

Setting National Biodiversity Goals and Targets for 2010

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Capacity-Building Workshop for South, East and South East
Asia on Preparation of the Fourth National Reports

Tsukuba, Japan, 2-4 December 2008

CBD: 2010 and after

- 1994-2010
 - Guidance
 - Programmes of Work
 - NBSAPs
- 2010-
 - Implementation of triple objectives
 - Multiple levels

2010 biodiversity targets

- Global:
 - ‘2010 target’
 - Further four goals
 - Nineteen objectives
- Framework of goals, sub-targets and indicators
 - Seven focal areas
 - Eleven goals
 - Twenty one sub-targets

National targets

- Parties invited to establish national targets
- Global set of targets is flexible framework within which national and/or regional targets can be developed
- Incorporate into plans, programmes and initiatives, including NBSAPs

National targets

- Flexible and adapted to national circumstances
- Use quantitative elements
- Achievable and realistic
- Developed through participatory process

Why targets?

- Words to action
- Actions to measurable results
- Measurable, time-bound, outcome-oriented
- Define desirable state for biodiversity (ecosystem, species, genetic levels)
- Desired outcomes (conservation, sustainable use, sharing of benefits)

Brazilian experience NBSAP

The Ministry of the Environment established the National Biodiversity Strategy and National Report project. Funded by the GEF and starting in 1998, its objectives are to:

- Carry out and publish strategic studies;
- Develop the National Biodiversity Policy;
- Establish and implement the national biodiversity CHM;
- Prepare the National Report to the CBD;
- Develop a proposal for implementation of the National Biodiversity Policy;
- Enhance regional cooperation on biodiversity.

National Biodiversity Policy

Decree 4339, of August 22, 2002

- 19 principles,
- 10 general guidelines,
- 7 components,
- 27 major goals and
- 285 specific goals

National Biodiversity Policy - Components

- 1 – Knowledge of Biodiversity
- 2 – Conservation of Biodiversity
- 3 – Sustainable Use of Components of Biodiversity
- 4 – Monitoring and Evaluation of Biodiversity and Prevention and Mitigation of Impacts
- 5 - Access to Genetic Resources and to Associated Traditional Knowledge and Benefit Sharing
- 6 – Biodiversity Education, Public Awareness, Information and Outreach
- 7 – Reinforcing Legal and Institutional Support for Biodiversity Management

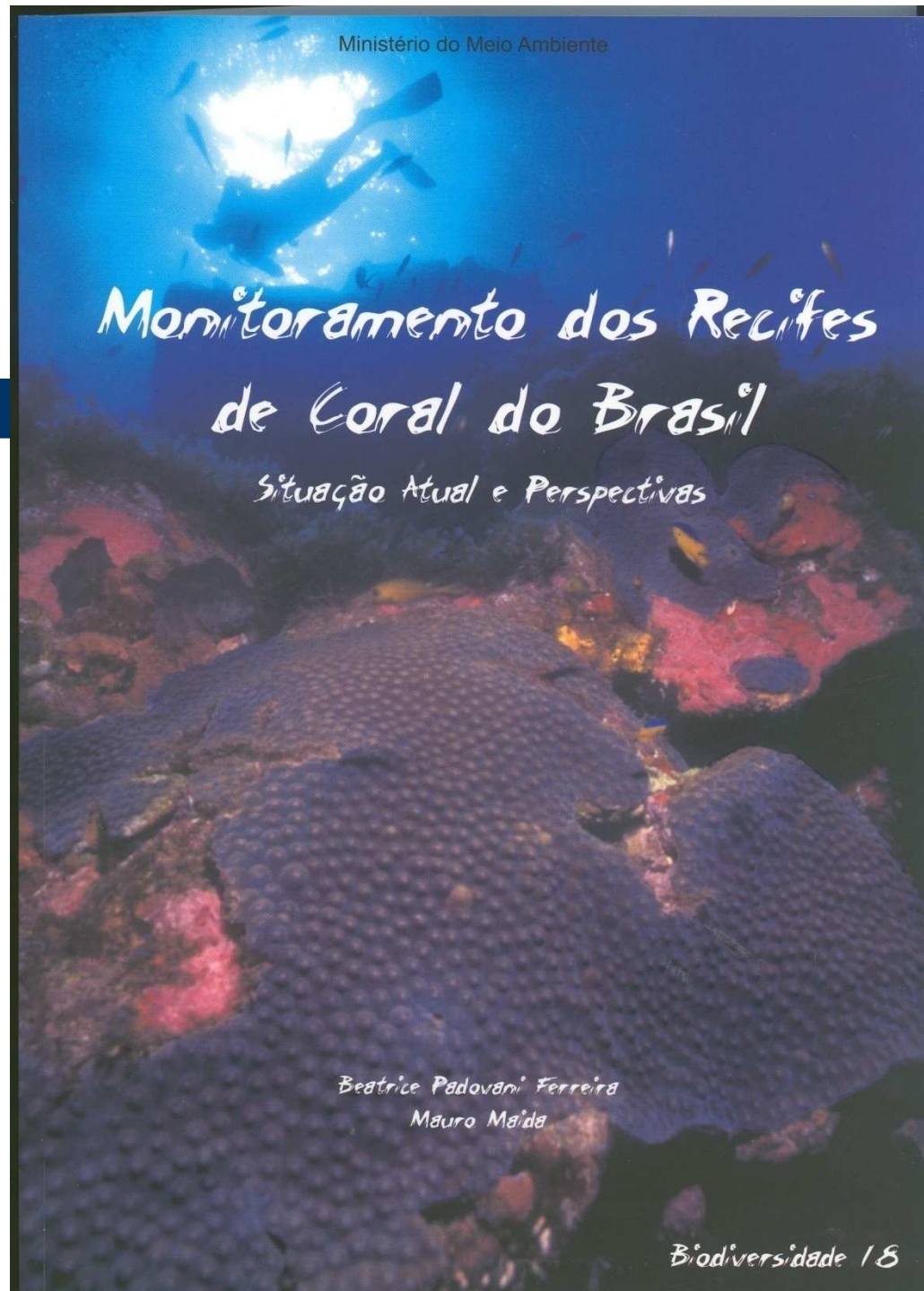
Component 1: Knowledge

- PROBIO (Conservation and Sustainable Use of Brazilian Biodiversity Project (GEF))
- \pm 30 scientific reviews
 - ‘Monitoring Coral Reefs in Brazil: Current Status and Future Prospects’
 - ‘Brazilian Bibliography on Pollination and Pollinators’
 - ‘Assessment of the Status of Knowledge of Brazilian Biodiversity’

Monitoring of Coral Reefs in Brazil:

Current Status and
Future Prospects

MMA, 2006



Brazilian Bibliography on Pollination and Pollinators

MMA, 2006

Ministério do Meio Ambiente

Bibliografia Brasileira de Polinização e Polinizadores



Biodiversidade 16

Assessment of the
Status of
Knowledge on
Brazilian
Biodiversity

[updated edition]

