Review the category of 1 PA (Carnaúbas State Park); 3. Increase the effectiveness of conservation in PAs.

Responsibility for the Action	Possible partners	Start date	Conclusion date	Interface with other targets	"Is there a cost estimate? (yes or no)"
SBio/MMA	ICMBio, Ibama, JBRJ, MCTIC; Research institutions	Continuous action	Continuous action	1	NO
DESP/SBio/MMA	ICMBio, JBRJ, OEMAs and Municipal Governments, Funbio (GEF terrestrial)	2017	2021	1, 11, 19	-
IBAMA, DESP/SBio/MMA	ICMBio	Continuous action	Continuous action	6, 7	NO
DESP/SBio/MMA and IBAMA	ICMBio and State and Municipalities	Continuous action	Continuous action	1	NO
SBio/MMA	IBAMA, ICMBIO, MAPA	2017	2018	1, 7,11	NO
DESP/SBio/MMA	ICMBio, Ibama, SAVE Brazil, MAPA	-	2023	1, 5, 6, 11	NO
DESP/SBio/MMA	ICMBio, Ibama, JBRJ, research institutions	2014	Continuous action. Included in PPA 2016-2019	1, 6, 7, 9, 11	NO
ICMBio	Federal, state and municipal environmental agencies, research institutions, NGOs, licensing and enforcement agencies, Protected Areas, funding institutions, private sector.	2017	2020	1, 5, 6, 8, 9, 10, 11	NO
Fepam -RS	Unipampa, DNPM, Municipal Government	2014	Continuous action	12	NO
Forestry Foundation, Forestry Institute and Botany Institute - SP	-	2016	2020	11	YES
IAP - PR	-	Continuous action	Continuous action	-	-
IAP/SEMA - PR	Scientific Community	Continuous action	Continuous action	-	-
IAP, SEMA -PR	Scientific Community	Continuous action	Continuous action	-	-
SEMA - AM	MMA	2017	2020	-	NO
SECIMA - GO	-	-	2018	-	-
SEMA-AM	SEPROR, IPAAM, IDAM and FAS	2017	2020	-	NO
SEMA-AM	SEPROR, IPAAM, IDAM and FAS	2017	2020	-	YES
SEMA- AM, IPAAM - AM	SEMA - AM	2017	2020	-	NO
COBIO/CEDIB/SEMA -CE	ICMBIO, JBRJ, OEMAS	2016	2019	1, 11, 19	YES

Target 12

By 2020, the risk of extinction of threatened species has been significantly reduced, tending to zero, and their conservation status, particularly of those most in decline, has been improved.

Target-Action	Group/segment	Action	Objective
Target12-Action20	State Environmental Agencies (OEMAs)	Development and implementation of integrated wildlife conservation projects.	Implement a program for the conservation of threatened fauna and flora species.
Target12-Action21	State Environmental Agencies (OEMAs)	Promotion of local actions for biodiversity	Develop and implement actions to support municipalities in the achievement of the Aichi Targets at the local scale, focusing on wildlife management.
Target12-Action22	State Environmental Agencies (OEMAs)	Establishment of management projects for priority species under damaged ecological balance	Carry out a conservation program for threatened fauna and flora species.
Target12-Action23	State Environmental Agencies (OEMAs)	Expansion of the São Paulo territory protected under PAs, considering foremost the representativeness of ecosystems.	Carry out a Program for the Consolidation of Protected Areas.
Target12-Action24	State Environmental Agencies (OEMAs)	Revision and updating of the red lists of threatened fauna and flora species and publish the Red Books.	Carry out a program for the conservation of threatened fauna and flora species.
Target12-Action25	State Environmental Agencies (OEMAs)	Implement a program for the conservation of threatened fauna and flora species in the state of São Paulo	Design a proposal for the State Policy on Wild Fauna
Target12-Action26	State Environmental Agencies (OEMAs)	Promote the rescue, donation or relocation of plants affected by infrastructure works for the purpose of ex situ conservation.	Carry out a program for the conservation of threatened fauna and flora species.
Target12-Action27	Civil Society (NGOs)	Revise the list of threatened species of Pará	Monitor the status of biodiversity species of Pará.
Target12-Action28	Civil Society (NGOs)	Support the reduction of the threat of extinction of species from the Brazilian biodiversity, recuperate their populations and promote knowledge and sustainable use.	Support the National Action Plans (PANs) and threatened species.
Target12-Action29	Civil Society (NGOs)	Support the expansion of the protection of fauna and flora in the Caatinga, Cerrado, Pantanal, Pampas and Atlantic Forest.	1. Develop and implement action plans for threatened species. 2. Evaluate the species' risk of extinction. 3. Evaluate the effectiveness of PAs for species conservation.
Target12-Action30	Civil Society (NGOs)	"Promote actions in collaboration with the Brazilian government to develop social programs that improve community participation, to establish an intelligence network to combat the illegal trade of fauna and flora. "	Support the development and implementation of new policies and legislation to monitor and combat the illegal trade of fauna and flora species in a participatory manner.
Target12-Action31	Civil Society (NGOs)	Development of economic incentive instruments to establish financial flows that empower local communities to contribute to the efforts to protect species threatened by illegal trade.	Support the development and implementation of new policies and legislation to monitor and combat the illegal trade of fauna and flora species in a participatory manner.
Target12-Action32	Civil Society (NGOs)	Identification of opportunities to collaborate with the Brazilian government to continue to provide technical assistance for the constant updating of the Red Species List and its use to inform public policies, and to promote the integration of national and global databases.	Support the use of the IUCN Red Species List at the national scale to increase knowledge on the status of species and to inform public policies and legislation.
Target12-Action33	Academia	Carry out the monitoring of impacts on mammals resulting from the mud spill.	Monitor population parameters.
Target12-Action34	Academia	Monitoring of threatened fauna and flora species in the Amazon-Cerrado transition.	Carry out continuous inventories to evaluate the threat status of species.

Responsibility for the Action	Possible partners	Start date	Conclusion date	Interface with other targets	"Is there a cost estimate? (yes or no)"
Coordination of Biodiversity and Natural Resources, São Paulo Zoological Foundation and Pro-Primates of São Paulo Commission/SMA - SP	-	2016	2020	-	YES
Coordination of Biodiversity and Natural Resources, SMA Secretary's Office and GreenBlue Municipality Program/SMA -SP	NGO SOS Mata Atlântica / ICLEI - Local Governments for Sustainability	2017	2020	17	YES
Coordination of Biodiversity and Natural Resources, Forestry Institute and Pro-Primates Commission/SMA - SP	-	2016	2020	-	YES
Forestry Foundation, Forestry Institute, Mantiqueira Working Group and SIGAP (Protected Areas Information and Management System) /SMA -SP	-	2016	2020	-	-
São Paulo Zoological Park Foundation, Coordination of Biodiversity and Natural Resources and Botany Institute/SMA -SP	-	2016	2020	-	YES
Working Group on the Policy on Fauna (Res. SMA 26/16)/ SMA -SP	-	2016	2020	12	YES
Botany Institute /SMA - SP	-	2016	2020	-	YES
CI, Pará Secretariat of the Environment	Conservation International, Goeldi Museum, Federal University of Pará	2017	Continuous action	-	NO
Boticário Foundation	SBio/MMA, ICMBio, Ibama, JBRJ, research institutions	2014	2019	1,6,7,9,11	YES
Boticário Foundation	MMA, ICMBio, JBRJ, OEMA	2014	2021	1, 11, 19	NO
IUCN	Ministry of the Environment and connected agencies, FUNBIO.	-	-	1	-
IUCN	Ministry of the Environment and connected agencies, FUNBIO.	2017	-	2	-
IUCN	Ministry of the Environment and connected agencies.	Continuous action	Continuous action	-	NO
PELD Site: Atlantic Forest and Lake System of the Medium Doce River-MG, Site 4	UFSJ	2017	2020	-	YES
PELD Site Cerrado-Amazon Forest Transition, Site 15	University of Brasília and University of Leeds (England)	2017	2020	1, 17, 19	YES

Target 13

By 2020, the genetic diversity of microorganisms, cultivated plants, farmed and domesticated animals and of wild relatives, including socio-economically as well as culturally valuable species, is maintained, and strategies have been developed and implemented for minimizing the loss of genetic diversity.

Target-Action	Group/segment	Action	Objective
Target13-Action1	MMA Secretariats	Support to the ex-situ conservation of the Brazilian genetic heritage (Projects under the National Fund for Benefit Sharing)	1. Increase the capacity for conserving and making available the species of current or potential interest, with economic, socio-environmental, cultural and agricultural value, and potential use for genetic improvement and food security. 2. Conserve the genetic diversity of local traditional or crioula varieties locally adapted by indigenous peoples, traditional communities and family rural producers. 3. Make genetic material available in an expeditious way and free of costs to indigenous peoples, traditional communities and family rural producers. 4. Implement projects through the National Fund for Benefit Sharing.
Target13-Action2	MMA Secretariats	Integration of biodiversity into food and nutritional safety policies (GEF Project "Conservation and sustainable use of biodiversity for the improvement of human nutrition and well-being")	"1. Demonstrate the nutritional value of agrobiodiversity and the role it plays in the promotion of healthy diets and strengthening of livelihoods. 2. Use the generated evidence to influence policies, programs and markets that support the conservation and sustainable use of agrobiodiversity of nutritional value. 3. Make available tools, knowledge and best practices for the intensification of the use of biodiversity for food and nutrition."
Target13-Action3	Agencies Connected to MMA	Carry out ethnobotanical studies and research on species of socio-economic and cultural value.	Research and analyze the local ecological knowledge of traditional communities, relating this knowledge to the availability of useful plant resources.
Target13-Action4	Agencies Connected to MMA	Carry out studies on the genetic variety of species of socio-economic and cultural value, and their wild varieties.	Support indigenous and collaborative research, inter-cultural and interdisciplinary, strengthening the dialogue between indigenous knowledge and scientific knowledge.
Target13-Action5	Institutes/ Institutions connected to Ministries	Implement the Profito - Agroecological Project of the Farmanguinhos Nucleus on Biodiversity and Health Management	Cultivation of medicinal plants by communities of the region of the Pedra Branca State Park, in Rio de Janeiro. The objective is to offer sustainable development alternatives by stimulating local production through the capacity building of agriculture producers.
Target13-Action6	Institutes/ Institutions connected to Ministries	Support to the ex-situ conservation of the Brazilian genetic heritage (Projects under the National Fund for Benefit Sharing)	Promote the identification and cadaster of popular herbaria or community seed banks, optimizing the vocation of these sites as centers for the preservation, qualification, education and cultural dissemination, aiming at the protection and promotion of traditional knowledge associated to the Brazilian genetic heritage.
Target13-Action7	Institutes/ Institutions connected to Ministries	Coordination of the Fiocruz Network of Technological Platforms	Technological basis for basic research and projects on the development of vaccines, medications, bio-insecticides and supplies for diagnosis, in addition to support the implementation of research projects in general. The network is currently comprised of 12 technological platforms, which possess high performance equipment and human resources with excellent technical capacity, and 01 Sub-unit carrying Multi-user equipment, with various PCR RT equipment.
Target13-Action8	Institutes/ Institutions connected to Ministries	Institutional representation in international committees and organizations	Participate in the World Federation of Culture Collection - WFCC Executive Board member 2013-2016, Scientific Collection International - SciColl Executive Board member; Identifying Species with DNA Barcoding - IBOL regional node; GBIF associated country; Member of High Level Political Forum on Sustainable Development of the United Nations.
Target13-Action9	Institutes/ Institutions connected to Ministries	Support and stimulus of projects for the on-farm conservation of agrobiodiversity and valuation of indigenous agricultural systems.	Develop a document with directives and recommendations for the implementation of projects on the conservation of agrobiodiversity and valuation of indigenous agricultural systems.
Target13-Action10	State Environmental Agencies (OEMAs)	Reactivation of the Germplasm Bank	Produce, store and conserve the genetic heritage of native plants of the state of Ceará.

Responsibility for the Action	Possible partners	Start date	Conclusion date	Interface with other targets	"Is there a cost estimate? (yes or no)"
DPG/SBio/MMA	MDSA, President's Office/ Special Secretariat for Family Agriculture, MCTIC, MAPA, Embrapa	2017	Continuous action	2, 16, 18	NO
SBio/MMA, SEDR/MMA	President's Office/ Special Secretariat of Family Agriculture; MDSA; MAPA; MEC; MS; MCTIC; Conab; FNDE; Consea; Embrapa; FNN; Public Universities.	14/11/2011 (endorsement), initiated in 09/2012	01/09/2017 (with possible one-year extension)	1, 2, 3, 4, 7, 14, 18	YES
JBRJ	UFSC, UnB, Emilio Goeldi Museum	2014	2020	13	YES
JBRJ	Royal Botanic Gardens, Kew; Birkbeck, University of London; Socio-environmental Institute (ISA); Federation of the Indigenous Organizations of Rio Negro (FOIRN); Emilio Goeldi Museum (MPEG), INPA	2016	2020	3, 8, 4	YES
Far-Manguinhos-Fiocruz, CFMA -Fiocruz	Rio de Janeiro Municipal Government, INEA	Continuous action	Continuous action	-	-
Iphan, DPG/SBio/MMA	MDSA, President's Office/ Special Secretariat for Family Agriculture, MCTIC, MAPA, Embrapa	-	-	-	-
Technological Development Program on Products for health - PDTIS, Center of Technological Development on Health – CDTS, Fiocruz Minas Gerais, IOC.	MCTI, Genoma, BarCode and SciColl Projects at the global level.	Continuous action	Continuous action	-	-
Vice-presidency of Research and Reference Laboratories, Fiocruz	WFCC, SciColl, IBOL, GBIF, UN	Continuous action	Continuous action	-	-
Funai	MDA, EMBRAPA, IPHAN, Indigenous Organizations and organizations working with indigenous peoples	2016	2019	5	NO
COBIO/CEGUC/SEMA - CE	Academia and NGOs	2017	2019	14,15	NO

Target 13

By 2020, the genetic diversity of microorganisms, cultivated plants, farmed and domesticated animals and of wild relatives, including socio-economically as well as culturally valuable species, is maintained, and strategies have been developed and implemented for minimizing the loss of genetic diversity.

Target-Action	Group/segment	Action	Objective
Target13-Action11	State Environmental Agencies (OEMAs)	Promotion of the sustainable use of biodiversity in agriculture, aquaculture and forestry activities.	Expand the state agriculture-prone area under agroecological practices.
Target13-Action12	State Environmental Agencies (OEMAs)	Coordination between researchers and faxinalenses communities for the management of crioula species.	Carry out the adequate management of crioula species (particularly swine, and crioula grain seeds).
Target13-Action13	State Environmental Agencies (OEMAs)	Restriction on the use of genetically modified organisms (GMOs)	Ensure the inclusion, in the Management Plan of the APA da Escarpa Devoniana, of mechanisms for the protection of GMO-free crops.
Target13-Action14	State Environmental Agencies (OEMAs)	Promotion of the sustainable use of biodiversity in agriculture, aquaculture and forestry activities.	Promote the conservation of wild relatives of domesticated species.
Target13-Action15	Civil Society (NGOs)	Implementation of Ecological Corridors	Implement 100% of the viable connectivity options of the Santa Genebra and Ribeirão Cachoeira sites in 10 years.
Target13-Action16	Civil Society (NGOs)	Continue the implementation of the Ecological Agriculture Program in Floodplain Areas of Western Amazon.	Develop technologies and good practices for itinerant and family agriculture in the floodplains of western Amazon, promoting the capacity building and exchange among agriculture producers for the protection of the cabocla varieties, protection of soil characteristics, reduction of carbon emissions, and protection of biodiversity.
Target13-Action17	Academia	Carry out studies on bees that function as indicators of anthropization.	Genetical comparison of the population dynamics.

Responsibility for the Action	Possible partners	Start date	Conclusion date	Interface with other targets	"Is there a cost estimate? (yes or no)"
Coordination of Biodiversity and Natural Resources/SMA-SP	Secretariat of Agriculture and Supply	2016	2020	13	YES
SEMA- PR, IAP-PR	Faxinalenses, Scientific community	-	-	-	-
SEMA- PR, IAP-PR	APA Management Council, FAEP	-	-	-	-
Botany Institute, Forestry Institute, Forestry Foundation and Coordination of Biodiversity and Natural Resources/SMA -SP	-	2016	2020	4	YES
SVDS/ICLEI	SVDS, SMSP, SMAJ, FJPO, SEPLAN, Mayor's Office	2016	2026	-	NO
IDSM - AM	INPA, MPEG, UFAM, PESAGRE, UFRA	2002	Not defined	-	NO
PELD Site: Atlantic Forest and Lake System of the Medium Doce River-MG, Site 4	UFOP, UFSJ, IFMG	2017	2020	-	YES

Strategic Objective D

Enhance the benefits to all from biodiversity and ecosystem services

3 targets | 28 institutions | 106 actions

National Targets: 14 to 16

14. Restoration of ecosystems providing essential services

34 actions

- Awareness of biodiversity value
- Recuperation of degraded areas and conservation of priority areas

15. Recuperation of degraded ecosystems for mitigation and adaptation to climate change

56 actions

- Support to the implementation of projects for the reconstitution of degraded areas
- Territorial management tools

16. Implementation of the Nagoya Protocol (access and benefit sharing)

16 actions

- Systematization and implementation of portals related to access to genetic resources
- Development of methodologies to systematize traditional knowledge

Comparison of the actions in the Action Plan with the components of the National Targets described in the 5th National Report to the CBD

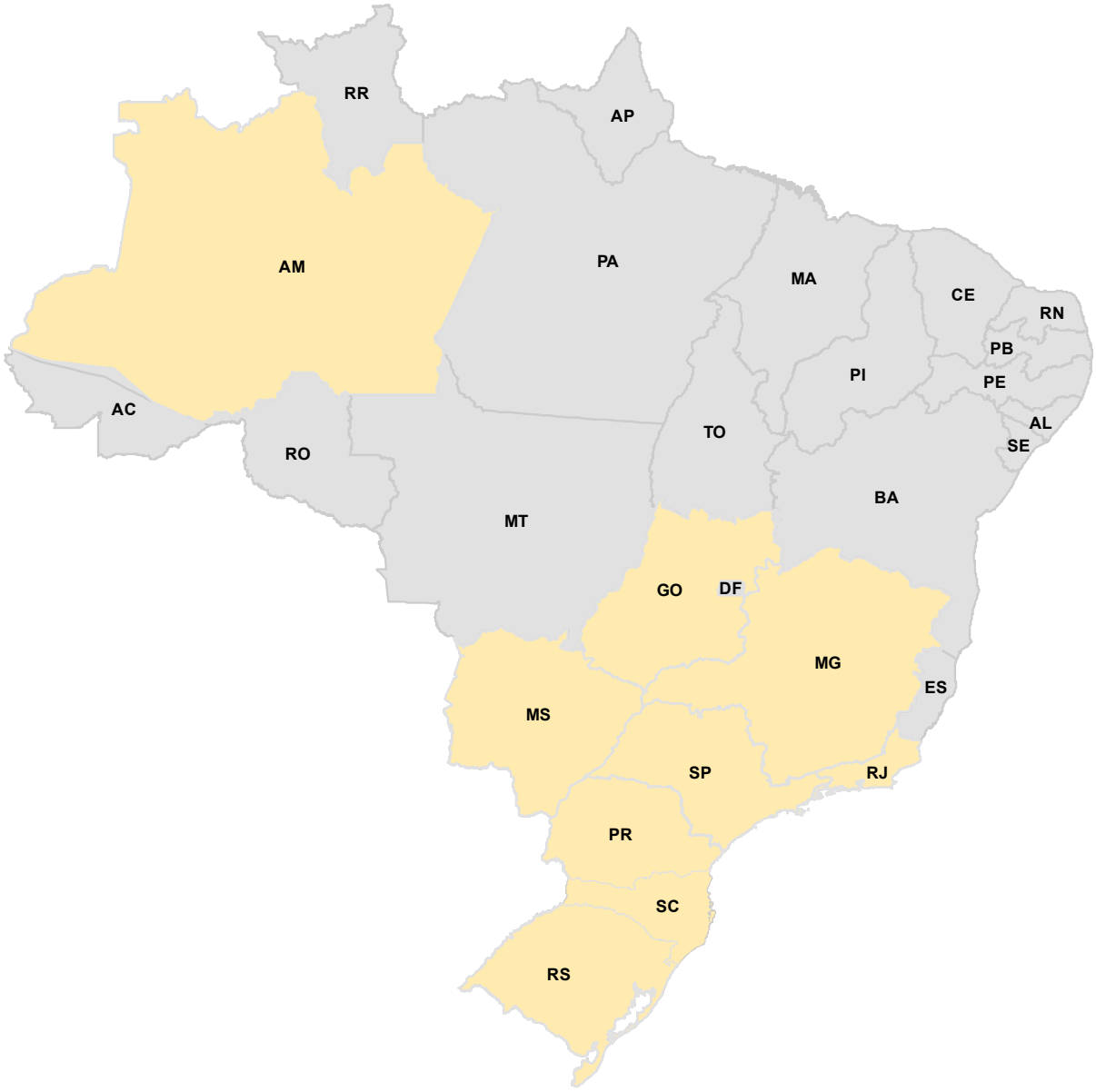
Target 14: By 2020, ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, traditional peoples and communities, indigenous peoples and local communities, and the poor and vulnerable.	
Parts of the Target	**Nº of actions**
Total actions for the Target	**34**
Number of actions for part 1: By 2020, ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded...	29
Number of actions for part 2: ...taking into account the needs of women, traditional peoples and communities, indigenous peoples and local communities, and the poor and vulnerable.	2
Number of actions that address both parts:	3

Target 15: By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced through conservation and restoration actions, including restoration of at least 15% of degraded ecosystems, prioritizing the most degraded biomes, hydrographic regions and ecoregions, thereby contributing to climate change mitigation and adaptation and to combatting desertification.	
Parts of the Target	**Nº of actions**
Total actions for the Target	**56**
Number of actions for part 1: By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced through conservation and restoration actions (in the Amazon).	36
Number of actions for part 2: By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced through conservation and restoration actions (in the other biomes).	
Number of actions for part 3: ...including through the restoration of at least 15% of degraded ecosystems, prioritizing the most degraded biomes, hydrographic regions and ecoregions, thereby contributing to climate change mitigation and adaptation and to combatting desertification.	11
Number of actions that address all parts:	8

Target 16: By 2015, the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization is in force and operational, consistent with national legislation.	
Parts of the Target	**Nº of actions**
Total actions for the Target	**16**
Number of actions for part 1: By 2015, the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization is in force and operational, consistent with national legislation.	16

Distribution of sectors/segments contributing to objective D:

Sectors	TOTAL ADHERENT INSTITUTIONS	INSTITUTIONS THAT CONTRIBUTE TO OBJECTIVE D	%
MMA Secretariats	3	3	100%
Agencies connected to MMA	4	0	0%
Ministries, Special Secretariats and Public Corporations	4	1	25%
Institutes/ Institutions connected to Ministries	6	3	50%
State Environmental Agencies (OEMAs)	14	10	71%
Civil Society (NGOs and similar organizations)	11	8	72%
Financing Agencies and Private Sector	1	0	0%
Academia	10	3	30%



States of the proposing institutions contributing to objective D:

Target 14

By 2020, ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, traditional peoples and communities, indigenous peoples and local communities, and the poor and vulnerable.