MMA, 2006

Ministério do Meio Ambiente

Avaliação do Estado do Conhecimento da Biodiversidade Brasileira

Coordenador Thomas Lewinsohn



Volume I

Biodiversidade 15

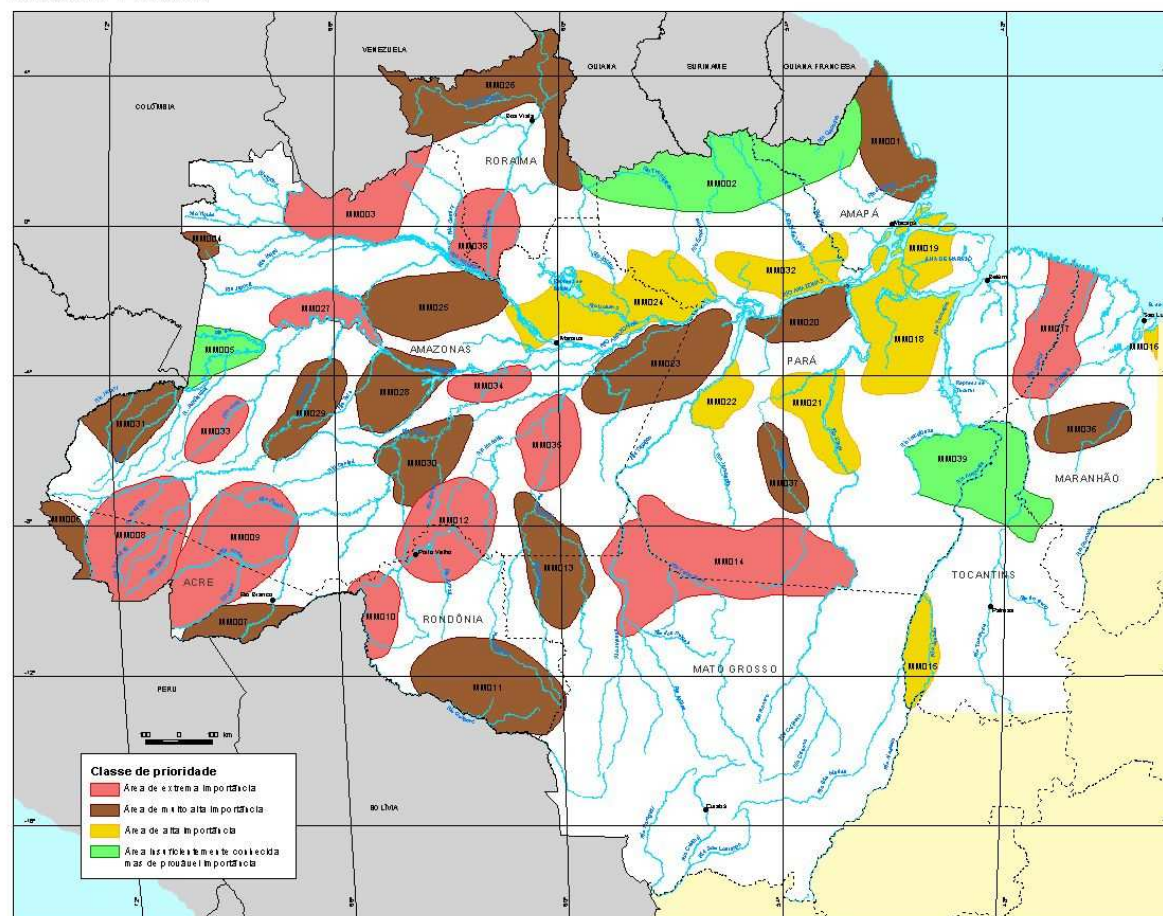
Biodiversity Assessments for Major Biomes

- Cerrado (Tropical Savannas) and Pantanal (Wetland), March 1998
- Atlantic Forest & Pampas, August 1999
- Amazon Forest, September 1999
- Marine & Coastal Zones, October 1999
- Caatinga (Dry Forests & Scrublands), May 2000