Target-Action	Group/segment	Action	Objective
Target14-Action1	MMA Secretariats	Implementation of the Ramsar Convention, focusing on Ramsar Sites	1. Develop the strategy of implementing the Ramsar Convention, focusing on Ramsar Sites in Brazil (internationally important areas for wetland ecosystems). 2. Contribute to the fulfillment of the national commitments under the Convention.
Target14-Action2	MMA Secretariats	Development and implementation of the Project "GEF Amazon Sustainable Landscapes"	Implement structuring policies and actions to promote the sustainable use of biodiversity in the Amazon.
Target14-Action3	Institutes/ Institutions connected to Ministries	Maintenance and Management of the Fiocruz Atlantic Forest Campus	Reforest 344 hectares of Atlantic Forest in areas within the Fiocruz Atlantic Forest Campus (CFMA) and in the Pedra Branca State Park, in the municipality of Rio de Janeiro (RJ), investing R$2.5 million in the following activities: reactivate the Tree-nursery School; mark regional native tree seed sources for the provision of seeds with floristic and genetic diversity; implement a tree nursery for the production of seedlings of regional species; carry out capacity building courses on environmental themes for communities within and around the Campus, including modules on the production of seedlings of native species, recuperation and restoration techniques, and mapping tree seed sources; monitoring, involving the evaluation of parameters related to the success of planting activities and consequent influence on the occurrence of zoonoses in the surrounding community.
Target14-Action4	Institutes/ Institutions connected to Ministries	Maintenance and Management of the Agroecological Platform of Phyto-medicines (PAF)	Support, in collaboration with the Botanical Collection of Medicinal Plants, the National System of Phyto Networks, and develop the project "Health and Medicinal Plants in Agroecological Production Systems in the far south of Bahia".
Target14-Action5	Institutes/ Institutions connected to Ministries	Bio-remediation of impacted areas	Use endogenous micro-organisms, identified and stored in the lineages bank, in studies on the bio-remediation of degraded areas.
Target14-Action6	Institutes/ Institutions connected to Ministries	Monitoring of the biodiversity of microbes in the restored areas	Monitor, through molecular biology identification techniques, the biodiversity of microbes in the restored areas.
Target14-Action7	State Environmental Agencies (OEMAs)	Implementation of the Guandu PES Project	Promote environmental conservation and restoration practices for maintaining water quantity and quality in the Hydrographic Region II, in water catchment areas strategic for the water supply system.
Target14-Action8	State Environmental Agencies (OEMAs)	Delimitation of priority areas for the protection of water catchment areas for the water supply system	Map the priority areas for the protection of water catchment areas that ensure the water supply and identify the areas with the greatest potential for forest restoration.
Target14-Action9	State Environmental Agencies (OEMAs)	Implementation of the Project for the Recuperation of Climate and Biodiversity services in the Paraíba do Sul Watershed, in the Brazilian Atlantic Forest	Recuperate and preserve ecosystem services associated to biodiversity and forest carbon sinks in priority zones of the Southeast Atlantic Forest Corridor Paraíba do Sul Watershed).
Target14-Action10	State Environmental Agencies (OEMAs)	Planning of water springs recuperation actions at the Ferrabraz Mountain Range	Develop a proposal for the recuperation of the set of water springs in the region. Identify water springs on the Ferrabraz Mountain Range.
Target14-Action11	State Environmental Agencies (OEMAs)	Creation and implementation of Watershed Committees.	Strengthen the participatory governance for the management of water resources.
Target14-Action12	State Environmental Agencies (OEMAs)	Creation and implementation of the State Water Resources Plan	Discipline the management of water resources.

Responsibility for the Action	Possible partners	Start date	Conclusion date	Interface with other targets	"Is there a cost estimate? (yes or no)"
DAP/SBio/MMA and DECO/SBio/MMA	MCTIC, ANA, ICMBio, NGOs, Universities, Ministries, Member-States that comprise the National Wetlands Committee (CNZU), managers of Ramsar Sites	2016	"2017 (for Objective 1); Continuous action (for Objective 2)"	10, 11, 14	YES
DAP/SBio/MMA and DECO/SBio/MMA	SFB, ICMBio, OEMAs. Colombia and Peru	2017	2022	11, 15	YES
CFMA/Presidency -Fiocruz	Rio de Janeiro Municipal Government - Project on Community Collaborative Reforestation, and Rio de Janeiro Botanical garden - JBRJ	Continuous action	Continuous action	-	-
Farmanguinhos/Fiocruz	EMBRAPA, ESALQ/USP, ENSP/ FIOCRUZ, Landless Rural Workers Movement (MST)	Continuous action	Continuous action	-	-
INT, MMA	Universities and research centers	2017	2020	13	-
INT, MMA	Universities and research centers	2017	2020	13	-
INEA-RJ	Guandu Committee, Rio Claro Municipal Government, The Nature Conservancy and ITPA.	2008	Continuous action	-	YES
COGET/INEA-RJ	"SUBCLIM/SEA Implemented by the WayCarbon/ IBIO Consortium"	2016	2017	-	YES
SEA/INEA-RJ	RIORURAL, EMATER, PESAGRO, FINATEC, MCTI, BID/GEF (in ERJ)	2016	2021	-	YES
Araçá-Piranga S.A. Center	Municipal Governments, SEMA RS, Watershed Committees	2018	2019	2, 3, 4, 5, 9	YES
SEMA-AM	State Water Resources Council and ANA	2015	2020	-	YES
SEMA-AM	State Water Resources Council and ANA	2015	2018	-	YES

Target 14

By 2020, ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, traditional peoples and communities, indigenous peoples and local communities, and the poor and vulnerable.

Target-Action	Group/segment	Action	Objective
Target14-Action13	State Environmental Agencies (OEMAs)	Implement the Program for the universalization of water access	Make water available for human consumption at rural communities.
Target14-Action14	State Environmental Agencies (OEMAs)	Implementation of the Program for the Consolidation of the National Pact on Water Management - PROGESTÃO	Carry out the sustainable management of water resources.
Target14-Action15	State Environmental Agencies (OEMAs)	Implementation of the Program for the Conservation of Water Resources	Encourage the payment for actions and projects that promote the conservation of the state's water assets.
Target14-Action16	State Environmental Agencies (OEMAs)	Development of the Bill to support an ecosystem services market	1. Obtain contributions from the population of the cited municipalities on Payment for Ecosystem Services through workshops. 2. Carry out seminars in the cited municipalities to present the Bill prepared by consultants. 4. Develop a Bill to support an ecosystem services market in the state of Ceará.
Target14-Action17	State Environmental Agencies (OEMAs)	Recognition and protection of the traditional faxinalenses territories	Protect the natural ecosystems that are the guardians of ecosystem services.
Target14-Action18	State Environmental Agencies (OEMAs)	Creation of an inter-institutional study group (IAP, Public Attorney's Office, UFPR-Law, Puxirão Coordination of the Faxinalenses Peoples) for the purpose of protecting the traditional territories.	Construct/Prepare/Develop protection mechanisms for the traditional territories.
Target14-Action19	State Environmental Agencies (OEMAs)	Restoration of degraded areas in full protection Protected Areas	Carry out the restoration of 100% of the areas where actions for the eradication of invasive alien species were implemented, particularly in areas of reforestation with Pinus sp. and Eucalyptus sp. (This represents 130 hectares of full protection PAs.
Target14-Action20	State Environmental Agencies (OEMAs)	Implementation of the Water Springs Project for protection and restoration	Recuperate water springs areas under degradation processes or already degraded in critical water catchment areas important for the water supply system through the integration of this theme in actions supported by the state of Paraná or by sanitation corporations, or municipal governments.
Target14-Action21	State Environmental Agencies (OEMAs)	Implementation of the State Policy on the Promotion and Incentives to Ecosystem Services.	Development of instruments and legal framework to enable the structuring of public policies for the valuation of ecosystem services, combined with the generation of social benefits in the state, development of sustainable production chains and climate change mitigation.
Target14-Action22	State Environmental Agencies (OEMAs)	Implementation of the Environmental Compliance and Ecological Restoration Program	Expand the area of the São Paulo territory covered by ecosystems under restoration processes. 2. Increase and integrate actions related to vectors, hosts and sentries of diseases important for public health, for animal health and for the conservation of biodiversity, through the coordination among environmental agencies, agriculture agencies and health agencies.
Target14-Action23	State Environmental Agencies (OEMAs)	Integration of Health and biodiversity actions	Expand and integrate actions related to vectors, hosts and sentries for diseases important for public health, for animal health and for the conservation of biodiversity, through the coordination among environmental agencies, agriculture agencies and health agencies.
Target14-Action24	State Environmental Agencies (OEMAs)	Implementation of the Environmental Compliance and Ecological Restoration Program	Expand the area of the São Paulo territory registered in CAR and under environmental regularization process.

Responsibility for the Action	Possible partners	Start date	Conclusion date	Interface with other targets	"Is there a cost estimate? (yes or no)"
SEMA-AM	Municipal Governments and Federal Government	2015	2018	-	YES
SEMA-AM	State Water Resources Council and ANA	2015	2018	-	YES
SEMA-AM	IDESAM, FAS, IEB, IDSM, IPÊ, IPI, WWF, FVA, IDAM, SEPROR, Municipal Governments, Community associations "Mother" of PAs.	2017	2020	1.1	NO
CODES/SEMA - CE	COBIO/CEDIB/SEMA - CE	2016	2019	1, 11	YES
SEMA -PR, IAP -PR	-	-	-	-	-
SEMA -PR, IAP -PR	SEMA -PR, Scientific Community	-	-	-	-
SEMA -PR, IAP -PR	-	Continuous action	Continuous action	-	-
SEMA - PR, IAP	Municipal Governments	Continuous action	Continuous action	-	-
SEMARH - TO	-	2017	2020	3, 4, 5, 7, 15	NO
Coordination of Biodiversity and Natural Resources and CETESB/ SMA -SP	-	2016	2020	-	YES
Coordination of Biodiversity and Natural Resources, Forestry Institute and Forestry Foundation/SMA -SP	Secretariat of Health	2016	2020	3, 13	YES
Coordination of Biodiversity and Natural Resources and Secretariat of Agriculture and Supply/SMA -SP	Secretariat of Agriculture and Supply	2016	2020	3, 4, 5, 7, 13	YES

Target 14

By 2020, ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, traditional peoples and communities, indigenous peoples and local communities, and the poor and vulnerable.

Target-Action	Group/segment	Action	Objective
Target14-Action25	State Environmental Agencies (OEMAs)	Implementation of the São Paulo Strategy to Reduce Pressure on Biodiversity - Water quality in priority watersheds.	Contribute to improve water quality in priority watersheds for biodiversity conservation
Target14-Action26	State Environmental Agencies (OEMAs)	Implementation of the Environmental Compliance and Ecological Restoration Program	Implement the State Seeds Program.
Target14-Action27	Civil Society (NGOs)	Implementation of the Program on the Recuperation of Water Springs and Riparian Areas (PreNAC)	Recuperate Water Springs and Riparian Areas.
Target14-Action28	Civil Society (NGOs)	Recuperation of degraded areas	Increase biodiversity in recuperated areas or areas under recuperation process. Increase the quantity of recuperated areas to obtain greater biodiversity. Encourage landowners to recuperate priority private areas.
Target14-Action29	Civil Society (NGOs)	Implementation of the Program on Payment for the Conservation of Water and Water Resources – Water PSA	Promote the conservation of water and water services in rural areas, through financial and non-financial incentives.
Target14-Action30	Civil Society (NGOs)	"Implementation of the Sewage Collection System Program"	Improve the population's sanitary conditions in the region through the provision of quality infrastructure for sewage collection and water distribution systems. In addition, increase the sewage collection rate in the city to 100% and place the municipality of Campinas among the cities with the best implemented infrastructure, which should raise the city's life quality indicators.
Target14-Action31	Civil Society (NGOs)	Implementation of the Pro-Water Springs Project of the RMBA, connected to the VC-RBMA-SBE Technical Cooperation	Identify, map, restore and conserve water springs in private areas.
Target14-Action32	Civil Society (NGOs)	Integration and strengthening of the management of Biosphere Reserves, World Natural Heritage Sites, Sites of the Global Natural Heritage, and Ramsar Sites.	Support management strengthening processes for areas under international designation of conservation importance, integrating efforts and actions.
Target14-Action33	Civil Society (NGOs)	Restoration of Atlantic Forest areas	Establish restoration protocols for areas of the Lagamar region
Target14-Action34	Civil Society (NGOs)	Development and implementation of participatory actions for effectively integrating gender issues in landscape and forest restoration initiatives.	"Promote the empowerment, participation and qualified representativeness of women and youth in forest and landscape restoration actions in Brazil, scaling up and optimizing the effectiveness of these actions."
Target14-Action35	Academia	Research the insect-plant interactions in the advance of the forest over open areas.	Compare seed dispersal processes by ants.

Responsibility for the Action	Possible partners	Start date	Conclusion date	Interface with other targets	"Is there a cost estimate? (yes or no)"
SMA Secretary's Office -SP, Cetesb (Directorate E), and Coordination of Environmental Planning/SMA -SP	-	2016	2020	9, 10, 12, 13	YES
Forestry Institute/SMA -SP	-	2016	2020	-	YES
SVDS/ ICLEI	SANASA, SMDEST.	2017	2020	-	YES
SVDS/ ICLEI	SMSP, SMF, SMDEST, SEPLAN, SEHAB, Consortium PCJ, SMA/SP, CATI, EMBRAPA, IAC, Rural Labor Union of Campinas, CMDRA	2016	2026	-	YES
SVDS/ ICLEI	SVDS, SANASA, SMDEST.	2017	2020	-	YES
"SANASA, SVDS/ ICLEI "	SVDS, SMSP, SEINFRA, SMS, SMDEST, SEHAB, SEPLAN	2013	2022	-	YES
Atlantic Forest Biosphere Reserve	RBMA, Votorantim Cimentos (VC) and private sector	Continuous action	Continuous action	11	NO
Atlantic Forest Biosphere Reserve	MMA, SBio, DAP, GIZ, RBMA Network, RMA, REMAP	Continuous action	Continuous action	10, 11, 15, 18	NO
Atlantic Forest Network Paraná	State, NGOs	2016	2020	1	YES
IUCN	WRI Brazil, Pact for the Restoration of the Atlantic Forest	2016	2017	15	YES
PELD Site: Atlantic Forest and Lake System of the Medium Doce River-MG, Site 4	UFOP, UFSJ, IFMG	2017	2020	-	YES

Target 15

By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced through conservation and restoration actions, including restoration of at least 15% of degraded ecosystems, prioritizing the most degraded biomes, hydrographic regions and ecoregions, thereby contributing to climate change mitigation and adaptation and to combatting desertification.

Target-Action	Group/segment	Action	Objective
Target15-Action1	MMA Secretariats	Implementation of the National Plan for the Recuperation of Native Vegetation - PLANAVEG	1. Recuperate the native vegetation of APPs and Legal Reserves. 2. Strengthen public policies, financial incentives, markets, recuperation technologies, good agricultural and livestock practices, and other measures necessary for the recuperation of native vegetation.
Target15-Action2	MMA Secretariats	Promote the restoration of native vegetation in the Caatinga, Pantanal and Pampas (GEF Terrestrial Project)	1. Develop instruments and directives for the restoration of native vegetation. 2. Implement restoration in selected areas in order to increase carbon stocks and promote connectivity.
Target15-Action3	MMA Secretariats	Development and implementation of the Project "GEF Amazon Sustainable Landscapes"	Implement structuring policies and actions to promote the recuperation of the native vegetation cover in the Amazon and strengthening of its chain (seeds, seedlings).
Target15-Action4	MMA Secretariats	Implementation of sectoral biodiversity and ecosystem targets under the National Climate Change Adaptation Plan (PNA)	1. Develop a strategy for ecosystem-based adaptation measures in areas subject to extreme events and other impacts from climate change. 2. Develop the modelling of impacts from climate change on biodiversity to inform public policies on biodiversity conservation, recuperation and sustainable use. 3. Implement monitoring in 50 federal protected areas, for the evaluation and in situ monitoring of the impacts from climate change and future impacts on biodiversity.
Target15-Action5	MMA Secretariats	Actions for recuperating degraded areas (combat to desertification) and mitigating drought effects, through the provision of support to environmental, social and production actions.	Implement Degraded Areas Recuperation Units - URAD, and Crop-Livestock-Forest Integration systems, to promote sustainable rural development through environmental, social and production actions, under municipal planning and using micro-watersheds as working units.
Target15-Action6	MMA Secretariats	Support the implementation of the Environmental Regularization Programs – PRAs	Support the environmental regularization of rural properties and the consequent conservation/ recuperation of APPs and Legal Reserves.
Target15-Action7	MMA Secretariats	Implementation of the directives and targets of the biodiversity and ecosystems sectoral chapter of the National Climate Change Adaptation Plan.	1. Enhance scientific knowledge on the vulnerability of biodiversity to climate change and its role in the reduction of social and economic vulnerabilities. 2. Implement adaptation measures, including ecosystem-based adaptation.
Target15-Action8	MMA Secretariats	Revitalization of watersheds facing environmental vulnerability	Recuperation, preservation and conservation of watersheds through integrated and permanent actions to promote the sustainable use of natural resources, improvement of socio-environmental conditions and increase in water availability, both in quantity and quality, for its multiple uses.
Target15-Action9	MMA Secretariats	Support to the development of the Biodiversity Chapter of the National Climate Change Adaptation Plan	Evaluate the impacts of climate change on biodiversity in the country, and identify possible adaptation measures to reduce its vulnerability and assess the role of biodiversity and ecosystems in the reduction of socio-economic vulnerability through the provision of ecosystem services.
Target15-Action10	Ministries, Special Secretariats and Public Corporations	Development of a map of priorities for ecological restoration in Brazil	"1. Define the priority areas for restoration in all Brazilian biomes. 2. Fund scholarships, travel, workshops and field activities."
Target15-Action11	Institutes/ Institutions connected to Ministries	Promote debates on indigenous lands and vulnerability to desertification processes.	Create a working group to discuss the vulnerability of indigenous lands to the desertification process, particularly in the northeastern region of Brazil. 2. Promote subsidies to the recuperation of ecosystems.
Target15-Action12	State Environmental Agencies (OEMAs)	Implementation of the Strategic Plan for Ecosystem Restoration in the State of Santa Catarina	1. Carry out planning actions for the implementation of the Environmental Regularization Program - PRA; 2. Increase native vegetation cover; 3. Strengthen the green economy based on native species.
Target15-Action13	State Environmental Agencies (OEMAs)	Development of the Ecosystem Restoration Plan for the state of Santa Catarina	Planning actions for the implementation of the Environmental Regularization Program - PRA, increase of native vegetation cover, and strengthening of the green economy based on native species.
Target15-Action14	State Environmental Agencies (OEMAs)	Development of the Ecosystem Restoration Plan for the state of Santa Catarina	Define directives for ecosystem restoration in SC, incorporating native species of agricultural interest, as well as for urban use in landscaping and tree planting.

Responsibility for the Action	Possible partners	Start date	Conclusion date	Interface with other targets	"Is there a cost estimate? (yes or no)"
DECO/SBio/MMA and DFCD/SMCF/MMA	Mapa, Special Secretariat of Family Agriculture and Agrarian Development under the President's Office, MCTIC, MF, MP, Abema, Anamma, civil society and academia (such as WRI, IUCN, IIS, PUC-RJ, USP, etc.)	2017 (estimate)	2037 (estimate)	11, 14	YES
DECO/SBio/MMA	ICMBio, OEMAs, Research institutions and Municipalities, Funbio	2017	2021	1, 11, 14	-
DECO and DAP/SBio	DPCD/SMCQ, ICMBio, OEMAs. Colombia and Peru, Funbio	2017	2022	11, 14	YES
DECO/SBio/MMA, DPMC/ SMCF/MMA and ICMBio	MCTI, MPEG, state environmental agencies, universities and research centers, NGOs.	2016	2020	1, 10, 11	NO
DRS/SEDR/MMA	MAPA, EMBRAPA, UNDP, IICA, State governments, Municipal governments	2016	2020	5,7,14,19	YES
DECO/SBio/MMA, SFB and OEMAs	Municipalities	2020	2020	11, 14	-
DPMC/SMCF/MMA and DECO/SBio/MMA	MCTIC, other ministries and sectors related to cities, health, water resources, coastal zones, energy, risk and disaster management, industry and mining, infrastructure, vulnerable peoples and communities, agriculture, food and nutritional safety, and Municipalities.	-	2020	1, 10,19	-
DRB/SRHQ/MMA	Federal, state and municipal public institutions, and civil society.			8,15	NO
DPMC/ SMCF and DECO/ SBio/MMA, MCTIC	Ministries and Sectors related to Cities, Health, Water Resources, Coastal Zones, Energy, Risk and Disasters Management, Industry and Mining, Infrastructure, Vulnerable Peoples and Communities, Agriculture, Food and Nutritional Safety.	2016	2020	19	YES
MCTIC and INPA	"MMA, Inpa/PPBio of Western Amazon, Emilio Goeldi Museum, PUC-Rio, UnB, UERJ, State University of Feira de Santana (UEFS), UFMG, UFRJ and UFRGS."	2016	2018	11, 14	YES
Funai	MMA/SRH	2016	2019	14	NO
FATMA - SC	Universities, NGOs	2018	2020	5,7,12,14	NO
FATMA - SC, IUCN, Çarakura Institute, WRI Brazil	Universities, NGOs	2015	2017	5,7,12,14	NO
FATMA - SC	IUCN, WRI, Çarakura Institute, others	2015	2017	1	NO

Target 15

By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced through conservation and restoration actions, including restoration of at least 15% of degraded ecosystems, prioritizing the most degraded biomes, hydrographic regions and ecoregions, thereby contributing to climate change mitigation and adaptation and to combatting desertification.

Target-Action	Group/segment	Action	Objective
Target15-Action15	State Environmental Agencies (OEMAs)	Environmental Regularization of Properties along the Timbó and Chapecó Ecological Corridors	1. Protect water springs; 2. Recuperation of Riparian Forests.
Target15-Action16	State Environmental Agencies (OEMAs)	Develop Community Agreements (community rules)	Ensure the establishment of rotating processes for forest enrichment with species selected by the community, with the purpose of increasing biodiversity and future income generation, reducing pressure on the faxinais, particularly due to the reduction of the available territory for traditional communities.
Target15-Action17	State Environmental Agencies (OEMAs)	Promote forestry with native species	Recuperate/restore altered or degraded ecosystems through recuperation/restoration actions, applying the appropriate technique and methodology for each habitat.
Target15-Action18	State Environmental Agencies (OEMAs)	Promote forestry for economic purposes.	Reduce pressure on the remaining native vegetation fragments.
Target15-Action19	State Environmental Agencies (OEMAs)	Implementation of the Environmental Regularization Program - PRA tool/system	Restoration, recuperation and/or compensation of non-compliances regarding forests in Permanent Protection Areas - APPs and Legal Reserves - RL identified through CAR.
Target15-Action20	State Environmental Agencies (OEMAs)	PRA - Dissemination and training	Disseminate to the general public and carry out internal (SISEMA) and external (Partners and general public) training events on the PRA tool/ system.
Target15-Action21	State Environmental Agencies (OEMAs)	Maintenance of Tree Nurseries of forest species	Produce seedlings to be used in the recuperation/restoration programs, as well as in the production of seedlings of alien species for the social programs, with the objective of reducing pressure on the remaining native vegetation fragments.
Target15-Action22	State Environmental Agencies (OEMAs)	Implementation of the Rio das Flores Water Project	Promote forest restoration in 610 hectares of water springs and riparian forests in the watershed of the Flores river, which is the main source of the water supply system of Valença-RJ, with the objective of protecting the quantity and quality of its waters.
Target15-Action23	State Environmental Agencies (OEMAs)	Implementation of the Environmental Regularization Program - PRA	Promote the environmental regularization of rural properties and the consequent conservation/recuperation of APPs and RLs.
Target15-Action24	State Environmental Agencies (OEMAs)	Recuperation of 1,500 hectares of degraded areas in the 3 municipalities facing the greatest deforestation pressure in the south of the state.	Promote the recuperation of degraded areas in small rural properties through the establishment of agroforestry systems.
Target15-Action25	State Environmental Agencies (OEMAs)	Implementation of the Project on the Protection of Amazon Tropical Forests.	Combat deforestation.
Target15-Action26	State Environmental Agencies (OEMAs)	Implementation of the Ecosystem Services Program of the PAs in the state of Amazonas.	Encourage the payment for actions and projects that promote the conservation, recuperation, preservation and sustainable use of the natural environment in Protected Areas.
Target15-Action27	State Environmental Agencies (OEMAs)	Regulation and implementation of the Law on the CAR and PRA.	Provide the state with instruments to operate the SICAR-AM.
Target15-Action28	State Environmental Agencies (OEMAs)	Strengthen adhesion to CAR in the state of Amazonas	Promote the registration and analysis of 55,000 rural properties in the CAR.
Target15-Action29	State Environmental Agencies (OEMAs)	Coordination of the PREVINA - Prevention, Monitoring and Control of Burning Activities.	Prevent, control and coordinate the response to environmental emergencies in the state (forest fires and environmental accidents).
Target15-Action30	State Environmental Agencies (OEMAs)	Participation in the Paraná Forum on Global Climate Change.	Participate in various Mitigation and Adaptation actions.

Responsibility for the Action	Possible partners	Start date	Conclusion date	Interface with other targets	"Is there a cost estimate? (yes or no)"
FATMA - SC	EPAGRI, State Secretariat of Agriculture	2014		3, 7, 14	YES
IAP - PR	-	Continuous action	Continuous action	-	-
Directorate of Ecosystem Conservation and Recuperation/IEF -MG	Academia, NGO, OSCISP, Municipal governments	Continuous action	Continuous action	5	YES
Directorate of Ecosystem Conservation and Recuperation/IEF -MG	Academia, NGO, OSCISP, Municipal governments	Continuous action	Continuous action	5	YES
Directorate of Ecosystem Conservation and Recuperation, Legal Reserve Management Unit, Regional units/IEF -MG	IEF Regional Units and SUPRAMs, SFB, SEAPA, SEDA, FAEMG, FETAEMG, AMM, EPAMIG and UFLA.	2017	2018	-	YES
Directorate of Ecosystem Conservation and Recuperation, Legal Reserve Management Unit, Regional units/IEF -MG	IEF Regional Units and SUPRAMs, SFB, SEAPA, SEDA, FAEMG, FETAEMG, AMM, EPAMIG and UFLA.	2017	2018	-	YES
Directorate of Ecosystem Conservation and Recuperation, Legal Reserve Management Unit, Regional units/IEF -MG	Academia, NGO, OSCISP, Municipal governments	Continuous action	Continuous action	5	YES
SEA/INEA -RJ	FAA, RIOGaleão, Ferroporto, CEIVAP/AGEVAP	2016	2017	-	YES
SECIMA - GO	MMA	-	2017	11, 14	-
SEMA-AM	IDAM, EMBRAPA, Rural producers	2011	2016	-	YES
SEMA-AM	KfW	2015	2018	-	YES
SEMA-AM	IDESAM, FVA, FAS	2016	2020	1.1	YES
SEMA-AM, IPAAM	IPAAM, IDAM, SPF, SEPROR	2015	2016	2, 11	YES
SEMA-AM, IPAAM	IPAAM, IDAM, SPF, SEPROR	2015	2018	2, 12	YES
CODES/SEMA-CE	COBIO, COEAS/SEMA, IBAMA, NGOs, Communities around PAs and Others.	2016	2018	1,3	YES
SEMA-PR	-	-	-	8	-

Target 15

By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced through conservation and restoration actions, including restoration of at least 15% of degraded ecosystems, prioritizing the most degraded biomes, hydrographic regions and ecoregions, thereby contributing to climate change mitigation and adaptation and to combatting desertification.

Target-Action	Group/segment	Action	Objective
Target15-Action31	State Environmental Agencies (OEMAs)	Preparation of the 1st Inventory of Greenhouse Gases of Paraná across various sectors.	Define the volume of CO_2 emitted into the atmosphere by the state, carry out the inventory of forest plantations in Paraná that contribute to the compensation of CO_2 emitted into the atmosphere, enabling the measurement of the variation in CO_2 stocks.
Target15-Action32	State Environmental Agencies (OEMAs)	Implementation of the Roads with Araucaria Project	Capture carbon to compensate the emission of greenhouse gases through the planting of Araucaria angustifolia along the borders of rural properties and along federal, state, municipal and private roads. This project has the objective of capturing carbon emitted by corporations and industries, in order to implement the compensation of greenhouse gas emissions; the recuperation of riparian vegetation formations, reconstructing ecological corridors, offering favorable conditions for wildlife; valuation of the landscape and promotion of rural tourism, in addition to the production of Araucaria pine nuts for consumption.
Target15-Action33	State Environmental Agencies (OEMAs)	Implementation of the Zero Carbon project	Contribute to the minimization of the causes and effects of Climate Change, by raising awareness (instruction); Support and/or provide guidance to municipal managers on decisions related to climate change issues.
Target15-Action34	State Environmental Agencies (OEMAs)	Implementation of the EBA - Ecosystem-based Adaptation	Address the climate change threats.
Target15-Action35	State Environmental Agencies (OEMAs)	Development of environmental restoration projects	Implement environmental compensation measures in the environmental restoration projects, preliminarily in full protection PAs and connected to the Program for the Eradication of Alien Species.
Target15-Action36	State Environmental Agencies (OEMAs)	Evaluate carbon capture by reforestation activities	Quantify the biomass and carbon capture in reforestation activities and monitor the projection of carbon capture in ecosystem restoration projects applying different ecological restoration methods.
Target15-Action37	State Environmental Agencies (OEMAs)	Institution of a State Climate Change Policy	Define principles, objectives, instruments and directives of the State Climate Change Policy, guiding the development of the State Climate Change Policy, as well as other plans, programs, projects and actions directly or indirectly related to climate change (Law 17.133/2012).
Target15-Action38	State Environmental Agencies (OEMAs)	Develop PES norms targeting the valuation of ecosystem services, strengthen actions under the Proclima Working Group, created in 2016 and which is part of the Program on the Valuation and Preservation of the Environment, under the Semade Management Contract/2016, and has the strategic directive of promoting the development of sustainable production chains.	Implement the State Climate Change Program, enabled through Law nº 4.555, of 15 July 2014.
Target15-Action39	State Environmental Agencies (OEMAs)	Develop a Guidebook or Manual on the Restoration of Degraded Areas in the Atlantic Forest Biome.	Support the Environmental Regularization of Rural Properties of sugarcane producers in the Atlantic Forest biome.
Target15-Action40	State Environmental Agencies (OEMAs)	Implementation of the State Program on the Recuperation of Degraded Pastures – TERRA BOA ("Good Land")	1. Promote, in five years, the recuperation and maintenance of the productive capacity of two million hectares of degraded pastures in the state. 2. Generate tax benefits for the production of grains in recuperated pasture areas.
Target15-Action41	State Environmental Agencies (OEMAs)	Quantification, Valuation and Audit of the Environmental Assets of Tocantins	Quantify, value and audit the environmental assets to promote the development of financial mechanisms to transform environmental assets in monetary assets to be included in the TO state accounting.
Target15-Action42	Civil Society (NGOs)	Support the implementation of biodiversity directives and targets under the National Climate Change Adaptation Plan.	1. Enhance scientific knowledge on the biodiversity vulnerability to climate change and its role in the reduction of social and economic vulnerabilities. 2. Implement adaptation measures, including ecosystem-based adaptation.
Target15-Action43	Civil Society (NGOs)	Carbon inventory - Carbon inventory of the Brazilian forests (for each biome and, if possible, for each phyto-physiognomy.	Determine the carbon stock to inform REDD and/or REDD+ programs.
Target15-Action44	Civil Society (NGOs)	Implementation of the Climate Amapá Project	Support the preparation and development of the climate policy in the state of Amapá.
Target15-Action45	Civil Society (NGOs)	Implementation, conservation and recuperation of degraded areas in ecological corridors. (1)	Recuperate degraded areas in the region of the Sossego-Caratinga Ecological Corridor in eastern Minas Gerais, to establish connection among forest fragments and recuperate the Atlantic Forest biome, and increase the range of the northern wooly spider monkey, a Brazilian primate species threatened with extinction, classified as "Critically Endangered".

Responsibility for the Action	Possible partners	Start date	Conclusion date	Interface with other targets	"Is there a cost estimate? (yes or no)"
SEMA-PR	-	-	-	8	YES
SEMA - PR	SEAB, EMBRAPA, EMATER, DSR Logistics Group	Continuous action	Continuous action	7	YES
SEMA -PR	Municipalities		Continuous action	-	YES
SEMA- PR, GIZ	Municipal Governments and Civil Defence	Continuous action	Continuous action	-	-
SEMA - PR, IAP -PR	SEAB	Continuous action	Continuous action	-	-
SEMA - PR, IAP -PR	FAEP	Continuous action	Continuous action	-	-
SEMA - PR, IAP -PR	-	-	-	-	YES
SEMADE/IMASUL - MS and TNC	Civil society, entrepreneurs and universities	2015	Continuous action	1, 10	NO
SEMADE/IMASUL - MS and TNC	Association of Bioenergy Producers	2014	2017	11	YES
Secretariat of Production and Family Agriculture, SEPAF - MS, SEMADE - MS	Agraer, Rural Producers	2016	Continuous action	11	NO
SEMARH -TO	GCF Task Force, GCFF	2017	2019	3, 4, 5, 7, 14	YES
"Boticário Group Foundation, DPMC/SMCF and DECO/SBio"	Ministries	2011	2020	1, 10,19	-
CEPAN, MMA	Universities and civil society	2017	2019	-	NO
CI, Amapá Government	Conservation International, GCFF	2017	2019	-	YES
Biodiversitas Foundation	Members of the Management Committee of the Sossego-Caratinga Ecological Corridor (according to IEF Administrative Ruling nº 48, of 08 August 2016); Federal University of Viçosa.	2017	2019	1, 7, 12, 14	NO

Target 15

By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced through conservation and restoration actions, including restoration of at least 15% of degraded ecosystems, prioritizing the most degraded biomes, hydrographic regions and ecoregions, thereby contributing to climate change mitigation and adaptation and to combatting desertification.

Target-Action	Group/segment	Action	Objective
Target15-Action46	Civil Society (NGOs)	Implementation, conservation and recuperation of degraded areas in ecological corridors. (2)	Build the capacity of family rural producers located within the Sossego-Caratinga Ecological Corridor on the functioning of Agroforestry Systems.
Target15-Action47	Civil Society (NGOs)	Implementation, conservation and recuperation of degraded areas in ecological corridors. (3)	Implement and monitor Agroforestry Systems in the Sossego-Caratinga Ecological Corridor as a means to increase carbon stocks, recuperate Atlantic Forest areas and promote sustainable development.
Target15-Action48	Civil Society (NGOs)	Support the implementation of biodiversity directives and targets under the National Climate Change Adaptation Plan.	1. Support scientific research for defining management directives for the Lagamar Mosaic. 2. Contribute to the development of the National Adaptation Plan through the Study of Ecosystem-Based Adaptation (EBA). 3. Contribute to the Civil Society Tool for Adaptation to Climate Change. 4. Participate in the MMA's AdaptaClima Platform.
Target15-Action49	Civil Society (NGOs)	Implementation of the Research Program on the Recuperation of Degraded Areas of Floodplain Forests on the Medium Solimões.	Carry out research for constructing a floodplain forest recuperation model for the Medium Solimões, considering: 1. Identify the most relevant tree species and functional groups on the floodplain of the Medium Solimões and collect seeds from source trees. 2. Identify the germination patterns of seeds from the most important species in each successional stage and functional group, and determine the orthodox and recalcitrant species. 3. Identify the protocols to obtain seedlings from these species. 4. Identify the aspects of seedling establishment, survival in the early stages (due to annual flooding), and growth rates and carbon sequestration rates.
Target15-Action50	Civil Society (NGOs)	Development of a Protocol for the Recuperation of Degraded Floodplain Areas of the Amazon and Seed Banks (and Live Collections) of Floodplain Species	1. Develop a regional protocol based on the replication of the research program on the theme of the previous action (15.1) of the Institute, applying to other four different sites of the seasonal floodplain and other three sites of the estuary floodplain of the Brazilian Amazon. 2. Collect seeds from source trees of orthodox species that can be stored in seed banks. 3. Carry out the maintenance of in situ live collections of recalcitrant species.
Target15-Action51	Civil Society (NGOs)	Recuperation of degraded areas	1. Increase biodiversity in recuperated areas or areas under recuperation. 2. Increase the number of recuperated areas to obtain greater biodiversity. 3. Encourage landowners to recuperate priority private areas.
Target15-Action52	Civil Society (NGOs)	Implementation of the Program on Payment for the Conservation of Soil, Water and Water Resources (PES Water/Soil)	Promote the conservation and recuperation of water and soil in rural areas, through financial and non-financial incentives.
Target15-Action53	Civil Society (NGOs)	Restoration of Atlantic Forest areas	Establish restoration protocols for areas in the Lagamar region.
Target15-Action54	Civil Society (NGOs)	Development of studies and systematization of case-study results that assess the economic and silvicultural potential of native species to promote large-scale forest restoration and conservation.	Develop economic mechanisms and planting methodologies that promote the use of native species for silviculture, optimizing the environmental and socio-economic benefits.
Target15-Action55	Academia	Evaluate the effects of climate change on biodiversity patterns.	Monitor the alpha and beta diversities in plankton in the long term.
Target15-Action56	Academia	Valuation of carbon stocks in forests and savannas of the Amazon-Cerrado transition.	Calculate the available stocks and carbon dynamics in different forest and savanna formations in the Amazon-Cerrado transition.

Responsibility for the Action	Possible partners	Start date	Conclusion date	Interface with other targets	"Is there a cost estimate? (yes or no)"
Biodiversitas Foundation	Members of the Management Committee of the Sossego-Caratinga Ecological Corridor (according to IEF Administrative Ruling nº 48, of 08 August 2016); Federal University of Viçosa.	2017	2020	1, 2, 4, 7, 14, 18	NO
Biodiversitas Foundation	Members of the Management Committee of the Sossego-Caratinga Ecological Corridor (according to IEF Administrative Ruling nº 48, of 08 August 2016); Federal University of Viçosa.	2016	2020	1, 2, 4, 7, 12, 14, 18	NO
Boticário Foundation	"MMA, Ministries, FAPESP"	2011	2020	1, 10	-
IDSM - AM	UFPA, INPA, INPE, UNESP, Max Planck Institut	2004	2020	19	YES
IDSM - AM	MUSA, INPA, MPEG, Embrapa-Cenargen, JBRJ, UFAM	2018	2023	19	YES
SVDS/ICLEI	SVDS, SMSP, SMF, SMDEST, SEPLAN, SEHAB, PCJ Consortium, SMA/SP, CATI, EMBRAPA, IAC, Campinas Rural Labor Union, CMDRA	2016	2026	-	YES
SVDS/ICLEI	"SVDS, SANASA, SMDEST, CATI, EMBRAPA"	2017	2020	-	YES
Paraná Atlantic Forest Network	State, NGOs	2016	2020	1	YES
IUCN	WRI Brazil, Universities and research institutes.	2015	2017	3, 7	YES
PELD Site: Atlantic Forest and Lake System of the Medium Doce River-MG, Site 4	UFOP, UFSJ, IFMG	2017	2020	-	YES
PELD Site Cerrado- Amazon Forest Transition, Site 15	University of Leeds (England)	2017	2020	1, 7, 17	YES

Target 16

By 2015, the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization is in force and operational, consistent with national legislation.