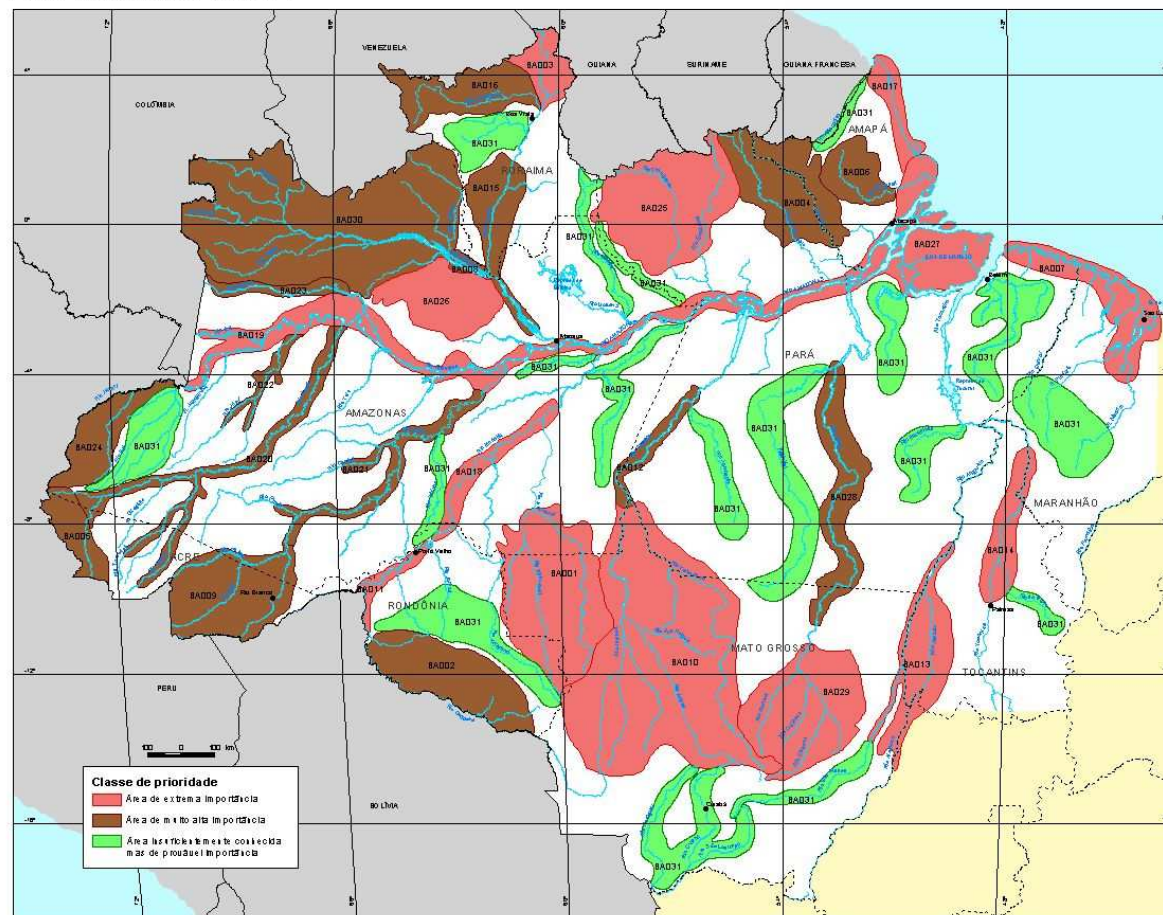


**Map of
Continental
Biomes of
Brazil
scale:
1: 5.000.000
IBGE & MMA**

Resultado do Grupo Temático MAMÍFEROS



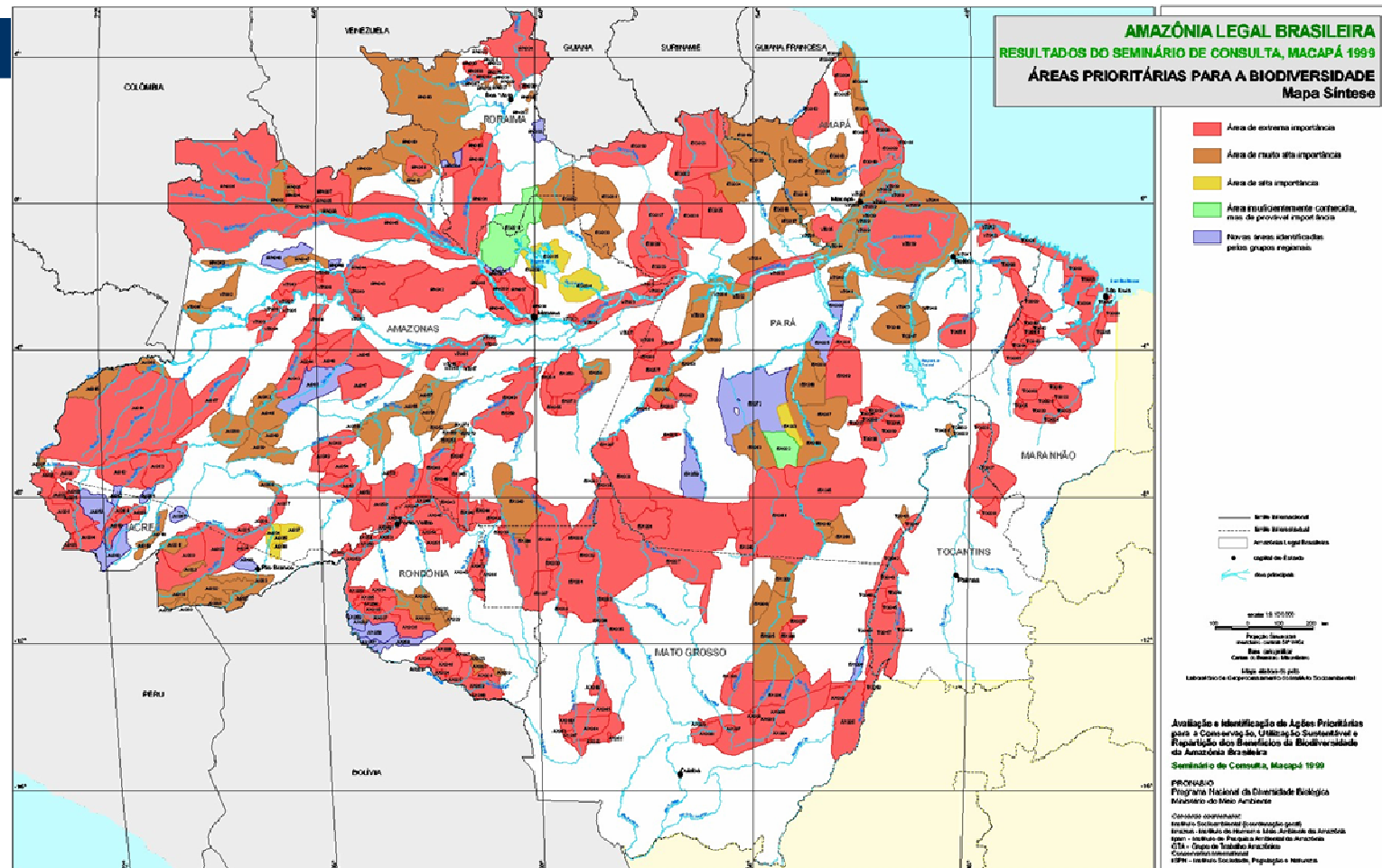
Resultado do Grupo Temático BIOTA AQUÁTICA

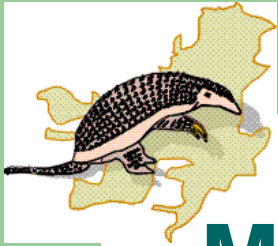


Amazon Forest Biome

Products:

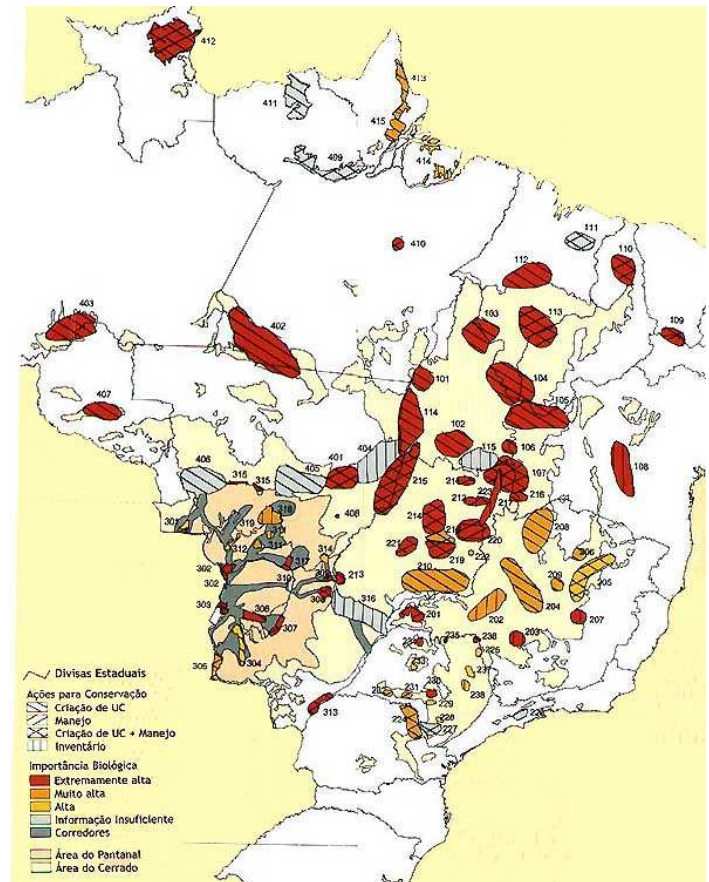
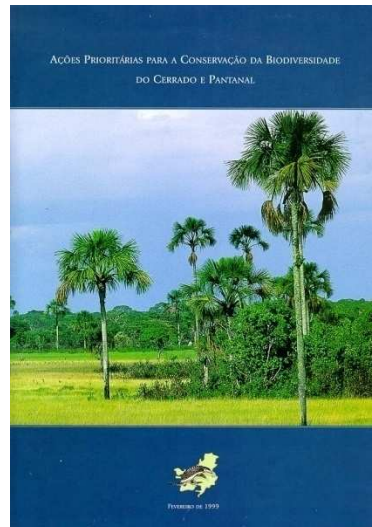
- ◆ Map with priority areas
- ◆ Executive Summary
- ◆ Technical Report