Target-Action	Group/segment	Action	Objective
Target16-Action1	MMA Secretariats	Development and implementation of the National System for Managing Genetic Heritage and the Associated Traditional Knowledge - SisGen	1. Provide users with a system for managing access to genetic heritage components and/or associated traditional knowledge in an expeditious, simple and transparent manner. 2. Automatize the steps that comprise the management processes of genetic heritage and associated traditional knowledge. 3. Support the enforcement and control activities. 4. Enable the traceability of the use of genetic heritage or associated traditional knowledge, and benefit sharing.
Target16-Action2	MMA Secretariats	Implementation of the National Benefit Sharing Fund and its operation.	Apply Fund resources originating from benefit sharing to support actions and activities targeting the valuation of genetic heritage and of associated traditional knowledge, and promote their sustainable use, according to the directives of the National Benefit Sharing Program - PNRB.
Target16-Action3	MMA Secretariats	Development and implementation of the "Brazilian Portal on Access to Genetic Heritage and Associated Traditional Knowledge".	Create a national communication mechanism that is capable to transmit the necessary information foreseen for the clearinghouse mechanism of the Nagoya Protocol, under the Convention on Biological Diversity; and enable the national ABS communication, bringing to the national level the ABS clearinghouse model.
Target16-Action4	Institutes/ Institutions connected to Ministries	Participation in the Brazilian government mission to the international forums on the Nagoya Protocol	Disseminate the Brazilian legislation on access to biodiversity within the institution and at the national and international forums to facilitate research projects and programs.
Target16-Action5	Institutes/ Institutions connected to Ministries	Institutional structuring of procedures and action flows, considering the protection and safeguard of traditional knowledge associated to genetic heritage of indigenous peoples, and traditional communities and rural producers.	1. Implement actions for the preservation and safeguard of traditional knowledge associated to genetic heritage. 2. Contribute to the implementation of Law 13.123/2015.
Target16-Action6	Institutes/ Institutions connected to Ministries	Development of cultural inventory methodologies for traditional knowledge associated to biodiversity.	1. Strengthen the protagonist role and autonomy of communities in the management of their cultural heritage. 2. Promote the valuation and safeguard of traditional knowledge associated to biodiversity of indigenous peoples and traditional communities. 3. Contribute to the implementation of Law 3215/2015.
Target16-Action7	State Environmental Agencies (OEMAs)	Management of the knowledge on São Paulo biodiversity (6)	Enhance knowledge on São Paulo biodiversity through the production of information and research, as a contribution to biodiversity management.
Target16-Action8	State Environmental Agencies (OEMAs)	Management of the knowledge on São Paulo biodiversity (7)	Implement scientific collection policies, focusing on their expansion.
Target16-Action9	State Environmental Agencies (OEMAs)	Establishment of partnership with UFPR - Botany Department (Oikos Laboratory and UFPR-Coastal Zone) and Management Council of the APA de Guaratuba	Develop community management methods for Non-Timber Forest Products (PFNM), through Participatory Guarantee Systems, as ruled by Decree 6.660/2008, which regulates the Atlantic Forest Law, with the objective of implementing a pilot initiative for forest SPGs, inspired by the models of participatory certification systems of organic producers.
Target16-Action10	State Environmental Agencies (OEMAs)	Approval of resources from leSul compensatory measures	Develop a project based on PFNM management through Participatory Guarantee Systems, as ruled by Decree 6.660/2008, which regulated the Atlantic Forest Law, seeking to implement a pilot initiative for forest SPGs, inspired by the models of participatory certification systems of organic producers.
Target16-Action11	State Environmental Agencies (OEMAs)	Management of the knowledge on São Paulo biodiversity (5)	Expand the biodiversity monitoring network of the state of São Paulo.

Responsibility for the Action	Possible partners	Start date	Conclusion date	Interface with other targets	"Is there a cost estimate? (yes or no)"
DPG/SBio/MMA	MCTIC, ANVISA, MF, MAPA, IBAMA, FUNAI, MDIC, INPI, CDN, Brazilian Navy	2016	Continuous action	2, 18	YES
DPG/SBio/MMA	MCTIC, MMA, MF, MDSA, SEAD/President's Office, Funai, Iphan, CNPCT, Condraf, CNPI, SBPC, Consea	2016	2017	3, 5, 7, 11, 13, 14, 18	NO
DPG/SBio/MMA	MCTIC, Anvisa, MF, MAPA, CNPq, Ibama, Funai, MDIC, INPI, CDN, MinC	2017		1, 18, 19	YES
Vice-Presidency of Research and Reference Laboratories - VPPSR and Center of International Health Affairs - CRIS - Oswaldo Cruz Institute - IOC.	MMA, MCTIC, Embrapa and MRE.	Continuous action	Continuous action	-	-
IPHAN, MinC	DPG/SBio, Funai, FCP, Embrapa	2017	2018	18	NO
IPHAN, MinC	DPG/SBio, Funai, FCP, Embrapa	2018	2019	-	NO
Forestry Institute - SP and Botany Institute -SP/ SMA - SP	-	2016	2020	-	YES
Botany Institute/Curators Council and Forestry Institute -SP/ SMA - SP	-	2016	2020	-	YES
SEMA - PR, IAP -PR	SEMA - PR, UFPR	-	-	-	-
SEMA - PR, IAP-PR	-	-	-	-	-
SMA-SP	FAPESP (São Paulo State Research Support Foundation)	2016	2020	-	YES

Target 16

By 2015, the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization is in force and operational, consistent with national legislation.

Target-Action	Group/segment	Action	Objective
Target16-Action12	State Environmental Agencies (OEMAs)	Management of the knowledge on São Paulo biodiversity (1)	Increase and improve the management of research carried out in PAs through the São Paulo Environmental System.
Target16-Action13	State Environmental Agencies (OEMAs)	Management of the knowledge on São Paulo biodiversity (4)	Promote studies on the assessment of ecosystem services provided by São Paulo biodiversity to inform the proposal of public policies (TEEB-SP).
Target16-Action14	State Environmental Agencies (OEMAs)	Management of the knowledge on São Paulo biodiversity (8)	Promote discussions on the role and actions that can be promoted by ESP under Law 13.123/15 and its regulation (genetic resources).
Target16-Action15	State Environmental Agencies (OEMAs)	Management of the knowledge on São Paulo biodiversity (2)	Seek the data sharing among the various databases and systems on the state's biodiversity.
Target16-Action16	State Environmental Agencies (OEMAs)	Management of the knowledge on São Paulo biodiversity (3)	Implementation of the São Paulo State Biodiversity Outlook, through the development and application of indicators for monitoring the achievement of the Aichi Targets and the quality of biodiversity in the state of São Paulo.

Responsibility for the Action	Possible partners	Start date	Conclusion date	Interface with other targets	"Is there a cost estimate? (yes or no)"
Forestry Institute, Botany Institute and Forestry Foundation/SMA - SP	-	2016	2020	1, 17, 20	YES
Coordination of Biodiversity and Natural Resources/ SMA -SP	Secretariat of Agriculture and Supply, through the Coordination of Integral Technical Assistance - CATI, Conservation International of Brazil - CI Brazil, German International Cooperation Agency (GIZ), and Ministry of the Environment.	2016	2020	-	YES
SMA Secretary's Office, Forestry Institute, Forestry Foundation and Botany Institute -SP	-	2016	2020	-	YES
Forestry Institute, Forestry Foundation, Botany Institute, Geological Institute, Coordination of Environmental Planning, GSTIC (Sectoral Group on Information Technology and Communication) and SMA-SP Secretary's Office.	-	2016	2020	-	YES
All areas of the Executive Secretariat of the São Paulo Biodiversity Commission - SP/ SMA - SP	-	2016	2020	-	YES

Strategic Objective E

Enhance the implementation through participatory planning, knowledge management and capacity building

4 targets | 29 institutions | 127 actions

National Targets: 17 to 20

17. NBSAP development and Implementation

9 actions

- Construction, enhancement and monitoring of NBSAP actions
- Achievement of the National Targets

18. Respect to traditional peoples and knowledge

28 actions

- Strengthening of Indigenous Peoples and Traditional Communities
- Family agriculture
- Rural extension activities

19. Science and technology for biodiversity

80 actions

- Compilation of existing records
- Field activities for data collection
- Implementation of platforms and databases for the publication of technical – scientific material

20. Mobilization of financial resources

10 actions

- Inventory of biodiversity expenditures
- Establishment of institutional partnerships
- Information dissemination on the achievement of National Targets

Comparison of the actions in the Action Plan with the components of the National Targets described in the 5th National Report to the CBD

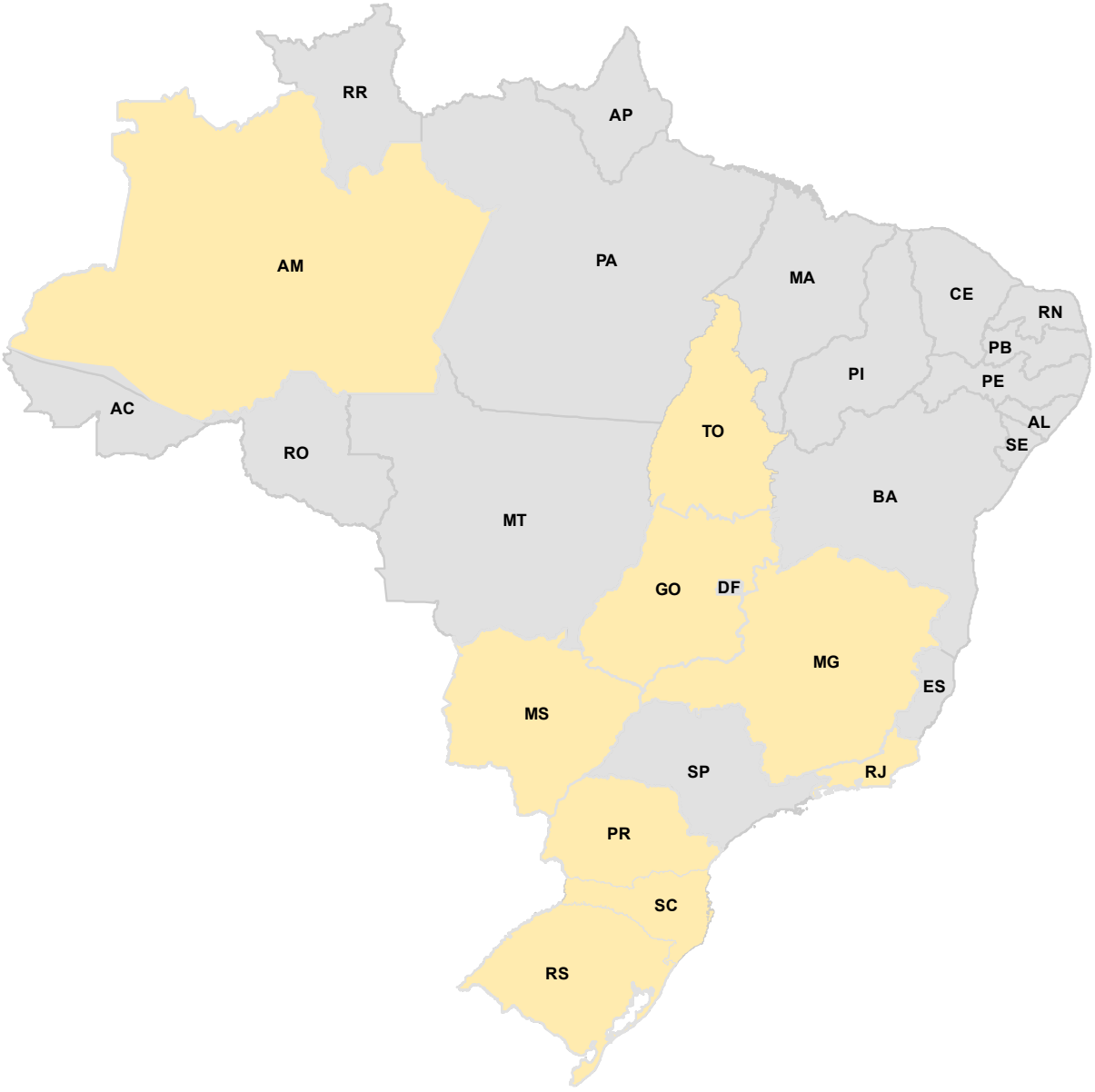
Target 17: By 2014, the national biodiversity strategy is updated and adopted as policy instrument, with effective, participatory and updated action plans, which foresee periodic monitoring and evaluation.	
Parts of the Target	**Nº of actions**
Total actions for the Target	**9**
Number of actions for part 1: By 2014, the national biodiversity strategy is updated and adopted as policy instrument, with effective, participatory and updated action plans, which foresee periodic monitoring and evaluation.	9
Target 18: By 2020, the traditional knowledge, innovations and practices of indigenous peoples, family rural producers and traditional communities relevant for the conservation and sustainable use of biodiversity, and their customary use of biological resources, are respected, in accordance with their uses, customs and traditions, national legislation and relevant international commitments, and fully integrated and reflected in the implementation of the CBD, with the full and effective participation of indigenous peoples, family rural producers and traditional communities, at all relevant levels.	
Parts of the Target	**Nº of actions**
Total actions for the Target	**28**
Number of actions for part 1: Traditional knowledge, innovations and practices of indigenous peoples, family rural producers and traditional communities relevant for the conservation and sustainable use of biodiversity, and their customary use of biological resources, are respected, in accordance with their uses, customs and traditions, national legislation and relevant international commitments...	8
Number of actions for part 2: ... and fully integrated and reflected in the implementation of the CBD...	10
Number of actions for part 3: ... with the full and effective participation of indigenous peoples, family rural producers and traditional communities, at all relevant levels.	8
Number of actions that address all parts:	2
Target 19: By 2020, the science base and technologies necessary for enhancing knowledge on biodiversity, its values, functioning and trends, and the consequences of its loss, are improved and shared, and the sustainable use of biodiversity, as well as the generation of biodiversity-based technology and innovation are supported, duly transferred and applied. By 2017, the complete compilation of existing records on aquatic and terrestrial fauna, flora and microbiota is finalized and made available through permanent and open access databases, with specificities safeguarded, with a view to identify knowledge gaps related to biomes and taxonomic groups.	
Parts of the Target	**Nº of actions**
Total actions for the Target	**80**
Number of actions for part 1: By 2020, the science base and technologies necessary for enhancing knowledge on biodiversity, its values, functioning and trends, and the consequences of its loss, are improved and shared...	36
Number of actions for part 2: ... and the sustainable use of biodiversity, as well as the generation of biodiversity-based technology and innovation are supported, duly transferred and applied.	12
Number of actions for part 3: By 2017, the complete compilation of existing records on aquatic and terrestrial fauna, flora and microbiota is finalized and made available through permanent and open access databases, with specificities safeguarded, with a view to identify knowledge gaps related to biomes and taxonomic groups.	19
Number of actions that address all parts:	13

Target 20: Immediately following the approval of the Brazilian targets, resources needs assessments are carried out for the implementation of national targets, followed by the mobilization and allocation of financial resources to enable, from 2015 on, the implementation and monitoring of the Strategic Plan for Biodiversity 2011-2020, as well as the achievement of its targets.

Parts of the Target	Nº of actions
Total actions for the Target	**10**
Number of actions for part 1: Immediately following the approval of the Brazilian targets, resources needs assessments are carried out for their implementation, followed by the mobilization and allocation of financial resources to enable, from 2015 on, the implementation and monitoring of the Strategic Plan for Biodiversity 2011-2020, as well as the achievement of its targets.	10

Distribution of sectors/segments contributing to objective E

Sectors	TOTAL ADHERENT INSTITUTIONS	INSTITUTIONS THAT CONTRIBUTE TO OBJECTIVE E	%
MMA Secretariats	3	3	100%
Agencies connected to MMA	4	4	100%
Ministries, Special Secretariats and Public Corporations	4	2	50%
Institutes/ Institutions connected to Ministries	6	2	33%
State Environmental Agencies (OEMAs)	14	9	64%
Civil Society (NGOs and similar organizations)	11	4	36%
Financing Agencies and Private Sector	1	1	100%
Academia	10	4	40%



States of the proposing institutions contributing to objective E

Target 17

By 2014, the national biodiversity strategy is updated and adopted as policy instrument, with effective, participatory and updated action plans, which foresee periodic monitoring and evaluation.

Target-Action	Group/segment	Action	Objective
Target17-Action1	MMA Secretariats	Increase the multi-sectoral adhesion and prepare the second version of the NBSAP	1. Carry out a process for the adhesion of agencies and institutions from various sectors, such as federal and state governments, private sector, civil society, academia, etc. to the NBSAP, collecting and incorporating their contributions for the consolidation of the second version of the NBSAP. 2. Carry out a gap analysis on the NBSAP. 3. Develop plans for NBSAP monitoring, communication and resource mobilization. 4. Present and discuss the NBSAP in Conabio and PainelBio meetings, collecting contributions for its improvement.
Target17-Action2	MMA Secretariats	Detailing and enhancement of indicators for monitoring the National Biodiversity Targets.	1. Prepare and systematize the technical sheets of the indicators of the National Biodiversity Targets; 2. Develop monitoring methodologies.
Target17-Action3	MMA Secretariats	National and international dissemination of the NBSAP.	1. Translate the 1st and 2nd versions of the NBSAP into English. 2. Format the text of the 2nd version of the NBSAP. 3. Submit the NBSAP document to the CBD.
Target17-Action4	Institutes/ Institutions connected to Ministries	Implementation of the Fiocruz 2022 Strategies	1. Implement the strategic macro-directives established by Fiocruz under the 2022 Strategies, which guide its change agenda. 2. Under the NBSAP, focus on the macro-directive of integrated approach to Health, environment and sustainability, where biodiversity is one of the structuring pillars of its programs and actions evaluated in the PPAs.
Target17-Action5	Institutes/ Institutions connected to Ministries	Support to the implementation and monitoring of the NBSAP.	1. Inform to MMA the Fiocruz actions that contribute to the achievement of the Aichi Targets, for their incorporation into the national documents; 2. Monitor and report on the progress of Fiocruz's actions.
Target17-Action6	State Environmental Agencies (OEMAs)	Support to the implementation of the NBSAP with the involvement of all Secretariat staff	1. Contribute to the achievement of the National Targets; 2. Promote the participation of the entire team of the Ceará State Secretariat of the Environment.
Target17-Action7	State Environmental Agencies (OEMAs)	Management of the knowledge on São Paulo biodiversity	1. Implement the São Paulo State Biodiversity Outlook, through the development and application of indicators for monitoring the achievement of the Aichi Targets and of the quality of biodiversity in the state of São Paulo. 2. Expand the São Paulo biodiversity monitoring network.
Target17-Action8	Civil Society (NGOs)	Continue the preparation, publication and dissemination of the RBMA Atlantic Forest Yearbook	Disseminate information on the progress of the achievement of the Aichi Targets for the Atlantic Forest biome for communication, awareness, education and decision making.
Target17-Action9	Civil Society (NGOs)	Support and promote the implementation of international conventions and agreements for the conservation of biodiversity	1. Operate as the executive secretariat of the PainelBio to support the implementation of the National Biodiversity Targets. 2. Promote the dissemination of the Brazilian experience for the cooperation with other countries interested in implementing similar strategies.

Responsibility for the Action	Possible partners	Start date	Conclusion date	Interface with other targets	"Is there a cost estimate? (yes or no)"
SBio/MMA	IUCN, GIZ, UNDP, PainelBio, Conabio and various institutions, in all sectors of society.	2016	2017	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 18, 19, 20	YES
SBio/MMA	PainelBio, Conabio, UNDP	2016	2017	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 18, 19, 20	YES
SBio/MMA	MRE, ASIN/MMA, GM/MMA, UNDP	2017	2017	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 18, 19, 20	YES
Fiocruz	-	Continuous action	Continuous action	1, 2, 3, 4, 5, 9, 11, 13, 14, 16, 18, 19	-
Institutional Program on Biodiversity & Health - Presidency of Fiocruz	MMA	Continuous action	Continuous action	1, 2, 3, 4, 5, 9, 11, 13, 14, 16, 18, 19	-
COBIO/CEDIB/SEMA -CE	COEAS, CODES, ADINS, SEXEC and related areas under the Secretariat	2016	2019	1,2,3,4,5,6,7,8,9 ,10,11,12,13,14, 15,16,18,19,20	NO
All areas that comprise the SMA-SP	-	2016	2020	All	YES
"Atlantic Forest Biosphere Reserve"	MMA, GIZ, RBMA Network, Atlantic Forest Network, research and learning institutions, federal, state and municipal governments, private sector.	Annual	Annual	All	YES
IUCN	All institutions that have formally adhered to the PainelBio	2014	Continuous	All	NO

Target 18

By 2020, the traditional knowledge, innovations and practices of indigenous peoples, family rural producers and traditional communities relevant for the conservation and sustainable use of biodiversity, and their customary use of biological resources, are respected, in accordance with their uses, customs and traditions, national legislation and relevant international commitments, and fully integrated and reflected in the implementation of the CBD, with the full and effective participation of indigenous peoples, family rural producers and traditional communities, at all relevant levels.

Target-Action	Group/segment	Action	Objective
Target18-Action1	MMA Secretariats	Financing monographies and clinical studies for the inclusion of new species in the compendiums of the Brazilian pharmacopoeia.	Increase the number of phytotherapics developed based on Brazilian biodiversity and associated traditional knowledge for prescription through the Public Health System.
Target18-Action2	MMA Secretariats	"Implement the strategy for disseminating the Community Protocols"	1. Promote voluntary codes of conduct, directives and good practices and/or rules. 2. Build the capacity of users and providers of genetic resources and associated traditional knowledge. 3. Create awareness on the protocols and procedures of the indigenous and local communities.
Target18-Action3	MMA Secretariats	Formatting the Network of Multiplier Agents on Access and Benefit Sharing.	Integrate and maintain multiplier agents informed through ABS capacity building.
Target18-Action4	MMA Secretariats	Strengthening of phytotherapics production chains with access to genetic heritage and associated traditional knowledge.	1. Strengthen production chains of products originating from the associated traditional knowledge. 2. Promote the free trade by traditional peoples and communities of products originating from the associated traditional knowledge. 3. Value traditional knowledge associated to medicinal plants and phytotherapics, with the purpose of protecting and promoting the knowledge associated to this cultural heritage.
Target18-Action5	MMA Secretariats	Build capacity on the national and international regulation that rule the access, shipping and benefit sharing (ABS)	Increase the capacity of the different actors on themes such as: development of instruments to promote the management of the ABS system in the country; awareness and training to the main interested parties involved in ABS, with particular attention to the capacity building of indigenous and traditional communities (providers) for participating in ABS operations.
Target18-Action6	MMA Secretariats	"Carry out studies on 3 species from socio-biodiversity for valuing ecosystem services."	Include the costs related to ecosystem services provided by extractive activities in the definition of the minimum prices under the PGPMBio.
Target18-Action7	MMA Secretariats	Implementation and preparation of the National Plan for Strengthening Extractive and Riverside Communities	Adjust, coordinate, integrate and propose actions for access to policies on health, education, social infrastructure, support to sustainable production, income generation, and environmental and territorial management in areas of traditional use and occupation.
Target18-Action8	MMA Secretariats	"Publish 3 calls for proposals for support to projects on the sustainable production inclusion of indigenous peoples and traditional extractive communities."	Provide technical and financial support to the organization of production chains for products from socio-biodiversity and socio-productive inclusion of traditional peoples and communities.
Target18-Action9	MMA Secretariats	Inclusion of 3 new products from socio-biodiversity in the PGPM-Bio	Expand the access of traditional peoples and communities to the subsidies of PGPMBio.
Target18-Action10	Ministries, Special Secretariats and Public Corporations	Support to the capacity building on ABS	Increase the capacity of the different actors on themes such as: development of instruments to promote the management of the ABS system in the country; awareness and training to the main interested parties involved in ABS, with particular attention to the capacity building of indigenous and traditional communities (providers) for participating in ABS operations.
Target18-Action11	Ministries, Special Secretariats and Public Corporations	Promote dialogue at the National Committee on Medicinal Plants and Phytotherapics about the creation of Community Protocols for household medicines.	Create Community Protocols for household medicines.
Target18-Action12	Institutes/ Institutions connected to Ministries	Support to the development and implementation of the National Policy on Integral Health of Rural and Forest Peoples	Support the development of health policies and programs that include traditional activities carried out by indigenous peoples, quilombolas and traditional communities related to food safety and health, under the broad well-being context.
Target18-Action13	Institutes/ Institutions connected to Ministries	Research on indigenous health and qualification of Indigenous Community Agents	Qualify Indigenous Community Agents in the Amazon, carry out research on indigenous health and their livelihoods.
Target18-Action14	Institutes/ Institutions connected to Ministries	Coordination and guidance of activities carried out by the study group on ABS and ATK	Establish 1 permanent study group working on an electronic platform for discussing ABS and protection of ATK.
Target18-Action15	Institutes/ Institutions connected to Ministries	Technical advisory service to indigenous peoples on the legislation on access and benefit sharing, and on policies for safeguarding traditional knowledge associated to the genetic heritage.	Provide, when requested, technical advice to indigenous peoples on access, benefit sharing, and ATK protection and safeguard.
Target18-Action16	Institutes/ Institutions connected to Ministries	Technical support to the qualification of appointed indigenous representatives and their replacements for participation on the CGEN and on the Management Committee of the National Fund for Benefit Sharing.	Provide technical advice to indigenous representatives appointed as members of the CGEN and FNRB Management Committee.

Responsibility for the Action	Possible partners	Start date	Conclusion date	Interface with other targets	"Is there a cost estimate? (yes or no)"
DPG/SBio/MMA	MS, ANVISA	2017	2018	13, 19	YES
DPG/SBio/MMA	IPHAN, Palmares Cultural Foundation, FUNAI, GTA, Pacari, APIB, CNPCT	2016	2020	1, 2, 16	YES
DPG/SBio/MMA	IPHAN, States: AC, AP, PA, AM, RO, RR, BA, MG, MS, RS	2016		1, 2, 16	NO
DPG/SBio/MMA and SEDR/MMA	IPHAN, MS, ANVISA, SEAD/ President's Office, MI, ICMBio, SFB, SEBRAE	2017	2019	1, 2, 4, 7, 19	YES
DPG/SBio/MMA	"IPHAN, MCTIC, MEC, MJ, Funai, SEAD/President's Office, IBAMA, ICMBio, Palmares Cultural Foundation, SEBRAE, CNPCT, APIB, CONDRAF"	2016	2017	1, 2, 16	YES
DEX/SEDR/MMA	CONAB, SEAD/CC and GIZ	2017	2017	1, 2, 4, 7, 14, 15	YES
DEX/SEDR/MMA	"Forest Service, ICMBio, MDSA, SEAD/CC, Confrem, CNS"	-	-	1, 2, 4, 7, 14, 15	NO
DEX/SEDR/MMA	ICMBio, FBB, Amazon Fund and MDS	2016	2020	1, 2, 4, 7, 14, 15	NO
DEX/SEDR/MMA	PGPMBio Management Group (MDA, MAPA, Conab, MDSA, MPOG, MFAZENDA)	2017	2020	1, 2, 4, 7, 14, 15	NO
MCTIC	Ministry of Education, Ministry of Women, Racial Equality and Human Rights, IBAMA, ICMBio, Funai, Palmares Cultural Foundation, SEBRAE, CNPCT, APIB, CONDRAF	2016	2017	-	YES
MS, MMA, MinC, Anvisa	Other members of the National Committee on Medicinal Plants and Phytotherapics.	2017	2019	2	YES
National School of Public Health - ENSP, Joaquim Venâncio Polytechnic School - EPJV, Fiocruz	ABRASCO	Continuous action	Continuous action	-	NO
Fiocruz Amazon, ENSP	FUNASA, Federation of the Indigenous Organizations of the Rio Negro	Continuous action	Continuous action	-	NO
Funai	MMA/DPG	2016	2019	13	NO
Funai	MMA/DPG, IPHAN	2016	2019	13	NO
Funai	MMA/DPG, IPHAN	2017	2020	13	NO

Target 18

By 2020, the traditional knowledge, innovations and practices of indigenous peoples, family rural producers and traditional communities relevant for the conservation and sustainable use of biodiversity, and their customary use of biological resources, are respected, in accordance with their uses, customs and traditions, national legislation and relevant international commitments, and fully integrated and reflected in the implementation of the CBD, with the full and effective participation of indigenous peoples, family rural producers and traditional communities, at all relevant levels.

Target-Action	Group/segment	Action	Objective
Target18-Action17	State Environmental Agencies (OEMAs)	Organization and implementation of Ordinary Meetings and Conferences of the Sustainable Development Council of Traditional Peoples and Communities.	Consolidate and implement the State Policy for products from socio-biodiversity.
Target18-Action18	State Environmental Agencies (OEMAs)	Implementation of the Program on Environmental Education and Family Agriculture/CE	Develop the Political Pedagogic Project on Environmental Education for family agriculture, featuring the collective construction of strategies to address the rural socio-environmental problems.
Target18-Action19	State Environmental Agencies (OEMAs)	Build the capacity of human resources through the Environmental Educators Qualification Course	Integrate sustainability concepts into the society of Ceará through the qualification of citizens and managers, making them co-responsible parties in environmental protection and conservation through the implementation of capacity building courses and other related activities.
Target18-Action20	State Environmental Agencies (OEMAs)	Recognition and protection of the traditional faxinalenses territories	Protect the natural ecosystems that function as guardians to ecosystem services.
Target18-Action21	State Environmental Agencies (OEMAs)	Establishment of an inter-institutional study group on protection of traditional territories (IAP, Public Attorney's Office/Operational Support Center to Human Rights Public Prosecutor' Offices, UFPR-Law, Puxirão Coordination of the Faxinalenses Peoples, and Popular University Law Advisory Movement)	Develop mechanisms for the protection of traditional territories and the legal basis for the protection of territories already registered at the environmental agency, recognizing them as protected areas.
Target18-Action22	State Environmental Agencies (OEMAs)	Creation of the Rural Anthropology group on traditional communities.	Participate in the process of creating the State Council of Traditional Peoples and Communities, in the Rural Development and Family Agriculture Council and respective Agroecology Sectoral Chamber, and in the State Table for Monitoring the Policy on the Regularization of Quilombola Territories of Paraná.
Target18-Action23	State Environmental Agencies (OEMAs)	"Improvement of the rules for harvesting Araucaria pine nuts"	Develop a more adequate resolution for harvesting the Araucaria pine nuts, seeking the facilitation of the technical understanding of its maturation phase, defining the characteristics of the ripe pine nut and readiness for harvesting.
Target18-Action24	State Environmental Agencies (OEMAs)	Regulation of indigenous participation in environmental discussions in Paraná.	Include representatives of indigenous communities in the State Environment Council.
Target18-Action25	Civil Society (NGOs)	Carry out the Seminar on Guianas Protected Areas - SAPEG	Support the organization of the event, where discussions are held on issues related to traditional peoples, extractive communities and quilombolas who live inside and around the protected areas of the Guianas Shield.
Target18-Action26	Civil Society (NGOs)	Implementation of Programs on Participatory Management of Biological Resources in the seasonally flooded forests of the Brazilian Amazon.	Build models, promote pilot initiatives and encourage the replication of participatory management systems by riverside communities (indigenous, caboclas, quilombolas, etc.) of traditionally used biological resources, such as fisheries resources, forest timber and non-timber resources, and energy sources in the seasonally flooded forests of the Brazilian Amazon, including the mangroves of the Pará coast line, initially implemented inside protected areas, taking into consideration the traditional knowledge associated to the scientific knowledge, encompassing approximately 50 species between 1998 and 2016.
Target18-Action27	Civil Society (NGOs)	Expansion of the RBMA Atlantic Forest Market Program	Identify, conserve and promote sustainable practices and products in the Atlantic Forest, through the collaborative construction of sustainability principles, directives and indicators for the good management of areas and species.
Target18-Action28	Academia	Valuation of the traditional knowledge of family rural producers and indigenous peoples.	Provide guidance to actions involving the collection and trade of native species' seeds, adding value through the knowledge of indigenous peoples and family rural producers that participate in the Xingu Seeds Network.

Responsibility for the Action	Possible partners	Start date	Conclusion date	Interface with other targets	"Is there a cost estimate? (yes or no)"
SEMA-AM	Federal and state governmental institutions, and non-governmental institutions.	2015	2020	-	YES
COEAS/SEMA-CE	COBIO, Surrounding communities, Residents' associations, Universities	2016	2019	1, 2, 3, 4	NO
COEAS/SEMA-CE	COBIO/SEMA, Universities, Communities around PAs and Others	2016	2019	1, 4	YES
SEMA - PR, IAP-PR	-	-	-	-	NO
SEMA - PR, IAP-PR	Public Attorney's Office/Operational Support Center to Human Rights Public Prosecutor' Offices, UFPR-Law, Puxirão Coordination of the Faxinalenses Peoples, and Popular University Law Advisory Movement.	-	-	-	NO
SEMA - PR, IAP-PR	SEMA and ITCG	-	-	-	NO
SEMA - PR, IAP-PR	SEMA -PR	2014	2015	-	NO
SEMA - PR, IAP-PR	SEMA-PR	-	-	-	NO
CI	Iepé, Imazon, ICMBIO, IDEFLORBio, Imaflora, Moore Foundation	2014	Continuous action	-	YES
IDSM -AM	IBAMA, ICMBio, INPA, MPEG, UFAM, UFPA, UFRA, IPAAM, DEMUC, SEPAq-PA, SEMA-PA, SFB	1998	Continuous action	2, 6, 7	NO
Atlantic Forest Biosphere Reserve	RBMA Network, Atlantic Forest network and partner institutions.	Continuous action	Continuous action	1, 3, 5, 8, 11, 13, 14, 15, 18	NO
PELD Site: Cerrado-Amazon Forest Transition, Site 15	Socio-environmental Institute, Xingu Seeds Network, and University of Leeds (England).	2017	2020	1	NO

Target 19

By 2020, the science base and technologies necessary for enhancing knowledge on biodiversity, its values, functioning and trends, and the consequences of its loss, are improved and shared, and the sustainable use of biodiversity, as well as the generation of biodiversity-based technology and innovation are supported, duly transferred and applied. By 2017, the complete compilation of existing records on aquatic and terrestrial fauna, flora and microbiota is finalized and made available through permanent and open access databases, with specificities safeguarded, with a view to identify knowledge gaps related to biomes and taxonomic groups.

Target-Action	Group/segment	Action	Objective
Target19-Action1	MMA Secretariats	Implementation of a Module on Support to Decision Making on Biodiversity - MAD in SiBBr	Create a consultation module through the establishment of filters and crossings, capable of: 1) present spatial data, 2) generate reports, and 3) produce analyses (priority areas for conservation, connectivity and fragmentation analyses, identification of potential areas for the provision of ecosystem services and location of areas for recuperation/ restoration, among others), to support the decision-making process.
Target19-Action2	Agencies Connected to MMA	Implementation of the Program to Promote the Dissemination of Data on Water Quality (ANA Resolution n 643/2016)	1. Contribute to the systematic management of water resources through the dissemination of data on the quality of surface water in Brazil. 2, Promote the implementation of the National Water Quality Network. 3. Promote the standardization of the criteria and methods for monitoring water quality in the country. 4. Contribute to the strengthening and structuring of the management agencies for carrying out the systematic monitoring of water quality and publicize the generated data.
Target19-Action3	Agencies Connected to MMA	Implementation of SISBIO	Analyze the requests for collection of biological material and for carrying out research in federal protected areas and caves, for processing authorization. The system allows the management of information resulting from completed research for biodiversity conservation purposes, as it receives activity reports that provide recommendations for PA management and data on species occurrence and distribution, which are made available in PortalBio. It is also possible to carry out data and information analyses on completed research to identify the possibility of applying the generated knowledge relevant for conservation, and manage knowledge gaps in the management of PAs.
Target19-Action4	Agencies Connected to MMA	Strategic Plan for Research and Knowledge Management of the Chico Mendes Institute for Biodiversity Conservation	Identify and disseminate the main demands for knowledge and management tools for strengthening biodiversity conservation strategies at the national scale, targeting the achievement of effective biodiversity conservation results.
Target19-Action5	Agencies Connected to MMA	Implementation of the Biodiversity Portal (PortalBio)	Make available to Brazilian society the data and information on Brazilian biodiversity generated or received by the Ministry of the Environment and its connected institutions. The Portal is under constant development for the implementation of enhanced features and integration with other databases on biodiversity.
Target19-Action6	Agencies Connected to MMA	Development of the Brazilian Biodiversity Journal	Disseminate scientific knowledge on biodiversity conservation, promoting the discussion and dissemination of conservation and management experiences, focusing on protected areas and threatened species.
Target19-Action7	Agencies Connected to MMA	Implementation of the Biodiversity Conservation Monitoring Program	Support the management of protected areas at the local, regional and national scale, through the in situ monitoring of biodiversity indicators, applying standardized protocols. Based on the identification of trends in the monitored indicators, it is possible to assess the effectiveness of management actions and introduce eventual adaptations to increase effectiveness.
Target19-Action8	Agencies Connected to MMA	Conclusion of the On-line Platform of the Brazilian Flora	Make available online and with free access the monographies on all groups of algae, fungi and plants.
Target19-Action9	Agencies Connected to MMA	Expansion of the REFLORA Virtual Herbarium	Make available online and with free access all plant samples collected in the Brazilian territory, deposited in different collections.
Target19-Action10	Agencies Connected to MMA	Make available online and with free access the Fauna Catalogue.	Make available online and with free access the Fauna Catalogue.
Target19-Action11	Agencies Connected to MMA	Support national herbaria in the electronic management and online publication of their collections.	Make the JABOT system available to other herbaria and Botanical Gardens for managing collections.
Target19-Action12	Agencies Connected to MMA	Expand the JBRJ Data Portal	1. Increase the number of information resources offered by the tools associated to the Data Portal. 2. Develop an integrated search mechanism.
Target19-Action13	Agencies Connected to MMA	Carry out floristic inventories in Protected Areas	"1. Indicate priority areas for the creation of PAs. 2. Fill in the knowledge gaps on the occurrence of plant species in PAs."
Target19-Action14	Agencies Connected to MMA	National Forest Inventory	Make data available to contribute to research on Brazilian forests.

Responsibility for the Action	Possible partners	Start date	Conclusion date	Interface with other targets	"Is there a cost estimate? (yes or no)"
"DECO/SBio/MMA and MCTIC "	ICMBio, Ibama, JBRJ, WWF, Universities, Research Centers	2016	2017	1, 2, 5, 14, 15	YES
ANA	State agencies and entities responsible for water resources management.	2014	2021	7, 8	YES
ICMBio/DIBIO	IBAMA, MCTIC, OEMAs	2007	Continuous action		NO
ICMBio/DIBIO	Preparation: GIZ, UNDP, FOS, Funbio; Implementation: learning and research institutions	2016	Continuous implementation, revised every 3 years	Potential to indirectly contribute to the achievement of all targets	NO
ICMBio/DIBIO	USP Polytechnic School, GIZ, BMUB, MMA, JBRJ	nov/15	Continuous action	1	NO
ICMBio/DIBIO	Learning and research institutions	2011	Continuous action	Potential to indirectly contribute to the achievement of all targets	NO
ICMBio/DIBIO	Preparation: GIZ, IPÊ, learning and research institutions; Implementation: IPÊ, SFB, JBRJ, UNDP, Funbio and learning and research institutions	2013	Continuous action	Targets 1, 12, 6	NO
JBRJ	MCTI, 800 voluntary taxonomists	2015	2020	1, 18, 15, 12	YES
JBRJ	MCTI, CNPq, FAPERJ, UFRJ/COPPE/ PESC, Newton Fund, UNEP, GEF, National and Foreign Herbaria	2011	2020	12	YES
JBRJ	MZUSP, UFRJ/COPPE/ PESC, SBZ, UFPR, INPA	2014	2020	-	NO
JBRJ	National and foreign herbaria, MCTI	2016	2020	12	-
JBRJ	MCTI, ICMBio, MMA, IBAMA	2017	2020	1	YES
JBRJ	ICMBio, Universities and Research Institutes	-	-	2,11, 12	YES
SFB	Embrapa, Universities, Herbaria	2011	2019	12, 15, 18 and 20	YES

Target 19

By 2020, the science base and technologies necessary for enhancing knowledge on biodiversity, its values, functioning and trends, and the consequences of its loss, are improved and shared, and the sustainable use of biodiversity, as well as the generation of biodiversity-based technology and innovation are supported, duly transferred and applied. By 2017, the complete compilation of existing records on aquatic and terrestrial fauna, flora and microbiota is finalized and made available through permanent and open access databases, with specificities safeguarded, with a view to identify knowledge gaps related to biomes and taxonomic groups.

Target-Action	Group/segment	Action	Objective
Target19-Action15	Ministries, Special Secretariats and Public Corporations	Disseminate to society, through the Embrapa Portal, concepts, information and technological solutions developed by Embrapa and partners for the recuperation and sustainable use of Legal Reserve Areas (ARL), Permanent Protection Areas (APP) and Areas of Restricted Use (AUR).	"1. Organize and present the main strategies for environmental recuperation, with concepts, expected results, possible risks and monitoring. 2. Present the experiences on environmental recuperation developed by Embrapa and partners, with research results and good agricultural and livestock practices recommended for APP, ARL, AUR in the Brazilian biomes. 3. Systematize and make information available on native plant species for environmental recuperation in the Brazilian biomes, according to the vegetation formation and phytophysiognomy. 4. Make information available on seedling and seed producers, areas for seed collection and cultivar/cloning garden. 5. Present the on-going research projects of the Embrapa portfolio on environmental recuperation and management. 6. Provide free access to Embrapa publications related to environmental recuperation. 7. Encourage compliance with Law 12.651/2012, on the protection of native vegetation. "
Target19-Action16	Ministries, Special Secretariats and Public Corporations	Development, implementation, updating and integration of information systems on Brazilian biodiversity: SiSBio, Species, Biodiversity Portal, MAD, JABOT, SiBBr/MCTI.	Reduce the extinction threat to species of Brazilian biodiversity, recuperate their populations and promote knowledge and sustainable use.
Target19-Action17	Ministries, Special Secretariats and Public Corporations	Spatialize the distribution and monitor key species, and endemic and invasive species in Brazilian biomes.	Integrate into SiBBr data on biodiversity monitoring, CNUC data and data from land use/cover monitoring in Brazilian biomes (Prodes, TerraClass, fire occurrences)
Target19-Action18	Ministries, Special Secretariats and Public Corporations	Integrate into SiBBr data on biodiversity monitoring, CNUC data and data from land use/cover monitoring in Brazilian biomes (Prodes, TerraClass, fire occurrences).	Spatialize the distribution and monitor key species, and endemic and invasive species in Brazilian biomes.
Target19-Action19	Institutes/ Institutions connected to Ministries	Implementation of the Long-Term Ecological Research Program - PELD (CNPq Normative Resolution n. 23/2011)	1. Support long-term research targeting the investigation of functioning patterns of Brazilian biomes, of the biodiversity they house, and of the impacts caused by human disturbance and environmental changes, at permanent research sites distributed throughout the various Brazilian ecosystems. 2. Promote the transferring of generated knowledge to the civil society, to contribute to the country's environmentally sustainable development. 3. Support information networks, national and international cooperation, and the qualification of human resources, and provide subsidies for the establishment of public policies for the development of long-term ecological research in Brazil.
Target19-Action20	Institutes/ Institutions connected to Ministries	Implementation of the SISBIOTA Brazil Program - National System of Biodiversity Research (CNPq Administrative Resolutions 236/2010 and 033/2014 - Management and Scientific Committees)	Support and expand knowledge on Brazilian biodiversity, improve forecast capacity on responses to global change, particularly to changes in land use and cover and climate change, associating research to the qualification of human resources, environmental education and dissemination of scientific knowledge.
Target19-Action21	Institutes/ Institutions connected to Ministries	Implementation of the Taxonomy Capacity Building Program - PROTAX (CNPq Administrative Resolution 006/2007)	1. Promote the qualification of human resources on Taxonomy and Curatorship of Biological Collections. 2. Support and provide subsidies to various governmental actions targeting the knowledge and conservation of biodiversity (PPBio, SISBIOTA, REFLORA, the List of Brazilian Flora, the List of Brazilian Fauna, the Directives of the National Biodiversity Policy and of the United Nations Convention on Biological Diversity).
Target19-Action22	Institutes/ Institutions connected to Ministries	Implementation of the Long-Term Ecological Research Program - Call for Proposals CNPq/ CAPES/FAPs/BC- Newton Fund/PELD n. 15/2016	Provide financial support to sites of Long-Term Ecological Research in Brazilian ecosystems, to ensure the continuity of the PELD.
Target19-Action23	Institutes/ Institutions connected to Ministries	Implementation of the Taxonomy Capacity Building Program - PROTAX - Call for Proposals CNPq/MCTI/FAP/PROTAX No 001/2015	Support scientific and technological research projects that aim to significantly contribute to the country's scientific and technological development, providing continuity and strengthening the PROTAX.
Target19-Action24	Institutes/ Institutions connected to Ministries	Implementation of the Program "Plants of Brazil: Historical Retrieval and Virtual Herbarium for Knowledge and Conservation of the Brazilian Flora - REFLORA" (CNPq Administrative Ruling 105/2011 - Technical Committee)	Fund research projects and build the virtual herbarium to retrieve and make available to Brazil and to the world images and information on samples of the Brazilian flora collected up to the 18th, 19th and 20th centuries by foreign missions, deposited at the Royal Botanic Gardens de Kew (RBGK), England, and at the Muséum National d'Histoire Naturelle de Paris (MNHN), France.