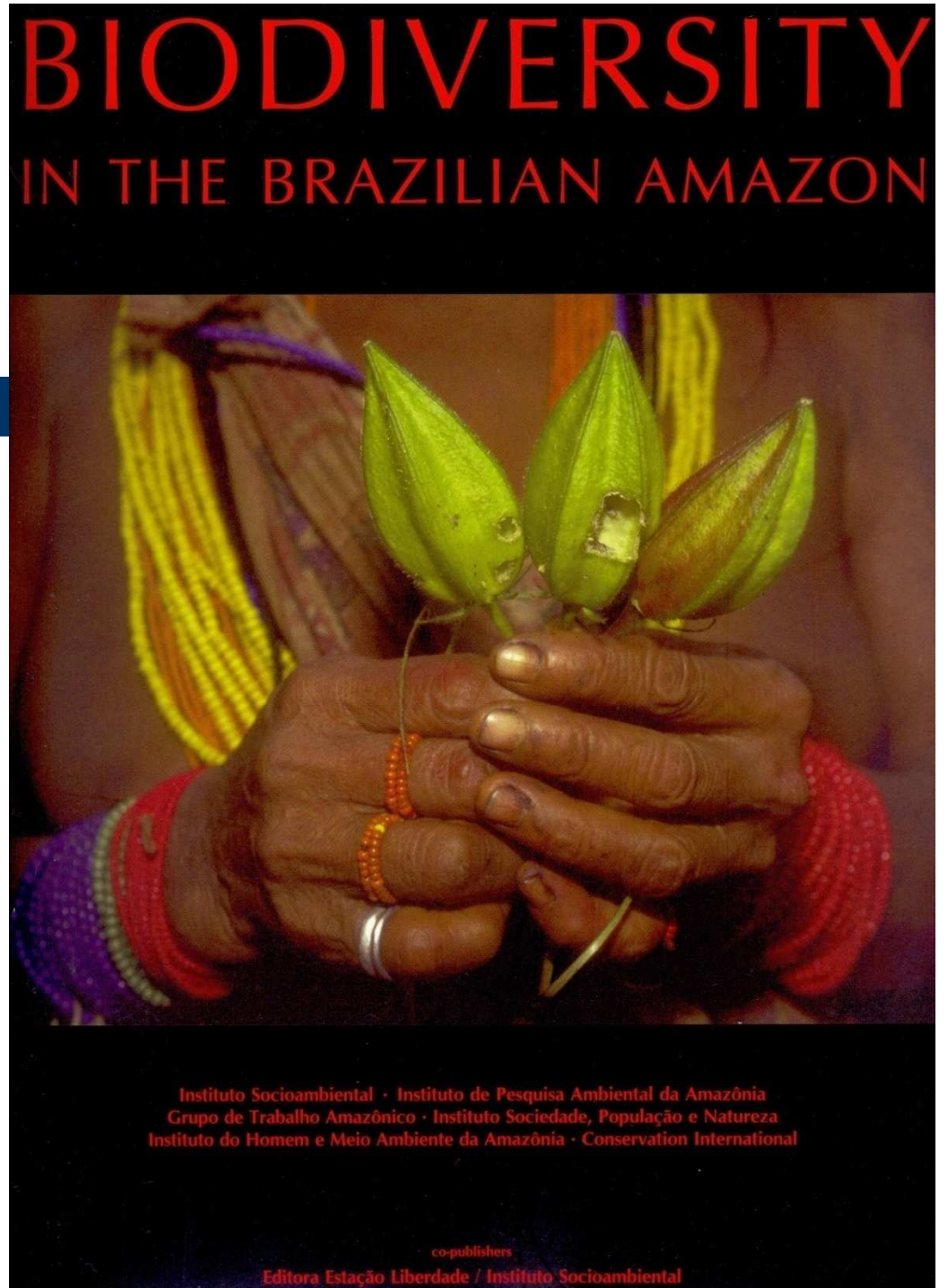
Savanna Biomes (Cerrado & Mato Grosso Pantanal)

- Products:
 - Priority areas
 - Executive Summary
 - Technical Report



Biodiversity in the Brazilian Amazon

ISA & Estação
Liberdade, 2001 (Port)
2004 (English)