Responsibility for the Action	Possible partners	Start date	Conclusion date	Interface with other targets	"Is there a cost estimate? (yes or no)"
Embrapa	Universities, State and Municipal Secretariats of the Environment, SFB, MAPA, MMA.	2014	2018	4, 5 11, 15	YES
MCTIC	MMA, ICMBio, Ibama, JBRJ, Boticário Group Foundation	-	2019	-	YES
MCTIC and partners	"MMA, INPE, INPA, EMBRAPA, IBAMA, JBRJ and research institutions"	-	2020	19	YES
MCTIC and partners	"MMA, INPE, INPA, EMBRAPA, IBAMA, JBRJ and research institutions"	-	2020	19	YES
CNPq	MCTIC, CAPES, State Research Support Foundations, British Council - Newton Fund	1999	Continuous action	1, 5, 10 and 15	YES
CNPq and MCTIC (FNDCT)	CAPES, MEC, MMA, State Research Support Foundations	2010	Continuous action	1 and 10	NO
CNPq	MCTIC, MEC, CAPES	2007	Continuous action	13	YES
CNPq	CAPES, State Research Support Foundations, British Council-Newton Fund	2016	2020	1, 5, 10 and 15	YES
CNPq	MCTIC, CAPES, State Research Support Foundations	2015	2019	13	YES
CNPq	MCTIC/FNDCT, MEC/CAPES, State FAPs, JBRRJ, HVFF – INCT/UFPE, Natura S.A., Vale S.A., Royal Botanic Gardens Kew (RBGK), Muséum National d'Histoire Naturelle de Paris (MNHN), BC-Newton Fund	2010	2017	1	YES

Target 19

By 2020, the science base and technologies necessary for enhancing knowledge on biodiversity, its values, functioning and trends, and the consequences of its loss, are improved and shared, and the sustainable use of biodiversity, as well as the generation of biodiversity-based technology and innovation are supported, duly transferred and applied. By 2017, the complete compilation of existing records on aquatic and terrestrial fauna, flora and microbiota is finalized and made available through permanent and open access databases, with specificities safeguarded, with a view to identify knowledge gaps related to biomes and taxonomic groups.

Target-Action	Group/segment	Action	Objective
Target19-Action25	Institutes/ Institutions connected to Ministries	Call for Proposal CNPq Nº 39/2012 – Archipelago and Oceanic Islands Program	Provide continuity and increase support to research projects that seek to significantly contribute to the country's scientific and technological development, under the Archipelago and Oceanic Islands Program, to be implemented at the São Pedro and São Paulo Archipelago (PROARQUIPÉLAGO), at Trindade Island and at the Martim Vaz Archipelago (PROTRINDADE).
Target19-Action26	Institutes/ Institutions connected to Ministries	Implementation of the Call for Proposals CTI/ CNPq/FNDCT- Crosscutting Action /CT-Waterways nº. 62/2013 – Research and Development in Oceanic Islands.	Select proposals of scientific, technological and innovation research, under the Archipelago and Oceanic Islands Program - PROARQUIPELAGO, reducing the knowledge gap present on the areas of interest and seeking to increase the support to research projects in isolated oceanic habitats of special ecological and strategic interest in the country.
Target19-Action27	Institutes/ Institutions connected to Ministries	Implementation of the Call for Proposals CNPq nº 15/2015 - Archipelago and Oceanic Islands Program	Provide continuity and increase support to research projects that seek to significantly contribute to the country's scientific and technological development, under the Archipelago and Oceanic Islands Program, to be implemented at the São Pedro and São Paulo Archipelago (PROARQUIPÉLAGO), at Trindade Island and at the Martim Vaz Archipelago (PROTRINDADE).
Target19-Action28	Institutes/ Institutions connected to Ministries	Management of the Ecological Station of the Fiocruz Atlantic Forest Campus - CFMA, with 506 hectares, partially overlapping with the Pedra Branca State Park, in the city of Rio de Janeiro.	Improve the life quality of local population and achieve a sustainable and healthy balance between human occupation and the natural and urban environment. Offer support to the development and implementation of integrated public policies on health and environment. The Ecological Station of the Fiocruz Atlantic Forest Campus - CFMA, with 506 hectares and partially overlapping with the Pedra Branca State Park in the city of Rio de Janeiro, expands the research on drugs, biodiversity conservation and control of zoonoses, for the development of technologies that reconcile health and environment.
Target19-Action29	Institutes/ Institutions connected to Ministries	Carry out basic research on biological, health and social sciences, that support actions and policies on health and environment.	Promote activities of research, teaching, technological development and technical cooperation targeting the preservation of the environment and biodiversity, qualification of people in 32 Post-graduation (strictu sensu) courses.
Target19-Action30	Institutes/ Institutions connected to Ministries	Integration of the databases of the Fiocruz Biological Collections to the SiColl, World Federation of Culture Collections and GBIF/SiBBr	Make information accessible on the biological collections maintained at Fiocruz, and integrate this information to the global free-access databases.
Target19-Action31	Institutes/ Institutions connected to Ministries	Promote the actions under ARCA - Institutional Repository of the Oswaldo Cruz Institute - IOC	Collect, preserve, disseminate and provide visibility to the institutional technical-scientific production, which represents a significant portion of the public research effort on health in Brazil.
Target19-Action32	Institutes/ Institutions connected to Ministries	Integration of the databases on biological and environmental data and mathematical modelling of the SISS-Geo in the SiBBr and Portal Bio	Bring into the biodiversity information systems of Brazil (SiBBr and PortalBio) the results and services of mathematical and geo-spatial modelling of species distribution and ecological opportunities for zoonoses.
Target19-Action33	Institutes/ Institutions connected to Ministries	Make the Fiocruz Biological Collections available	1. Make taxonomic knowledge available on the genetic biodiversity of native and alien species of archaea, bacteria, fungi, protozoa, helminths, insects, and mollusks of medical and environmental importance, as well as human and animal histopathological samples. 2. Make available the epidemiological memory and the records of variations of etiological agents along time. 3. Make available the genetic populations of organisms related to research on public health, in addition to the micro-biological collections with potential for the production of new inputs of biotechnological interest.
Target19-Action34	Institutes/ Institutions connected to Ministries	Build the capacity of human resources in taxonomy and curatorship of collections	1. Directly contribute to the preparation of the List of the Brazilian Flora with online access. 2. Contribute to the implementation of the Global Strategy for Plant Conservation of the Convention on Biological Diversity (GSPC-CDB).
Target19-Action35	Institutes/ Institutions connected to Ministries	Implementation of the Biodiversity Research Program - PPBio (MCT Administrative Rulings nº 268, of 18 June 2004, nº 382, of 15 June 2005 and nº 388, of 22 June 2006)	Coordinate the regional expertise to increase and disseminate knowledge on Brazilian biodiversity in a planned and coordinated manner, through research networks targeting the identification, characterization, valuation and sustainable use of biodiversity. This action is structured in three components (Biological Collections, Biological Inventories, and Thematic Projects).
Target19-Action36	Institutes/ Institutions connected to Ministries	Implementation of the Geoma Network (MCT Administrative Ruling nº 316, of 30 June 2004)	Develop computing models capable of analyzing and forecast the space-time dynamics of the ecological and socio-economical systems at different geographical scales, to contribute to the development and monitoring of public policies for the conservation and sustainable development of the Amazon.

Responsibility for the Action	Possible partners	Start date	Conclusion date	Interface with other targets	"Is there a cost estimate? (yes or no)"
CNPq	CNPq	2012	2018	1, 10, 15	YES
CNPq	CNPq	2013	2018	1, 10, 15	YES
CNPq	CNPq	2015	2019	1, 10, 15	YES
CFMA/Presidency - Fiocruz	INEA-RJ	Continuous action	Continuous action	5 and 11	-
Fiocruz at all its units	Universities and research, technology and innovation centers, corporations	Continuous action	Continuous action	-	-
Fiocruz, MCTIC	WFCC, SciColl, SiBBr	Continuous action	Continuous action	-	-
ICTIC/Fiocruz	-	Continuous action	Continuous action	-	-
Institutional Program on Biodiversity & Health - Presidency of Fiocruz	MCTI, ICMBio	Continuous action	Continuous action	-	-
Fiocruz, Coordination of the Vice-Presidency of Research and Reference Services - VPPSR	SiBBr/GBIF, SiColl and World Culture Collections	Continuous action	Continuous action	1, 9 and 13	-
CNPq	Universities	-	2020	-	-
CNPq (implementation), MCTIC		2004	Continuous action	1 and 13	-
CNPq (implementation), MCTIC		2004	Continuous action	1 and 15	-

Target 19

By 2020, the science base and technologies necessary for enhancing knowledge on biodiversity, its values, functioning and trends, and the consequences of its loss, are improved and shared, and the sustainable use of biodiversity, as well as the generation of biodiversity-based technology and innovation are supported, duly transferred and applied. By 2017, the complete compilation of existing records on aquatic and terrestrial fauna, flora and microbiota is finalized and made available through permanent and open access databases, with specificities safeguarded, with a view to identify knowledge gaps related to biomes and taxonomic groups.

Target-Action	Group/segment	Action	Objective
Target19-Action37	Institutes/ Institutions connected to Ministries	Implementation of the Networks of Research, Monitoring and Modelling on Biodiversity and Ecosystems - Call for Proposals MCTI/CNPq nº 35/2012 – PPBio/Geoma	1. Provide financial support to scientific projects, coordinating regional expertise to increase and disseminate knowledge on Brazilian biodiversity and ecosystems in a planned and coordinated manner, through research networks targeting the identification, characterization, valuation and sustainable use of biodiversity (Biodiversity Research Program - PPBio); 2. Intensify actions related to the environmental modelling of the Amazon, including biotic, abiotic and socio-economic factors of the Thematic Network of Research on the Environmental Modelling of the Amazon - GEOMA.
Target19-Action38	Institutes/ Institutions connected to Ministries	Implementation of the Call for Proposals Nº 79/2013 - MCTI/CNPq/FNDCT Crosscutting Action - Regional Networks of Research on Biodiversity and Biotechnology	"Promote the expansion and consolidation of Regional Networks of Research on Biodiversity and Biotechnology, contributing to the capacity building of human resources and the production of scientific, technological and innovation knowledge that promote the sustainable social and economic development of the North, Central-West and Northeast Regions, targeting the conservation and sustainable use of the natural resources in the biomes encompassed by these regions."
Target19-Action39	Institutes/ Institutions connected to Ministries	Implementation of Call for Proposals MCTI/ CNPq/FNDCT - Crosscutting Action Nº 67/2013 - Biological Collections	Support scientific, technological and innovation research projects that contribute to promote the improvement of infrastructure and modernization of biological collections (zoological, botanical and of micro-organisms) of Brazilian institutions involved in inventories, characterization and management of biological diversity, based on Component 2 of the National Biodiversity Policy - Biodiversity Conservation (Decree Nº 4.339, of 22 August 2002, item 11), to contribute to increase knowledge, and to the conservation and sustainable use of biodiversity components.
Target19-Action40	Institutes/ Institutions connected to Ministries	Implementation of Call for Proposals MCTI/CNPq Nº 45/2012 - Information System on Brazilian Biodiversity (SiBBr) - Biological Collections	Make publicly available data referring to the Brazilian biological collections through the Information System on Brazilian Biodiversity SiBBr.
Target19-Action41	Institutes/ Institutions connected to Ministries	Implementation of the Call for Proposals MCTI/ CNPq/FNDCT - Crosscutting Action Nº 68/2013 Large-Scale Biosphere - Atmosphere Program in the Amazon - LBA	"1. Support research projects targeting the increase in knowledge on the functioning of ecosystems in the Amazon and Amazon-Cerrado transition areas; 2. Give priority to studies on the impacts of environmental changes on the interactions between biosphere and atmosphere, emphasizing the carbon cycle, including the tropical forest response to higher concentrations of atmospheric CO2, and associate observation and experimental approaches with the capacity building of human resources, in addition to strengthening the research infrastructure to contribute to the integration of different components of ecosystem services."
Target19-Action42	Institutes/ Institutions connected to Ministries	Implementation of the Call for Proposals MCTI/ CNPq/CT-Hydro Nº 36/2013 – Water conservation, and soil and biodiversity management, recuperation and conservation	Significantly contribute to understanding the interaction processes of soil/water/ biodiversity, emphasizing the rationalization of water use, impacts from the management, use and inadequate occupation of soils and the charge contributions to receiving water bodies. 1. Support the development of knowledge and improve technologies and methodologies for minimizing water use and value nutrients contained in human excrements. 2. Support the development of models and techniques for water conservation and rational use. 3. Support the development of knowledge on the risk of water reuse in irrigation and aquaculture. 4. Support the development of knowledge and improve methodologies for water and soil management in areas under desertification processes. 5. Support the development of knowledge and improve methodologies for the recuperation of slope vegetation to mitigate natural disasters associated to torrential rains and earth slides. 6. Support the development of knowledge and improve methodologies for the recuperation of riparian forests, mangroves, water springs, etc. 7. Promote the capacity building of human resources for work in the technical-scientific themes of water conservation and management, soil and biodiversity conservation and recuperation. 8. Disseminate technical and scientific knowledge to decision makers at the national, regional and municipal levels on the hydrological cycle processes involved in the soil/water/biodiversity interaction. 9. Promote the integrated action of research institutions working on the water, soil and biodiversity themes, through the establishment of cooperative and multi-disciplinary networks focusing on the interactions among the various portions of the hydrological cycle.
Target19-Action43	State Environmental Agencies (OEMAs)	Identification of research priorities for each PA, considering the Management Plans and data produced after their preparation	Promote the implementation of research in the State PAs.

Responsibility for the Action	Possible partners	Start date	Conclusion date	Interface with other targets	"Is there a cost estimate? (yes or no)"
CNPq (implementation), MCTIC		2012	2017	1, 13 and 15	YES
MCTIC (FNDCT - Crosscutting Action)/CNPq		2013	2018	1, 13	YES
MCTIC (FNDCT - Crosscutting Action)/CNPq		2013	2018	1	YES
CNPq (implementation), MCTIC		2012	2016	1	YES
MCTIC (FNDCT-Crosscutting Action), CNPq		2013	2017	1, 14	YES
MCTIC (FNDCT)/CNPq		2013	2017	1, 14, 15	
FATMA-SC	-	-	-	-	NO

Target 19

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Target-Action	Group/segment	Action	Objective
Target19-Action44	State Environmental Agencies (OEMAs)	Implementation of the SIGWEB computing system for biodiversity and Protected Areas management	This system was planned, at this first stage, to function as a basic computing tool for spatial analysis, search, recording and consultation of geographical data and production of maps, and as a tool to view environmental data produced and recorded by FATMA, thus targeting the understanding of the spatial arrangement and improvement of biodiversity conservation in the state of Santa Catarina.
Target19-Action45	State Environmental Agencies (OEMAs)	Development of a research protocol for the species Cavia intermedia (CR-SC)	Establish minimum procedures aiming at the care of the species and environment, of high environmental fragility.
Target19-Action46	State Environmental Agencies (OEMAs)	Dissemination of the generated scientific knowledge	Disseminate the results of scientific research through the publication of abstracts.
Target19-Action47	State Environmental Agencies (OEMAs)	Development and publication of the Researcher's Manual, for marketing the PAs by the academic community	Publication of information on Protected Areas and on priority research themes to be carried out in PAs.
Target19-Action48	State Environmental Agencies (OEMAs)	Biodiversity data and information dissemination through the SIGBIO online platform.	Join the Management Committee of the Geographical Information System on Biodiversity.
Target19-Action49	State Environmental Agencies (OEMAs)	Periodical assessment of the conservation status of biodiversity in the state of Rio Grande do Sul	Join the Management Group of the Biodiversity Monitoring System of Rio Grande do Sul - RS BIOMONITORA
Target19-Action50	State Environmental Agencies (OEMAs)	Development of the Agroforestry Systems Project in Permanent Preservation Areas	Evaluate species suitable for planting for the recuperation of APPs, while also capable of generating income; evaluate the costs of APP recuperation, biodiversity gains, and define value chains.
Target19-Action51	State Environmental Agencies (OEMAs)	Strengthening of the Pine Nut Value Chain Project	Strengthen community organization, the intensification of araucaria planting within the communities' territories, and the inclusion of the pine nut as a product in the Conab acquisition list, ensure the acquisition of pine nuts through the PAA and PNAE programs, and ensure its minimum price.
Target19-Action52	State Environmental Agencies (OEMAs)	Implementation of a research program on key fauna species living in the floodplains of the Brazilian Amazon.	Develop research projects on the biology and ecology of threatened species, flag species, endemic species, and species of higher economic relevance for the populations living on the Amazon floodplains (particularly manatees, dolphins, giant river otters, black caymans, jaguars, common caymans, bald-headed uacaris, black-headed uacaris, black-headed squirrel monkeys, pirarucus, tucunarés, aruanãs, tambaquis, etc.).
Target19-Action53	State Environmental Agencies (OEMAs)	Implement the Program on Inventories of the Vertebrate Biodiversity in PAs of Western Amazon.	Carry out the inventories of the vertebrate fauna in federal and state PAs in western Amazon, providing contributions to the management of these protected areas (FLONA Tefé, RESEX Rio Jutaí, RESEX Baixo Juruá, RESEX Auati- Paraná, ARIE Javari-Buriti, ESEC Juami-Japurá).
Target19-Action54	State Environmental Agencies (OEMAs)	Digitization of the IDSM scientific collections	Digitization of the IDSM reference scientific collections (particularly the botanical, mammals, reptiles and amphibians, and fish collections) on the biodiversity of the forests and floodplains of the western Brazilian Amazon, with the adoption of internationally standardized formats (SpeciesLink), and make this information available for online consultation.
Target19-Action55	State Environmental Agencies (OEMAs)	"Geo-information management / Geomoc in the Interior"	Promote the adequate ordering in the generation, storage, access, sharing, dissemination and use of geo-spatial data at IEF; Promote the use by IEF of standards and norms ratified by the SISEMA Spatial Data Infrastructure - IDE; Promote the capacity building and enhancement of the use of geo-technology tools.
Target19-Action56	State Environmental Agencies (OEMAs)	Creation of the State Cadaster of Protected Areas (CEUC)	Develop and integrate a database with standardized information on PAs, presenting information on physical, biological, touristic, social and managerial characteristics, allowing society to monitor the results of actions for the protection of the natural and cultural heritage of the state.