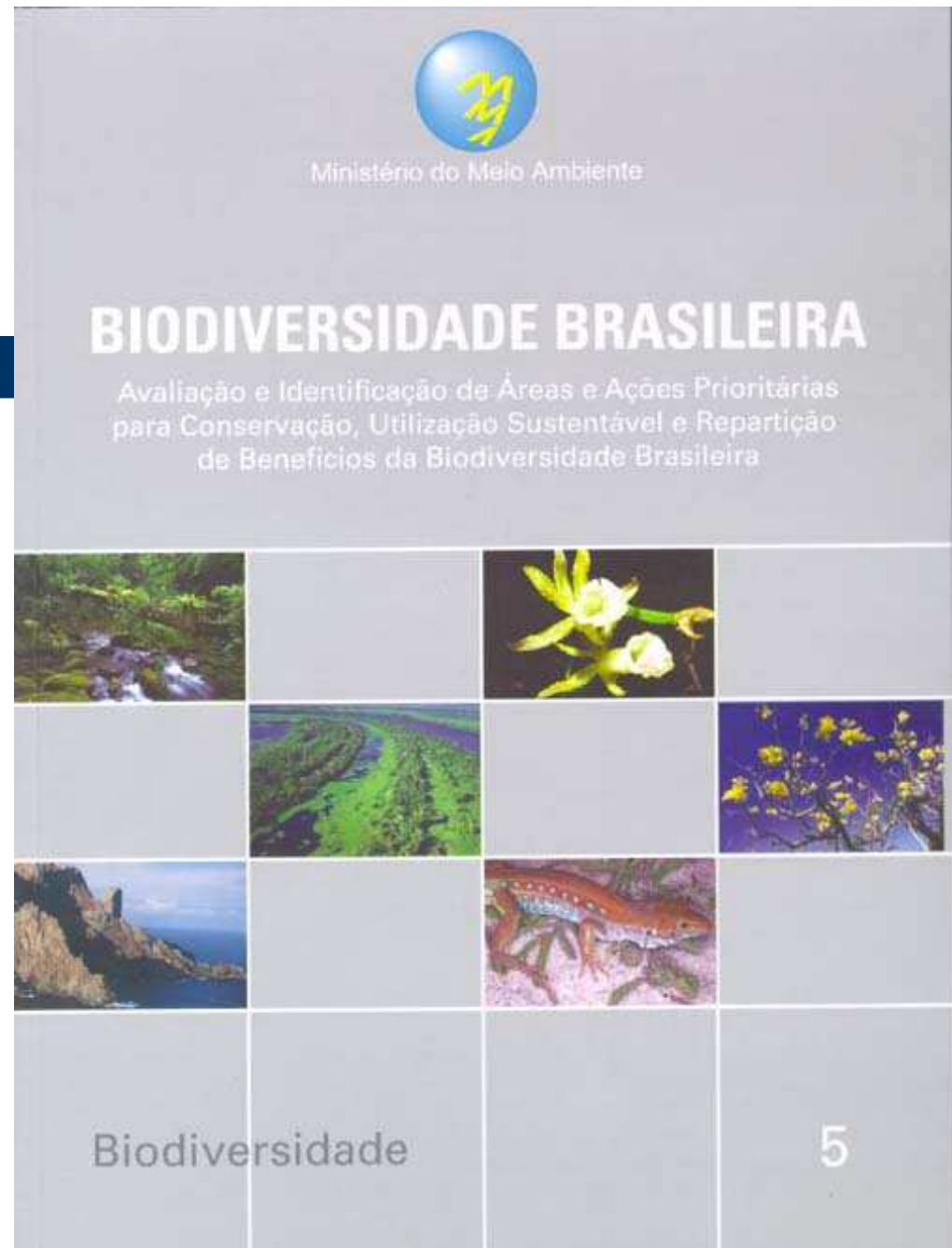
BRAZILIAN BIODIVERSITY

ASSESSMENT AND IDENTIFICATION OF PRIORITY AREAS

AND ACTIONS FOR CONSERVATION, SUSTAINABLE USE AND BENEFIT SHARING OF THE BIODIVERSITY IN THE BIOMES OF BRAZIL

MMA, 2002

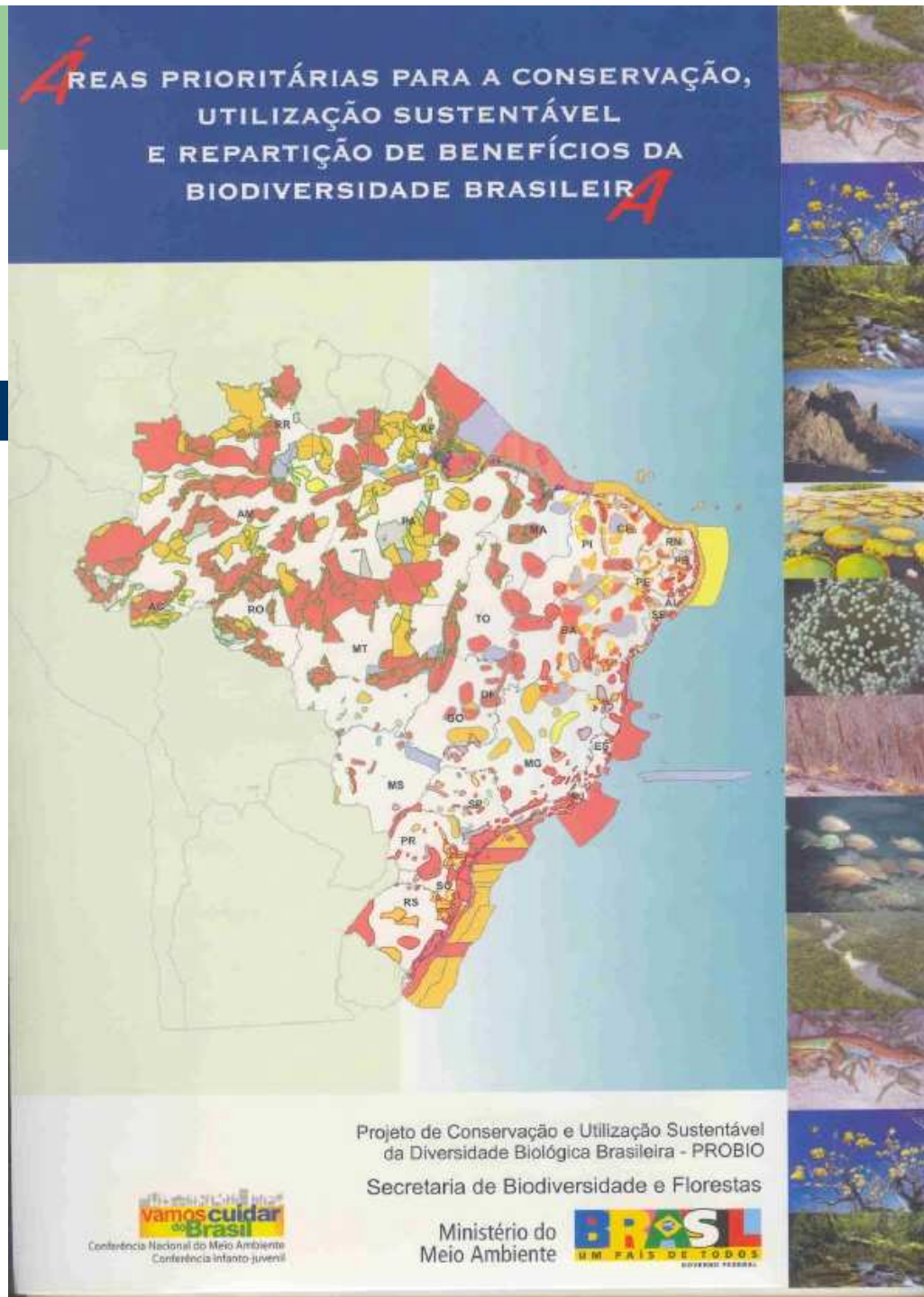
**[www.mma.gov.br/
biodiversidade](http://www.mma.gov.br/biodiversidade)**



Priority Areas for Conservation, Sustainable Use and Benefit Sharing of Biodiversity in Brazil

MMA, 2003

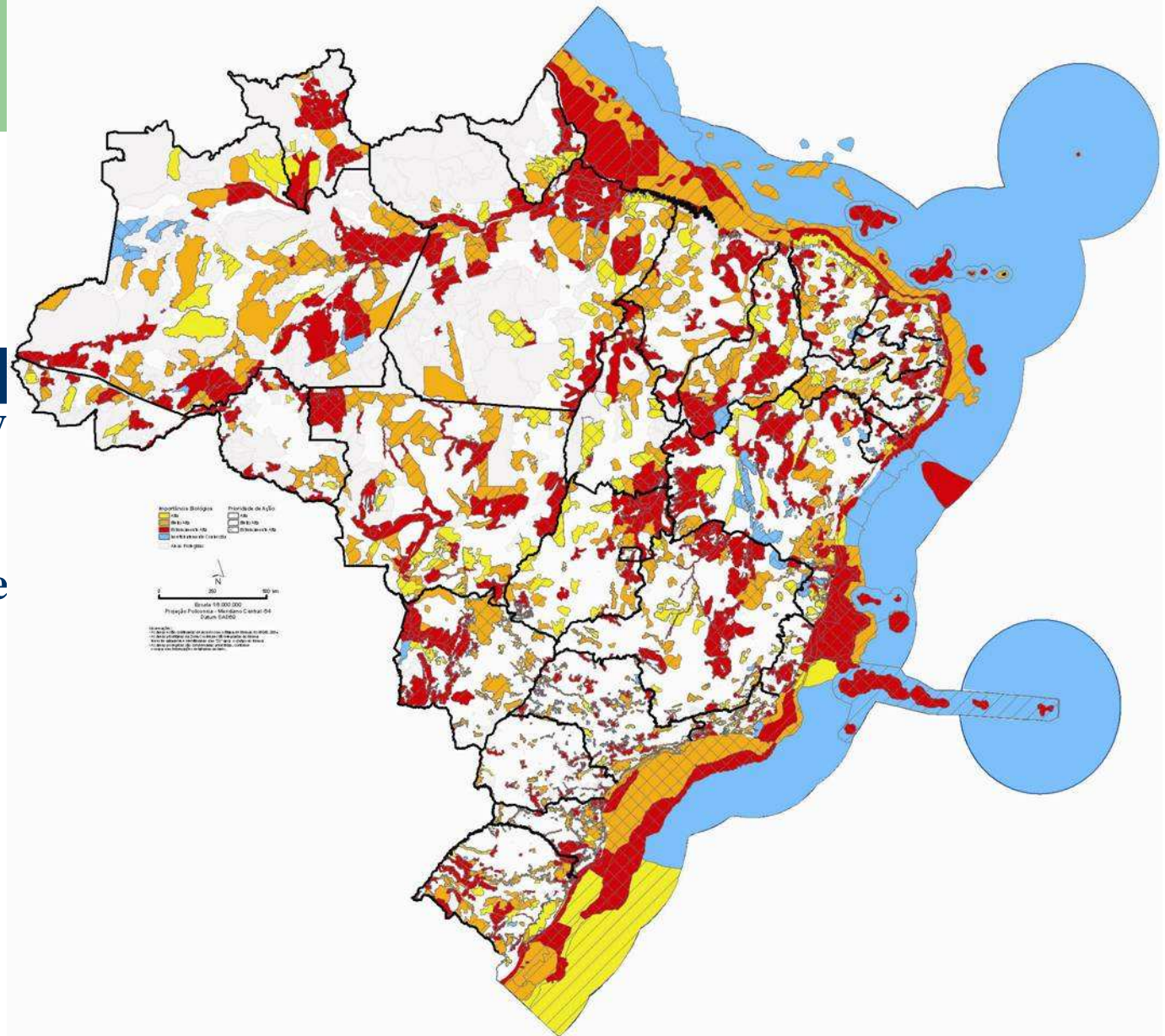
Wall Map +
interactive CD



**Map of Priority
Areas for
Conservation,
Sustainable Use
and Benefit
Sharing of the
Brazilian
Biodiversity.**

Updated 2007

**Obs.: Not
including areas
already
protected**



Priority Areas for Conservation, Sustainable Use and Benefit Sharing of Biodiversity in Brazil