Responsibility for the Action	Possible partners	Start date	Conclusion date	Interface with other targets	"Is there a cost estimate? (yes or no)"
FATMA-SC	-	2015	2017	-	YES
FATMA-SC	-	2016	2017	-	NO
FATMA-SC	Academia	2016	2017	-	NO
FATMA-SC	-	-	-	-	NO
Fepam -RS	SEMA, FZB	2016	Continuous action	1	NO
Fepam -RS	SEMA, FZB	2014	Continuous action	1	NO
IAP -PR	SEMA -PR	-	-	-	-
IAP -PR	Embrapa	-	-	-	-
IDSM- AM	INPA, MPEG, UFPA, UFAM, UFMG, UFRJ, UFPB, Univ. Florida, Univ. St. Andrews, UFAP, WCS	1993	Not defined	15	NO
IDSM- AM	ICMBio, MPEG	2014	2019	15	YES
IDSM- AM	-	2014	2017	-	YES
Directorate of Fauna Protection -IEF/MG	IEF	Waiting for publication of Decree on responsibilities and availability of budget resources (estimate March 2017)	Continuous	-	YES
COBIO/CEDIB/SEMA -CE	Sema, Residents' Associations, NGOs, Municipal Government, Universities, and Others	2016	2019	1 and 2	NO

Target 19

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Target-Action	Group/segment	Action	Objective
Target19-Action57	State Environmental Agencies (OEMAs)	Promotion of Energy Efficiency for the Pottery Center of the Lower Jaguaribe	Establish and implement innovative alternative practices and techniques for the gradual replacement of firewood as energy sources for pottery industries in the region of the Lower Jaguaribe.
Target19-Action58	State Environmental Agencies (OEMAs)	Development of a System and Database for Biological Collections, including the loading of data; implementation of a geographical database targeting the conservation of biodiversity and data integration services; Development of an application with GIS web interface.	Integrate the biodiversity database of the three environmental agencies of RS. Digitize the biological collections of the Zoobotanical Foundation and integrate these data to the system.
Target19-Action59	State Environmental Agencies (OEMAs)	Management of the knowledge on São Paulo biodiversity (1)	Expand the biodiversity monitoring network of the state of São Paulo
Target19-Action60	State Environmental Agencies (OEMAs)	Management of the knowledge on São Paulo biodiversity (8)	Promote studies for assessing ecosystem services provided by São Paulo biodiversity as a contribution to the proposal of public policies (TEEB-SP).
Target19-Action61	State Environmental Agencies (OEMAs)	Updating and adjustment of the Biodiversity Communication Program	Promote adjustments and periodically update the Biodiversity Portal.
Target19-Action62	State Environmental Agencies (OEMAs)	Management of the knowledge on São Paulo biodiversity (7)	Promote discussions on the role and actions that can be promoted by the ESP considering Law 13.123/15 and its regulation (genetic resources).
Target19-Action63	State Environmental Agencies (OEMAs)	Management of the knowledge on São Paulo biodiversity (6)	Implement a policy on scientific collections, focusing on their expansion.
Target19-Action64	State Environmental Agencies (OEMAs)	Management of the knowledge on São Paulo biodiversity (2)	Expand and improve the management of research carried out in PAs through the São Paulo Environmental System.
Target19-Action65	State Environmental Agencies (OEMAs)	Management of the knowledge on São Paulo biodiversity (4)	Seek the data sharing among the various systems/databases on biodiversity in the state.
Target19-Action66	State Environmental Agencies (OEMAs)	Management of the knowledge on São Paulo biodiversity (3)	Expand the knowledge on São Paulo biodiversity through the production of information and carrying out research, as a contribution to biodiversity management.
Target19-Action67	State Environmental Agencies (OEMAs)	Management of the knowledge on São Paulo biodiversity (5)	Implement the São Paulo State Biodiversity Outlook, through the development and application of indicators to monitor the achievement of the Aichi Targets and the quality of biodiversity in the state of São Paulo.
Target19-Action68	Civil Society (NGOs)	Dissemination of information from the Database on the Belém Endemism Center, with free access	Disseminate information on the biodiversity of the region of the Belém Endemism Center.
Target19-Action69	Civil Society (NGOs)	Biodiversity Monitoring in the region of the Belém Endemism Center	Evaluate the impacts of the production of dendê palm oil on the local biodiversity.
Target19-Action70	Civil Society (NGOs)	Biodiversity Monitoring with camera traps - Wildlife Insights Network	Assess the status of biodiversity in Federal protected areas using camera traps.
Target19-Action71	Civil Society (NGOs)	Consolidation of Atlantic Forest biodiversity data	Make data available on the biodiversity of the Atlantic Forest of the south of Brazil.
Target19-Action72	Civil Society (NGOs)	Make available the MAP Geobahia System	1. Make available to users a spatial analysis online tool focusing on mining ventures, installation of wind power parks and power lines. 2. Present information on the relevant environmental attributes, vulnerabilities, legal restrictions, potential, suitability, and socio-environmental costs for the implementation of ventures.

Responsibility for the Action	Possible partners	Start date	Conclusion date	Interface with other targets	"Is there a cost estimate? (yes or no)"
CODES/SEMA -CE	MMA, CAIXA, COBIO and COEAS/SEMA and Others	2016	2018	1 and 7	YES
SEMA -RS	FZB	Under implementation	-	-	-
SMA-SP	FAPESP (São Paulo State Research Support Foundation)	2016	2020	-	YES
Coordination of Biodiversity and Natural Resources (SMA -SP)	Secretariat of Agriculture and Supply, through the Coordination of Integral Technical Assistance - CATI, Conservation International of Brazil – CI Brazil, German International Cooperation Agency (GIZ) and Ministry of the Environment.	2016	2020	-	YES
Coordination of Environmental Planning and Communications Advisory (SMA -SP)	SMA Secretary's Office/ International Advisory	2016	2020	-	YES
SMA Secretary's Office, Forestry Institute, Forestry Foundation and Botany Foundation (SMA -SP)	-	2016	2020	-	YES
Botany Institute/Curators' Council and Forestry Institute (SMA - SP)	-	2016	2020	-	YES
Forestry Institute, Botany Institute and Forestry Foundation (SMA -SP)	-	2016	2020	1, 17 and 20	YES
Forestry Institute, Forestry Foundation, Botany Institute, Geological Institute, Coordination of Environmental Planning, GSTIC (Sectoral Group on Information and Communication Technology) and SMA Secretary's Office (SMA -SP).	-	2016	2020	-	YES
Forestry Institute and Botany Institute (SMA -SP)	-	2016	2020	-	YES
All sectors of the Executive Secretariat of the São Paulo Biodiversity Commission (SMA -SP).	-	2016	2020	-	YES
CI	USAID, Agropalma, Federal University of Pará	2015	Continuous action	-	YES
CI	USAID, Agropalma, Federal University of Pará	2008	2018	1 and 12	YES
CI, ICMBio	CENAP	2016	-	1 and 12	NO
Paraná Atlantic Forest Network	SPVS	2016	2020	-	YES
SEMA-BA, Conservation International	Jacarandá	2015	2017	-	YES

Target 19

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Target-Action	Group/segment	Action	Objective
Target19-Action73	Financing Agencies and Private Sector	Provide support to science, technology and innovation for increased knowledge and appropriate use of Brazilian biodiversity.	1. Provide financial support to science, technology and innovation projects that promote the expansion of knowledge on biodiversity and the appropriate use of natural resources. 2. Promote the capacity building of human resources and implementation of infrastructure for the development of science, technology and innovation projects on related themes.
Target19-Action74	Academia	Implementation of the PPBio biodiversity and ecosystem services monitoring program.	Monitor the status of biodiversity and ecosystem processes in natural, semi-natural and human-altered areas in all Brazilian biomes. Optimize the processes for evaluating environmental impacts resulting from infrastructure projects. Evaluate the degree of invasion in Brazilian biomes by alien species.
Target19-Action75	Academia	Dissemination of knowledge on biodiversity in PAs of the state of Mato Grosso	Carry out inventories in at least three PAs in the Amazon biome.
Target19-Action76	Academia	Consolidation and implementation of a database and its interaction with SiBBr	Load data into databases.
Target19-Action77	Academia	Fauna and flora monitoring in the Amazon-Cerrado transition, under the Long-Term Ecological Projects (PELD/CNPq)	Provide information for the development of public policies based on long-term monitoring activities.
Target19-Action78	Academia	Carry out new vegetation inventories and repeated inventories in the Amazon-Cerrado transition, and collect climate variables.	Carry out inventories and collect data on vegetation to quantify and compare the carbon dynamics in the air biomass and evaluate the long-term effects of climate and of human impacts on the structure and dynamics of phytophysiognomies of the Cerrado-Amazon transition.
Target19-Action79	Academia	Carry out new fauna inventories and repeated inventories in the Amazon-Cerrado transition	Carry out inventories, collect data on fauna and evaluate the long-term effects of human impacts on the structure and dynamics of species populations.
Target19-Action80	Academia	Share data and information on the biodiversity of the Amazon-Cerrado transition	Make data available in SiBBr and in academic dissemination means (books and scientific journals) on the biodiversity of the Amazon-Cerrado transition.

Responsibility for the Action	Possible partners	Start date	Conclusion date	Interface with other targets	"Is there a cost estimate? (yes or no)"
Finep	-	2008	2019	-	YES
CGGE/MCTIC, Western Amazon Network (INPA)	EMBRAPA, ICMBIO, IBAMA, Federal and State Universities.	2017	2020	1, 2, 4, 9, 11, 15, 17,	YES
UFMT, SEMA -MT	IFMT	2016	2021	1, 2,6, 8, 13 and 14	YES
PELD Site: Atlantic Forest and Lake System of the Medium Doce River-MG, Site 4	UFOP, UFSJ, IFMG	2017	2020	-	NO
PELD Site Cerrado-Amazon Forest Transition, Site 15	University of Brasília and University of Leeds (England)	2017	2020	1, 7, 12, 15,	YES
PELD Site Cerrado-Amazon Forest Transition, Site 15	Universities of Leeds, Exeter and Oxford (England)	2017	2020	1	YES
PELD Site Cerrado-Amazon Forest Transition, Site 15	University of Brasília, Socio-environmental Institute, Universities of Leeds, Exeter and Oxford (England)	2017	2020	1	YES
PELD Site Cerrado-Amazon Forest Transition, Site 15	University of Brasília	2017	2020	1, 2, 12, 17	YES

Target 20

Immediately following the approval of the Brazilian targets, resources needs assessments are carried out for the implementation of national targets, followed by the mobilization and allocation of financial resources to enable, from 2015 on, the implementation and monitoring of the Strategic Plan for Biodiversity 2011-2020, as well as the achievement of its targets.

Target-Action	Group/segment	Action	Objective
Target20-Action1	MMA Secretariats	Inventory of biodiversity expenditures	Carry out the inventory of federal, state and private sector expenditures referring to biodiversity since 2006.
Target20-Action2	Ministries, Special Secretariats and Public Corporations	Enhancement of a Financial Resources Mobilization Plan for the conservation of biodiversity (Biodiversity Financing Initiative - BIOFIN Brazil)	Systematically measure the public expenditure with biodiversity to identify gaps and propose innovative financing mechanisms for the conservation and sustainable use of biodiversity. This initiative complements the effort already adopted by IPEA to measure expenditures (actions 20.1) and intends to advance the Financial Resources Mobilization Strategy for Biodiversity.
Target20-Action3	Institutes/ Institutions connected to Ministries	Keep track of the measurement and monitoring of the Federal Environmental Expenditure	Support the quantification, analysis and monitoring of federal government environmental expenditure through the conceptualization of the governmental environmental expenditure.
Target20-Action4	State Environmental Agencies (OEMAs)	Development of the Mobilization, Action and Monitoring Plan for the achievement of the biodiversity conservation targets.	Systematize the expenditures and revenue of ecosystem services provided by biodiversity, proposing the necessary instruments for the use, financing and sustainable maintenance of the state natural resources.
Target20-Action5	State Environmental Agencies (OEMAs)	Coordination with the Committee on the Recuperation of Damaged Assets	Discuss and decide on the resources resulting from the Public Civil Suits related to assets under FEMA jurisdiction, directing them to the development of projects for the reconstitution, restoration and repair of the damaged environmental assets, including those of scientific and research character.
Target20-Action6	State Environmental Agencies (OEMAs)	Establishment of partnership with the Brazilian Fund for Biodiversity	Mobilize financial resources for the protection of ecosystems, aiming to improve the area covered by protected areas and their management effectiveness.
Target20-Action7	State Environmental Agencies (OEMAs)	Development of Plans for the Application of Compensatory Measures	1. Implement support structures, management plans, and other studies to inform biodiversity conservation actions; 2. Link the application of resources to the Biodiversity Conservation Strategies, particularly the regularization of full protection Protected Areas and environmental education.
Target20-Action8	State Environmental Agencies (OEMAs)	Promotion of local actions for biodiversity	Evaluate the normative instrument that guides the Green VAT in the state.
Target20-Action9	Civil Society (NGOs)	Develop cost and revenue estimates for different forest restoration techniques; forest restoration business cases including financing strategies.	Promote low-cost forest restoration and/or with economic profit.
Target20-Action10	Civil Society (NGOs)	Information dissemination on the progress in the achievement of the Aichi Targets for the Atlantic Forest biome, including information on invested resources.	1. Disseminate information on the progress in the achievement of the Aichi Targets for the Atlantic Forest biome, including information on invested resources. 2. Communicate and promote awareness, education, and support to decision making.

Responsibility for the Action	Possible partners	Start date	Conclusion date	Interface with other targets	"Is there a cost estimate? (yes or no)"
SBio/MMA	Ipea, CEBDS, CNI, states	-	2020	2, 17	-
SBio/MMA, MP	MMA, MF and Ipea	2017	2019	2,17	YES
SBio/MMA, MP	IPEA, MMA, MP, MF	2015	2017	2,17	NO
COBIO/CEDIB/SEMA -CE	COEAS, CODES, ADINS, SEXEC and related areas under the Secretariat	2016	2019	1, 2, 17	NO
SEMA -PR	-	Initiated in 2010	Continuous action	11	NO
SEMA - PR, IAP - PR	-	-	Continuous action	11	NO
SEMA - PR, IAP - PR	-	-	Continuous action	11	NO
Coordination of Environmental Planning and SMA-SP Secretary's Office	-	2016	2020	-	YES
Agroicone	INPUT Project and other partners	2015	Not defined	7,11,14,15	NO
"Atlantic Forest Biosphere Reserve"	MMA, GIZ, Atlantic Forest Network, research and learning institutions, federal, state and municipal governments, private sector.	Annual	Annual	All	YES

List of Acronyms of the Action Plan

ABS	Access and Benefit Sharing
AC	State of Acre
ADINS	Institutional Development Advisory (*Assessoria de Desenvolvimento Institucional*)
Agraer	Agrarian Development and Rural Extension Agency (*Agência de Desenvolvimento Agrário e Extensão Rural*)
Agroicone	Institute of Trade Studies and International Negotiations (*Instituto de Estudos do Comércio e Negociações Internacionais*)
AIS	Alien Invasive Species
AL	State of Alagoas
AM	State of Amazonas
ANA	National Water Agency (*Agência Nacional de Águas*)
AP	State of Amapá
APA	Environmental Protection Area (*Área de Proteção Ambiental*)
APP	Permanent Preservation Area (*Área de Preservação Permanente*)
ARPA	Amazon Region Protected Areas
Ascom	Communications Advisory (*Assessoria de Comunicação*)
ATK	Associated Traditional Knowledge
BA	State of Bahia
BAP	Upper Paraguai River Watershed (*Bacia Hidrográfica do Alto Paraguai*)
BFN	Biodiversity for Food and Nutrition
BIOFIN	Biodiversity Finance Initiative
CAPES	Coordination for Professional Improvement of Higher Education Graduates (*Coordenação de Aperfeiçoamento de Pessoal de Nível Superior*)
CAR	Rural Environmental Cadastre (*Cadastro Ambiental Rural*)
CATI	Coordination of Integral Technical Assistance (*Coordenadoria de Assistência Técnica Integral*)
CBD	Convention on Biological Diversity
CBPM	Charity Fund of the Military Police (*Caixa Beneficente da Polícia Militar*)
CCZEE	Coordination Commission of the Ecological-Economic Zoning of the National Territory (*Comissão Coordenadora do Zoneamento Ecológico Econômico do Território Nacional*)
CE	State of Ceará
CEBDS	Brazilian Corporate Council for Sustainable Development (*Conselho Empresarial Brasileiro para o Desenvolvimento Sustentável*)
CEDIB	Division of Conservation of Biological Diversity (*Célula de Conservação da Diversidade Biológica*)
CEPERJ	Rio de Janeiro State Center for Statistics, Research and Qualification of Public Servants (*Centro Estadual de Estatísticas, Pesquisas e Formação de Servidores Públicos do Rio de Janeiro*)
CGE	State Audit Office and Ombudsman (*Controladoria e Ouvidoria Geral do Estado*)
CGen	Genetic Heritage Management Council (*Conselho de Gestão do Patrimônio Genético*)
CI	Conservation International of Brazil
CIF	Climate Investment Fund
CIRM	Inter-Ministerial Commission for Sea Resources (*Comissão Interministerial para os Recursos do Mar*)
CISS	Wildlife Health Information Center (*Centro de Informação em Saúde Silvestre*)
CMS	Convention on the Conservation of Migratory Species of Wild Animals
CNCFlora	National Center of Plant Conservation (*Centro Nacional de Conservação da Flora*)
CNI	National Confederation of Industries (*Confederação Nacional das Indústrias*)
CNPCT	National Council for the Sustainable Development of Traditional Peoples and Communities (*Conselho Nacional de Desenvolvimento Sustentável de Povos e Comunidades Tradicionais*)
CNPq	National Scientific and Technological Development Council (*Conselho Nacional de Desenvolvimento Científico e Tecnológico*)
CNRH	National Water Resources Council (*Conselho Nacional de Recursos Hídricos*)

CNUC	National Cadastre of Protected Areas (*Cadastro Nacional de Unidades de Conservação*)
COBIO	Coordination of Biodiversity (*Coordenadoria da Biodiversidade*)
COC	House Oswaldo Cruz (*Casa Oswaldo Cruz*)
CODEMIG	Minas Gerais Economic Development Company (*Companhia de Desenvolvimento Econômico de Minas Gerais*)
Comec	Coordination of the Curitiba Metropolitan Region (*Coordenação da Região Metropolitana de Curitiba*)
CONAB	National Supply Company (*Companhia Nacional de Abastecimento*)
Conabio	National Biodiversity Commission (*Comissão Nacional de Biodiversidade*)
Conaflor	National Commission on Forests (*Comissão Nacional de Florestas*)
ConaREDD	National Commission for the Reduction of Greenhouse Gas Emissions from Deforestation and Forest (*Comissão Nacional para a Redução da Emissão de Gases de Efeito Estufa Provenientes do Desmatamento e da Degradação Florestal*)
Condraf	National Sustainable Rural Development Council (*Conselho Nacional de Desenvolvimento Rural Sustentável*)
CONFREM	National Commission for strengthening the extractive reserves and the coastal-marine extractive peoples (*Comissão Nacional para o fortalecimento das reservas extrativistas e dos povos extrativistas costeiros marinhos*)
COP	Convention of the Parties
Copel	Paraná State Energy Company (*Companhia Paranaense de Energia*)
CPG	Permanent Committee on the Management and Sustainable Use of Fisheries Resources (*Comitê Permanente de Gestão e Uso Sustentável de Recursos Pesqueiros*)
CURB	Contract for the Use of Genetic Heritage and Benefit Sharing (*Contrato de Utilização do Patrimônio Genético e de Repartição de Benefícios*)
DAP	Department of Protected Areas (*Departamento de Áreas Protegidas*)
DEA	Department of Environmental Education (*Departamento de Educação Ambiental*)
DECO	Department of Ecosystems (*Departamento de Ecossistemas*)
Defra	Department for Environment, Food and Rural Affairs – UK
Degrad/Detex	Mapping of Forest Degradation in the Brazilian Amazon (*Mapeamento de Degradação Florestal na Amazônia Brasileira*)
DEMUC	Department of Climate Change and Protected Areas (*Departamento de Mudanças Climáticas e Unidades de Conservação*)
DESP	Department of Biodiversity Conservation – Species (*Departamento de Conservação da Biodiversidade – Espécies*)
Deter	Real-Time Deforestation Detection System of the Legal Amazon (*Sistema de Detecção do Desmatamento na Amazônia Legal em Tempo Real*)
DETRAN	Department of Road Traffic (*Departamento de Trânsito*)
DF	Federal District (*Distrito Federal*)
DIPAB	Directorate of Biodiversity and Protected Areas (*Diretoria de Biodiversidade e Áreas Protegidas*)
DIRAC/Fiocruz	Directorate of Campus Administration (*Diretoria de Administração do Campus*)
DIREB	Regional Directorate of Brasília (*Diretoria Regional de Brasília*)
DLAA	Department of Environmental Licensing and Assessment (*Departamento de Licenciamento e Avaliação Ambiental*)
DNOCS	National Department of Works against Droughts (*Departamento Nacional de Obras contra as Secas*)
DPG	Department of Genetic Heritage (*Departamento de Patrimônio Genético*)
DPMA	Environmental Protection Police Headquarters (*Delegacia de Proteção ao Meio Ambiente*)
EEI	Alien Invasive Species (*Espécie Exótica Invasora*)
EEZ	Ecological-Economic Zoning
EMATERCE	Ceará Technical Assistance and Rural Extension Corporation (*Empresa de Assistência Técnica e Extensão Rural do Ceará*)
Embrapa	Brazilian Agricultural Resarch Corporation (*Empresa Brasileira de Pesquisa Agropecuária*)
ENREDD+	National REDD+ Strategy (*Estratégia Nacional de REDD+*)
EPAGRI	Santa Catarina Agricultural Research and Rural Extension Corporation (Empresa de Pesquisa Agropecuária e Extensão Rural de Santa Catarina)