- Decree 5092, of May 21, 2004;
- MMA Instruction 126, of May 27, 2004;
- MMA Instruction 9, of January 23, 2007
(updated)

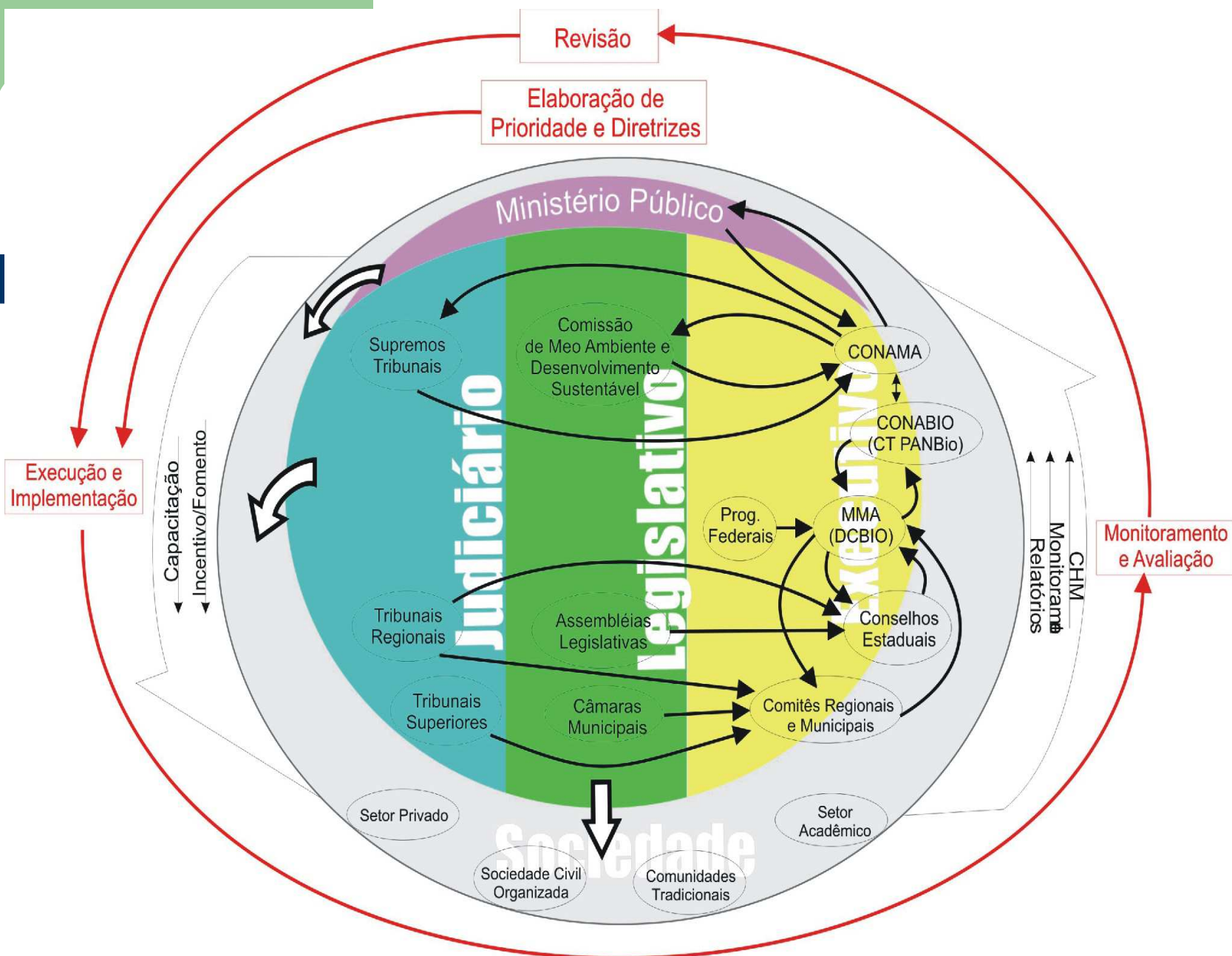
National Biodiversity Commission

- Decree 4703/2003 establishes National Biodiversity Commission – CONABIO
- CONABIO mandate: to coordinate CBD and National Biodiversity Policy implementation
- National Biodiversity Commission – CONABIO, composition: 10 government & 10 non-governmental members (meets regularly every two months)

Revised Action Plan for the National Biodiversity Policy

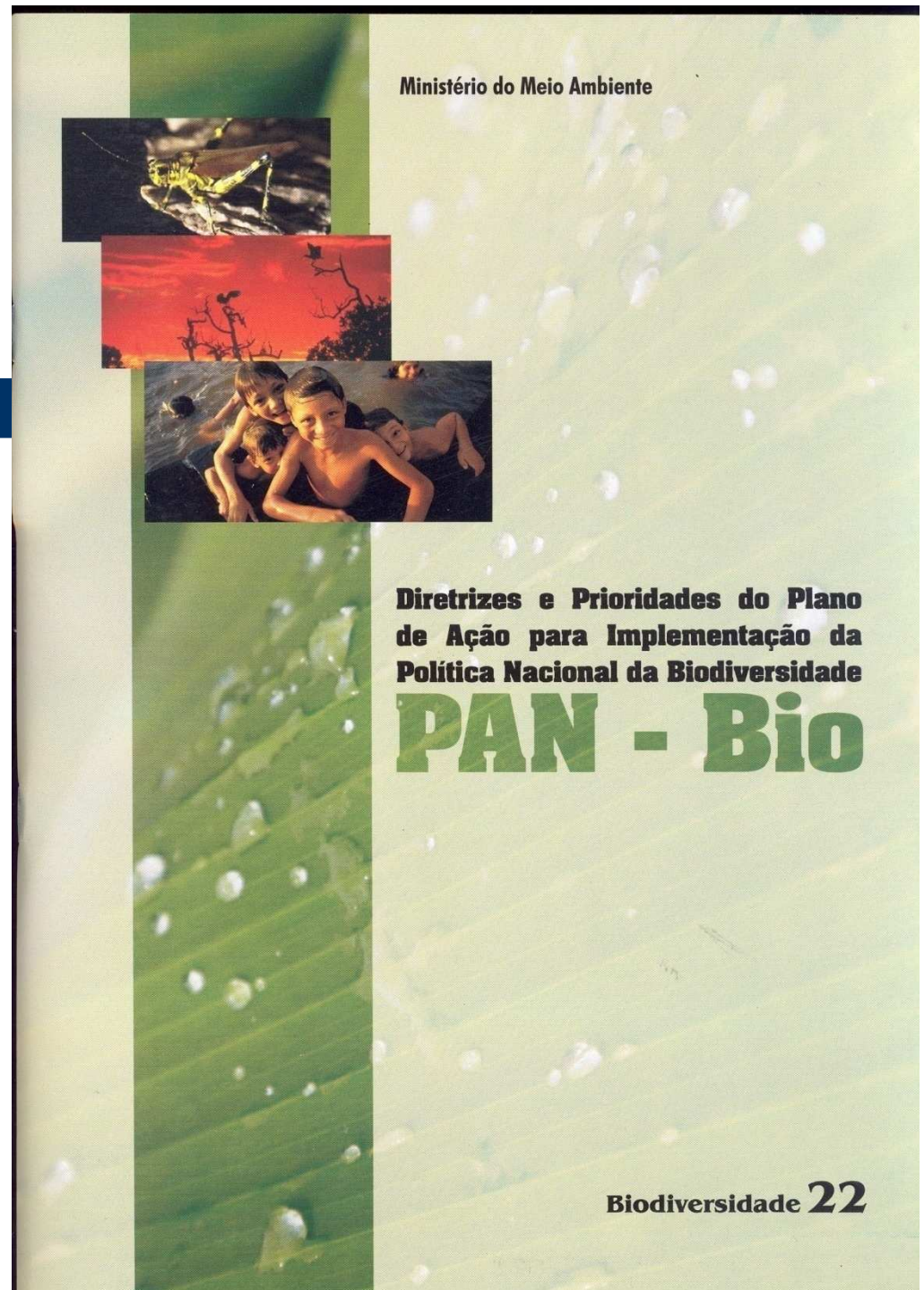
CONABIO Decision 40, of March, 2006

- A total of 161 Priority Actions
- Component 1 – 20 actions
- Component 2 – 36 actions
- Component 3 – 28 actions
- Component 4 – 15 actions
- Component 5 – 18 actions
- Component 6 – 22 actions
- Component 7 – 22 actions



Guidelines and Priorities of the Action Plan to Implement the National Biodiversity Policy (PAN-Bio)

2006



**Ministério do Meio Ambiente
Secretaria de Biodiversidade e Florestas**

**“Seminário para Definição de Metas
Nacionais de Biodiversidade para 2010”**

20ª Reunião Ordinária da CONABIO
Brasília, 24 e 25 de outubro de 2006



National Biodiversity Targets Seminar

Issues covered by the Roundtables:

- **Pressures on the Brazilian Biodiversity (deforestation, fires, fragmentation, alien invasives)**
- **State of the Biomes (vegetation)**
- **State of the Fauna and Flora (threatened and overexploited species)**
- **Responses for Conservation (protected areas, species & genetic resources conservation)**
- **Responses for Sustainable Use and Benefit Sharing**

National Biodiversity Targets Seminar

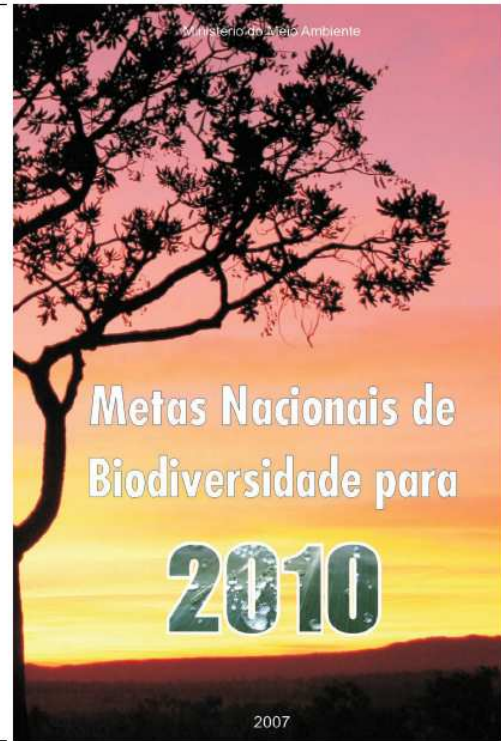
Information requested to all invited speakers to provide on their theme/parameter:

- sources of information available in Brazil (their geographic and temporal coverage, data quality and limitations);
- status (quantified) of the theme/parameter in Brazil in 2002 (baseline), biome by biome and total;
- average annual increment/reduction of the theme/parameter in Brazil at the turn of the millenium (baseline), biome by biome and total;
- indicate probable/possible targets for the theme/parameter in Brazil in 2010 under three scenarios (pessimistic, intermediary/business-as-usual and optimistic), considering the global target adopted by the CBD for the theme/parameter.

National Biodiversity Targets for 2010 (CONABIO Resolution 3/2006):

- The National Biodiversity Committee – CONABIO adopted, as Resolution 3/2006, a set of 51 National Biodiversity Targets for 2010, including 14 targets for conservation, 13 targets for sustainable use, seven targets for impact mitigation, eight targets for access and benefit sharing, three targets for research, three targets for education and information and three targets for financing and technology transference.
- Available at www.mma.gov.br/PortalBio

National Goals and Targets



National Biodiversity Targets for 2010 (CONABIO Resolution 3/2006): NBP 1 – Knowledge of biodiversity

- Target 1.1. An expanded and accessible list of formally described species of Brazilian plants and vertebrates, and of invertebrates and micro-organisms, these possibly selectively developed, in the form of permanent databases.
- Target 1.2. National Taxonomy Programme established, aiming at a 50% increase in scientific records with an emphasis on new species descriptions.
- Target 1.3. Virtual Brazilian Biodiversity Institute created and the expansion of the Biodiversity Research Programme (PPBio) from Amazonia and the Caatinga to the remaining biomes in order to increase availability of information on biodiversity.

National Biodiversity Targets for 2010 (CONABIO Resolution 3/2006):

NBP 2 – Conservation of biodiversity

- Target 2.1 - At least 30% of the Amazon biome and 10% of the remaining biomes and the coastal and marine zone effectively conserved through protected areas within the National Conservation Area System (SNUC).
- Target 2.2 - Protection of biodiversity guaranteed in at least 2/3 of the Priority Areas for Biodiversity by means of SNUC Protected Areas, Indigenous Lands, and *Quilombola* Territories.
- Target 2.3 - Temporary or permanent no-fishing zones, to protect fish stocks and integrated with protected areas, comprising 10% of the marine zone.

National Biodiversity Targets for 2010 (CONABIO Resolution 3/2006):

NBP 2 – Conservation of biodiversity

- Target 2.4. All species officially recognized as threatened with extinction in Brazil the object of action plans and active advisory groups.
- Target 2.5. 100% of threatened species effectively conserved in protected areas.
- Target 2.6. 25% reduction in the annual rate of increase of threatened species of fauna on the National List and de-listing of 25% of species currently on the National List.

National Biodiversity Targets for 2010 (CONABIO Resolution 3/2006):

NBP 2 – Conservation of biodiversity

- Target 2.7. A preliminary national-level assessment of the conservation status of all known plant and vertebrate species and a selective assessment of invertebrates.
- Target 2.8. 60% of threatened plant species conserved in *ex situ* collections and 10% of threatened plant species included in recovery and restoration programmes.
- Target 2.9. 60% of migratory species are the object of action plans and 30% of these have conservation programmes implemented.

National Biodiversity Targets for 2010 (CONABIO Resolution 3/2006):

NBP 2 – Conservation of biodiversity

- Target 2.10. 70% of the genetic diversity of socio-economically valuable cultivated or exploited wild plant species and associated indigenous and local knowledge maintained.
- Target 2.11. 50% of priority species under the Plants for the Future Project conserved *in situ* and on-farm.
- Target 2.12. 60% of the genetic diversity of Brazilian wild relatives of cultivated plant species of the ten priority genera effectively conserved *in situ* and/or *ex situ*.