EPUSP	Polytechnic School of São Paulo University (Escola Politécnica da Universidade de São Paulo)
ES	State of Espirito Santo
ETICE	Ceará Information Technology Corporation (*Empresa de Tecnologia da Informação do Ceará*)
FAP	Research Support Foundation (*Fundação de Amparo à Pesquisa*)
FAPESP	São Paulo State Research Support Foundation (*Fundação de Amparo à Pesquisa do Estado de São Paulo*)
FAPEU	Research Support and University Extension Foundation (*Fundação de Amparo à Pesquisa e Extensão Universitária*)
FATMA	Environment Foundation (*Fundação do Meio Ambiente*)
FAZ	Sustainable Amazon Foundation (*Fundação Amazonas Sustentável*)
FBDS	Brazilian Foundation for Sustainable Development (*Fundação Brasileira para o Desenvolvimento Sustentável*)
Femarh	State Foundation for the Environment and Water Resources (*Fundação Estadual do Meio Ambiente e Recursos Hídricos*)
FEPAM	State Foundation for Environmental Protection (*Fundação Estadual de Proteção Ambiental*)
FHIDRO	Fund for the Recuperation, Protection and Sustainable Development of Watersheds (*Fundo de Recuperação, Proteção e Desenvolvimento Sustentável das Bacias Hidrográficas*)
FIEP	Paraná State Federation of Industries (*Federação das Indústrias do Estado do Paraná*)
Fiesp	São Paulo State Federation of Industries (*Federação das Indústrias do Estado de São Paulo*)
Fiocruz	Oswaldo Cruz Foundation (*Fundação Oswaldo Cruz*)
FNDCT	National Fund for Scientific and Technological Development (*Fundo Nacional de Desenvolvimento Científico e Tecnológico*)
FNRB	National Fund for Benefit Sharing (*Fundo Nacional para a Repartição de Benefícios*)
FUNAI	National Indigenous Peoples Foundation (*Fundação Nacional do Índio*)
Funasa	National Health Foundation (*Fundação Nacional de Saúde*)
Funbio	National Fund for Biodiversity (*Fundo Brasileiro para a Biodiversidade*)
FUNCEME	Ceará Meteorology and Water Resources Foundation (*Fundação Cearense de Meteorologia e Recursos Hídricos*)
FVA	Vitória Amazônica Foundation (*Fundação Vitória Amazônica*)
FZB	Zoo-botanical Foundation (*Fundação Zoobotânica*)
GABGOV	Governor's Office (*Gabinete do Governador*)
GEF	Global Environment Facility
GIZ	German Cooperation Agency for Sustainable Development
GO	State of Goiás
GPFLR	Global Partnership on Forest Landscape Restoration
GTAPE	Working and Monitoring Group on Strategic Projects (*Grupo de Trabalho e Acompanhamento de Projetos Estratégicos*)
IAP	Paraná Environmental Institute (*Instituto Ambiental do Paraná*)
IBÁ	Brazilian Tree Industry (*Indústria Brasileira de Árvores*)
IBAMA	Brazilian Institute for the Environment and Renewable Natural Resources (I*nstituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis*)
IBDF	Brazilian Institute of Forestry Development (*Instituto Brasileiro de Desenvolvimento Florestal*)
IBGE	Brazilian Institute of Geography and Statistics (*Instituto Brasileiro de Geografia e Estatística*)
ICICT	Institute of Health Communication, Scientific Information and Technology (*Instituto de Comunicação, Informação Científica e Tecnologia em Saúde*)
ICLEI	Local Governments for Sustainability
ICMBio	Chico Mendes Institute for Biodiversity Conservation (*Instituto Chico Mentes de Conservação da Biodiversidade*)
ICMS	Value Added Tax on Merchandise and Services (*Imposto sobre Circulação de Mercadorias e Serviços*)
Icone	Institute of Trade Studies and International Negotiations (*Instituto de Estudos do Comércio e Negociações Internacionais*)

IDAM	Amazonas Institute of Agricultural and Forestry Development (*Instituto de Desenvolvimento Agropecuário e Florestal do Amazonas*)
IDESAM	Amazon Institute of Conservation and Sustainable Development (*Instituto de Conservação e Desenvolvimento Sustentável da Amazônia*)
IDSM	Mamirauá Institute (*Instituto Mamirauá*)
IEF	State Institute of Forests (*Instituto Estadual de Florestas*)
IFCE	Ceará Federal Institute (*Instituto Federal do Ceará*)
IFMG	Minas Gerais Federal Institute (*Instituto Federal de Minas Gerais*)
IFMT	Mato Grosso Federal Institute (*Instituto Federal do Mato Grosso*)
IGC	Geography and Cartography Institute (*Instituto Geográfico e Cartográfico*)
IICA	Inter-American Institute of Cooperation on Agriculture (*Instituto Interamericano de Cooperación para la Agricultura*)
IIS	International Sustainability Institute (*Instituto Internacional de Sustentabilidade*)
IMASUL	Mato Grosso do Sul Institute of the Environment (*Instituto de Meio Ambiente de Mato Grosso do Sul*)
Incra	National Institute of Colonization and Agrarian Reform (*Instituto Nacional da Colonização e da Reforma Agrária*)
INEA	State Institute of the Environment (*Instituto Estadual do Ambiente*)
INPA	National Institute of Amazon Research (*Instituto Nacional de Pesquisas da Amazônia*)
INPE	National Institute of Space Research (*Instituto Nacional de Pesquisas Espaciais*)
IPAAM	Amazonas Institute of Environmental Protection (*Instituto de Proteção Ambiental do Amazonas*)
IPBES	Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services
IPÊ	Ecological Research Institute (*Instituto de Pesquisas Ecológicas*)
IPEA	Applied Economics Research Institute (*Instituto de Pesquisa Econômica Aplicada*)
Iphan	Institute of National Historical and Artistic Heritage (*Instituto do Patrimônio Histórico e Artístico Nacional*)
ISA	Socio-environmental Institute (*Instituto Socioambiental*)
ITCG	Institute of Land, Cartography and Geology (*Instituto de Terras, Cartografia e Geologia*)
ITIC	Institute of Information Technology and Communication (*Instituto de Tecnologia da Informação e Comunicação*)
IUCN	International Union for the Conservation of Nature
JBRJ	Rio de Janeiro Botanical Garden (*Jardim Botânico do Rio de Janeiro*)
LC	Complementary Law (*Lei Complementar*)
LNCC	Bioinformatic Scientific Computation National Laboratory (*Laboratório Nacional de Computação Científica em Bioinformática*)
MA	State of Maranhão
MAPA	Ministry of Agriculture, Livestock and Supply (*Ministério da Agricultura, Pecuária e Abastecimento*)
MCidades	Ministry of Cities (*Ministério das Cidades*)
MCTIC	Ministry of Science, Technology, Innovation and Communication (*Ministério da Ciência, Tecnologia, Inovações e Comunicações*)
MD	Ministry of Defence (*Ministério da Defesa*)
MDINCRA	Special Secretariat of Family Agriculture and Agrarian Development (*Secretaria Especial de Agricultura Familiar e do Desenvolvimento Agrário*)
MDSA	Ministry of Social and Agrarian Development (*Ministério do Desenvolvimento Social e Agrário*)
MEA	Multilateral Environmental Agreements
MEC	Ministry of Education and Culture (*Ministério da Educação e Cultura*)
MF	Ministry of Finance (*Ministério da Fazenda*)
MG	State of Minas Gerais
MI	Ministry of National Integration (*Ministério da Integração Nacional*)
MINC	Ministry of Culture (*Ministério da Cultura*)
MMA	Ministry of the Environment (*Ministério do Meio Ambiente*)
MME	Ministry of Mines and Energy (*Ministério de Minas e Energia*)

MP	Ministry of Planning, Development and Administration (*Ministério do Planejamento, Desenvolvimento e Gestão*)
MPA	Ministry of Fisheries and Aquaculture (*Ministério da Pesca e Aquicultura*)
MPOG	Ministry of Planning, Development and Administration (*Ministério do Planejamento, Desenvolvimento e Gestão*)
MRE	Ministry of Foreign Affairs (*Ministério das Relações Exteriores*)
MS	State of Mato Grosso do Sul
MT	State of Mato Grosso
MT	Ministry of Transportation (*Ministério dos Transportes*)
MTur	Ministry of Tourism (*Ministério do Turismo*)
NATURANTINS	Tocantins Nature Institute (*Instituto Natureza do Tocantins*)
NBSAP	National Biodiversity Strategy and Action Plan
NDC	Nationally Determined Contribution
NGBS	Biodiveristy and Health Management Center (*Núcleo de Gestão em Biodiversidade e Saúde*)
NGO	Non Governmental Organization
OAB	Organization of Brazilian Lawyers (*Organização dos Advogados do Brasil*)
OBSMA	Brazilian Olympic Games on Health and Environment (*Olimpíada Brasileira de Saúde e Meio Ambiente*)
OCDE	Organisation for Economic Co-operation and Development
OEMA	Institute of Energy and Environment (*Instituto de Energia e Meio Ambiente*)
OGU	Federal Budget (*Orçamento Geral da União*)
OTSS	Observatory of Bocaina Sustainable and Healthy Territories (*Observatório de Territórios Sustentáveis e Saudáveis da Bocaina*)
PA	State of Pará
PainelBio	Brazilian Panel on Biodiversity (*Painel Brasileiro de Biodiversidade*)
PAN	National Action Plan (*Plano de Ação Nacional*)
PAN-Bio	National Biodiversity Action Plan (*Plano de Ação Nacional de Biodiversidade*)
PB	State of Paraíba
PC	Community Protocol (*Protocolo Comunitário*)
PDRS	Sustainable Rural Development Project (*Projeto de Desenvolvimento Rural Sustentável*)
PE	State of Pernambuco
PELD	Long-Term Ecological Research Program (*Programa de Pesquisa Ecológica de Longa Duração*)
PES	Payment for Ecosystem Services
PF	Focal Point (*Ponto Focal*)
PG	Genetic Heritage (*Patrimônio Genético*)
PGE	State Attorney's Office (*Procuradoria Geral do Estado*)
PGPM	Policy on the Guarantee of Minimum Prices for Products from Socio-biodiversity (*Política de Garantia dos Preços Mínimos para os Produtos da Sociobiodiversidade*)
PGTS	Sustainable Territorial Management Plans (*Planos de Gestão Territorial Sustentável*)
PI	State of Piauí
Planaveg	National Plan for the Recuperation of Native Vegetation (*Plano Nacional para Recuperação da Vegetação Nativa*)
PMA	Environmental Military Police (*Policia Militar Ambiental*)
PMABB	Program on the Environmental Monitoring of Brazilian Biomes (*Programa de Monitoramento Ambiental dos Biomas Brasileiros*)
PMDBBS	Project on the Satellite Monitoring of Brazilian Biomes (*Projeto de Monitoramento dos Biomas Brasileiros por Satélite*)
PNB	National Biodiversity Policy (*Política Nacional de Biodiversidade*)
PNGATI	Territorial and Environmental Management of Indigenous Lands (*Gestão Territorial e Ambiental em Terras Indígenas*)
PNMA	National Environment Policy (*Política Nacional do Meio Ambiente*)

PNMC	National Policy on Climate Change (*Política Nacional de Mudança do Clima*)
PNRB	National Benefit Sharing Program (*Programa Nacional de Repartição de Benefícios*)
PPA	Federal Multi-Year Plan (*Plano Plurianual*)
PPCDam	Action Plan for the Prevention and Control of Deforestation in the Amazon (*Plano de Ação para a Prevenção e Controle do Desmatamento na Amazônia*)
PPCerrado	Action Plan for the Prevention and Control of Deforestation and Fire in the Cerrado (*Plano de Ação para a Prevenção e Controle do Desmatamento e das Queimadas no Cerrado*)
PPCS	Action Plan for Sustainable Production and Consumption (*Plano de Ação para Produção e Consumo Sustentáveis*)
PR	State of Paraná
PRA	Environmental Regularization Plan (*Plano de Regularização Ambiental*)
Pró-Espécies	Pró-Espécies – National Program for the Conservation of Threatened Species (*Programa Nacional de Conservação das Espécies Ameaçadas de Extinção*)
RBMA	Atlantic Forest Biosphere Reserve (*Reserva da Biosfera da Mata Atlântica*)
REDD+	Reducing Greenhouse Gas Emissions from Deforestation and Forest Degradation
RedesFito	Innovation Networks on Biodiversity-based Medicines (*Redes de Inovação em Medicamentos da Biodiversidade*)
REFLORA	Brazilian Plants Program: Historical Recuperation and Virtual Herbarium for the Knowledge and Conservation of Brazilian Flora (*Programa Plantas do Brasil: Resgate Histórico e Herbário Virtual para o Conhecimento e Conservação da Flora Brasileira*)
RIRH	Water Resources of the Paranapanema Water Resources Management Unit (*Recursos Hídricos da Unidade de Gestão de Recursos Hídricos Paranapanema*)
RJ	State of Rio de Janeiro
RL	Legal Reserve (*Reserva Legal*)
RMA	Atlantic Forest Network (*Rede Mata Atlântica*)
RN	State of Rio Grande do Norte
RO	State of Rondônia
RPPN	Private Reserve of the Natural Heritage (*Reserva Particular do Patrimônio Natural*)
RR	State of Roraima
RS	State of Rio Grande do Sul
RSX	Xingu Seeds Network (*Rede de Sementes do Xingu*)
SAD	State Secretariat of Administration and for Reducing Burocratization (*Secretaria de Estado de Administração e Desburocratização*)
SAE	Secretariat of Strategic Affairs (*Secretaria de Assuntos Estratégicos*)
SAIC	Secretariat of Institutional Coordination and Environmental Citizenship (*Secretaria de Articulação Institucional e Cidadania Ambiental*)
SANEPAR	Paraná Sanitation Corporation (*Companhia de Saneamento do Paraná*)
SBio	Secreatariat of Biodiversity (*Secretaria de Biodiversidade*)
SC	State of Santa Catarina
SCN	National Accounting System (*Sistema de Contas Nacionais*)
SCP	Systematic Conservation Planning
SDS	State Secretariat of Sustainable Development (*Secretaria de Estado de Desenvolvimento Sustentável*)
SE	State of Sergipe
SEA	State Secretariat of Administration (*Secretaria de Estado da Administração*)
SEAB	State Secretariat of Agriculture and Supply (*Secretaria de Estado da Agricultura e do Abastecimento*)
SEAD	Special Secretariat of Family Agriculture and Agrarian Development (*Secretaria Especial de Agricultura Familiar e o Desenvolvimento Agrário*)
SEBRAE	Brazilian Micro and Small Business Support Service (*Serviço Brasileiro de Apoio às Micro e Pequenas Empresas*)

SECIMA	Secretariat of Environment, Water Resources, Infrastructure, Cities and Metropolitan Affairs (*Secretaria de Meio Ambiente, Recursos Hídricos, Infraestrutura, Cidades e Assuntos Metropolitanos*)
Secom	Secretariat of Social Communication (*Secretaria de Comunicação Social*)
SECULT	State Secretariat of Culture (*Secretaria de Estado da Cultura*)
SEDUC	State Secretariat of Education (*Secretaria de Estado da Educação*)
Seducs	Science and Health Education Service (*Serviço de Educação em Ciências e Saúde*)
SEED	State Secretariat of Education (*Secretaria de Estado da Educação*)
SEFAZ	State Secretariat of Finance (*Secretaria de Estado de Fazenda*)
SEJUS	State Secretariat of Justice (*Secretaria de Estado da Justiça*)
SEMA	State Secretariat of Environment and Water Resources (*Secretaria de Estado do Meio Ambiente e Recursos Hídricos*)
SEMACE	Ceará State Superintendency of the Environment (*Superintendência Estadual do Meio Ambiente do Ceará*)
SEMADE	State Secretariat of the Environment and Economic Development (*Secretaria de Estado de Meio Ambiente e Desenvolvimento Econômico*)
SEMARH	Secretariat of Environment and Water Resources (*Secretaria do Meio Ambiente e Recursos Hídricos*)
SENAI	National Service of Industry Learning (*Serviço Nacional de Aprendizagem Industrial*)
SEPAQ	State Secretariat of Fisheries and Aquaculture (*Secretaria de Estado de Pesca e Aquicultura*)
Seped	Secretariat of Research and Development Policies and Programs (*Secretaria de Políticas e Programas de Pesquisa e Desenvolvimento*)
SEPLAG	Secretariat of Planning and Administration (*Secretaria do Planejamento e Gestão*)
SEPLAN	Secretariat of Planning and Economic Affairs (*Secretaria de Planejamento e Assuntos Econômicos*)
SESA	State Secretariat of Health (*Secretaria de Estado da Saúde*)
SETI	State Secretariat of Science, Technology and Graduate Studies (*Secretaria de Estado da Ciência, Tecnologia e Ensino Superior*)
SETUR	State Secretariat of Tourism (*Secretaria de Estado de Turismo*)
SEXEC	Executive Secretariat (*Secretaria Executiva*)
SFB	Brazilian Forest Service (*Serviço Florestal Brasileiro*)
SGPR	Paraná Government Secretariat (*Secretaria de Governo do Paraná*)
SiBBr	Information System on Brazilian Biodiversity (*Sistema de Informação sobre a Biodiversidade Brasileira*)
SiCAR	Rural Environmental Cadastre System (*Sistema de Cadastro Ambiental Rural*)
SIEE	System of Economic-Ecological Interaction (*Sistema de Interação Econômico Ecológico*)
SIGA/MS	SIGA/MS – Mato Grosso do Sul Integrated Environmental Management System (*Sistema Integrado de Gestão Ambiental de Mato Grosso do Sul*)
SIMEPAR	Paraná Meteorological System (*Sistema Meteorológico do Paraná*)
SINTOX	National System of Pharmacological Toxicity Information (*Sistema Nacional de Informações Tóxico-Farmacológicas*)
SISBIOTA Brasil	National Biodiversity Research System (*Sistema Nacional de Pesquisa em Biodiversidade*)
SisEA	State Environmental Education Information System (*Sistema Estadual de Informação em Educação Ambiental*)
SISEMA	State Environment System (*Sistema Estadual de Meio Ambiente*)
SisGen	National Management System for Genetic Heritage and Associated Traditional Knowledge (*Sistema Nacional de Gestão do Patrimônio Genético e do Conhecimento Tradicional Associado*)
Sisnama	National Environment System (*Sistema Nacional de Meio Ambiente*)
SMA	State Secretariat of Environment (*Secretaria de Estado do Meio Ambiente*)
SMCQ	Secretariat of Climate Change and Environmental Quality (*Secretaria de Mudanças Climáticas e Qualidade Ambiental*)
SMDEST	Municipal Secretariat of Economic, Social and Tourism Development (*Secretaria Municipal de Desenvolvimento Econômico, Social e de Turismo*)
SNUC	National Protected Areas System (*Sistema Nacional de Unidades de Conservação*)

SP	State of São Paulo
SPM	Special Secretariat of Policies for Women (*Secretaria Especial de Políticas para as Mulheres*)
SPVS	Wildlife Research and Environmental Education Society (*Sociedade de Pesquisa em Vida Selvagem e Educação Ambiental*)
SRHQ	SRHQ – Secretariat of Water Resources and Environmental Quality (*Secretaria de Recursos Hídricos e Qualidade Ambiental*)
SRHU	Secretariat of Water Resources and Urban Environment (*Secretaria de Recursos Hídricos e Ambiente Urbano*)
SSPDS	Secretariat of Public Safety and Social Defence (*Secretaria de Segurança Pública e Defesa Social*)
SUS	Public Health System (*Sistema Único de Saúde*)
SVDS	Municipal Green Secretariat (*Secretaria Municipal do Verde*)
SVS	Secretariat of Health Surveillance (*Secretaria de Vigilância em Saúde*)
TEEB	The Economics of Ecosystem and Biodiversity
TerraClass	Inventory of Information on Land Use and Cover (*Levantamento de Informações de Uso e Cobertura da Terra*)
TI	Indigenous Land (*Terra Indígena*)
TNC	The Nature Conservancy
TO	State of Tocantins
UC	Protected Area (*Unidade de Conservação*)
UFAM	Federal University of Amazonas (*Universidade Federal do Amazonas*)
UFCE	Federal University of Ceará (*Universidade Federal do Ceará*)
UFG	Federal University of Goiás (*Universidade Federal de Goiás*)
UFGD	Federal University of Grande Dourados (*Universidade Federal da Grande Dourados*)
UFMS	Federal University of Mato Grosso do Sul (*Universidade Federal do Mato Grosso do Sul*)
UFMT	Federal University of Mato Grosso (*Universidade Federal do Mato Grosso*)
UFOP	Federal University of Ouro Preto (*Universidade Federal de Ouro Preto*)
UFPA	Federal University of Pará (*Universidade Federal do Pará*)
UFPE	Federal University of Pernambuco (*Universidade Federal de Pernambuco*)
UFPR	Federal University of Paraná (*Universidade Federal do Paraná*)
UFRGS	Federal University of Rio Grande do Sul (*Universidade Federal do Rio Grande do Sul*)
UFSJ	Federal University of São João Del-Rei (*Universidade Federal de São João Del-Rei*)
UFU	Federal University of Uberlândia (*Universidade Federal de Uberlândia*)
UN	United Nations
UnB	University of Brasília (*Universidade de Brasília*)
UNDP	United Nations Development Programme
Unea	Environmental Education Unit (*Unidade de Educação Ambiental*)
UNEMAT	State University of Mato Grosso (*Universidade do Estado de Mato Grosso*)
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
URCA	Regional University of Cariri (*Universidade Regional do Cariri*)
USAID	United States Agency for International Development
USFS	United States Forest Service
USP	University of São Paulo (*Universidade de São Paulo*)
VPAAS	Vice-Presidency of Environment and Health Services (*Vice-Presidência de Ambiente e Atenção a Saúde*)
WCS	Wildlife Conservation Society
WFCC	World Federation for Culture Collections
WRI	World Resources Institute
WWF	World Wide Fund for Nature

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