National Biodiversity Targets for 2010 (CONABIO Resolution 3/2006):

NBP 2 – Conservation of biodiversity

- Target 2.13. Capacity of ecosystems within Priority Areas for Biodiversity to deliver goods and services maintained or increased.
- Target 2.14. Significant increase in actions to support *on-farm* conservation of the components of agro-biodiversity that ensure maintenance of sustainable livelihoods, local food security and health care, especially for local communities and indigenous peoples.

National Biodiversity Targets for 2010 (CONABIO Resolution 3/2006):

NBP 3 - Sustainable use of the components of biodiversity

- Target 3.1. 30% of non-timber plant products obtained from sustainably managed sources.
- Target 3.2. Recovery of at least 30% of main fish stocks through participative management and capture control.
- Target 3.3. 40% of the area in Amazonia under forest management plans certified.

National Biodiversity Targets for 2010 (CONABIO Resolution 3/2006):

NBP 3 - Sustainable use of the components of biodiversity

- Target 3.4. 80% of Extractive Reserves and Sustainable Development Reserves benefit from sustainable management of fauna and flora species important for food or economically, with management plans prepared and implemented.
- Target 3.5. 80% reduction in unsustainable consumption of fauna and flora resources in sustainable development protected areas.
- Target 3.6. No species of wild fauna or flora endangered by international trade in accordance with CITES provisions.

National Biodiversity Targets for 2010 (CONABIO Resolution 3/2006):

NBP 3 - Sustainable use of the components of biodiversity

- Target 3.7. Significant reduction in illegal trade in fauna and flora species within Brazil.
- Target 3.8. 80% increase in innovation and added value for new biodiversity-based products.
- Target 3.9. 80% increase in new sustainable uses of biodiversity in medicine and foods leading to marketable products.

National Biodiversity Targets for 2010 (CONABIO Resolution 3/2006):

NBP 3 - Sustainable use of the components of biodiversity

- Target 3.10. Significant increase in detection, control and repression of bio-piracy.
- Target 3.11. Significant increase of investment in studies, projects and research on sustainable use of biodiversity.
- Target 3.12. 80% increase in the number of patents deriving from components of biodiversity.
- Target 3.13. Support of the Commission for Coordination of Ecological and Economic Zoning for the preparation and conclusion of ecological and economic zoning plans for at least 50% of Brazilian states.

National Biodiversity Targets for 2010 (CONABIO Resolution 3/2006):

NBP 4 - Monitoring, assessment, prevention and mitigation of impacts

- Target 4.1. 100% reduction in the rate of deforestation in the Atlantic Forest biome, 75% in the Amazonian biome and 50% in remaining biomes.
- Target 4.2. Overall reduction of 25% in the number of fires (heat spots) in each biome.
- Target 4.3. Creation and consolidation of a systematic and standardized nation-wide biodiversity monitoring network.

National Biodiversity Targets for 2010 (CONABIO Resolution 3/2006):

NBP 4 - Monitoring, assessment, prevention and mitigation of impacts

- Target 4.4. Action plans for prevention and control prepared for all species listed under the National Assessment of Alien Invasive Species.
- Target 4.5. Management plans implemented for the control of at least 25 of the principal invasive exotic species that threaten ecosystems, habitats or species in Brazil.

National Biodiversity Targets for 2010 (CONABIO Resolution 3/2006):

NBP 4 - Monitoring, assessment, prevention and mitigation of impacts

- Target 4.6. 50% of sources of water and soil pollution and their impacts on biodiversity controlled.
- Target 4.7. Support to bio-geographic studies to include the predictability of species occurrence associated with potential climate changes using Geographic Information Systems.

National Biodiversity Targets for 2010 (CONABIO Resolution 3/2006): NBP 5 - Access to genetic resources, traditional knowledge & benefit sharing

- Target 5.1. All public policies relevant to traditional knowledge implemented in accordance with Article 8(j) of the CBD.
- Target 5.2. Knowledge, innovations and practices of indigenous peoples and traditional communities protected.
- Target 5.3. 100% of scientific and general publications deriving from access to traditional knowledge identify the origin of the traditional knowledge.
- Target 5.4. 100% of cases of access to traditional knowledge include prior informed consent, obligatory sharing of knowledge generated and sharing of benefits.

National Biodiversity Targets for 2010 (CONABIO Resolution 3/2006): NBP 5 - Access to genetic resources, traditional knowledge & benefit sharing

- Target 5.5. Access and benefit sharing legislation, consistent with the CBD, approved by the National Congress and implemented, and 100% of access and shipment activities conform to national legislation.
- Target 5.6. Benefits resulting from commercial utilization of genetic resources effectively shared fairly and equitably in support of biodiversity conservation.
- Target 5.7. 100% of applications for patents on inventions of products or processes deriving from access to genetic resources and associated traditional knowledge include identification of origin and proof of authorized access.
- Target 5.8. Sharing of benefits in accordance with the International Treaty on Plant Genetic Resources for Food. and Agriculture implemented in Brazil.

National Biodiversity Targets for 2010 (CONABIO Resolution 3/2006): NBP 6 - Education, public awareness, information & outreach on biodiversity

- Target 6.1. Inclusion of the importance of biological diversity and the need for its conservation, sustainable use and benefit sharing in communication, education and public awareness programmes.
- Target 6.2. Increased access to high quality information on conservation, sustainable use and sharing of benefits of biodiversity.
- Target 6.3. Establishment and strengthening of action networks for the conservation, sustainable use and sharing of benefits of biodiversity.

National Biodiversity Targets for 2010 (CONABIO Resolution 3/2006): NBP 7 - Increased legal & institutional capacity for biodiversity management

- Target 7.1. New and additional financial resources, from public and private, domestic and international sources obtained and available for use in Brazil making possible the effective implementation of its commitments to the CBD programmes of work, in accordance with Article 20.
- Target 7.2. Implementation of initiatives that promote the transfer to Brazil of environmentally sustainable technologies developed in other countries for the effective implementation of the CBD programmes of work, in accordance with Article 20, paragraph 4 and Article 16.
- Target 7.3. Promotion of the exchange and transfer of environmentally sustainable technologies between developing countries for the effective implementation of the CBD programmes of work, in accordance with Article 20, paragraph 4 and Article 16.

Monitoring the National Targets:

Biodiversity: Vegetation Cover

- The Brazilian Ministry of Environment commissioned a wall-to-wall mapping of vegetation cover of all the Brazilian biomes for the baseline year of 2002 at the publication scale of 1:250.000 based on Landsat images (PROBIO Project in partnership with Brazilian research institutes and universities) – all the 610 maps produced are freely available online for download at www.mma.gov.br/PortalBio

Biodiversity: Vegetation Cover

- Since 2004 the Brazilian National Space Institute (INPE) has provided free download of the CBERS (China-Brazil) satellite images covering the whole country with images with a resolution of 20m.
- Currently there over 100 remote sensing labs in Brazil operating with CBERS, LANDSAT and other satellites images.

Biodiversity: Deforestation

- Since 2005 the Brazilian National Space Institute (INPE) and IBAMA monitor monthly clear-cut deforestation in the Amazon Forest (DETER Project in partnership with IBAMA) – data available at www.obt.inpe.br/deter/
- The Amazon Region is also covered by the SIVAM monitoring program

Biodiversity: Wildfires & Burnings

- Since 1988 the Brazilian National Space Institute (INPE) in partnership with IBAMA monitors fires (hot pixels) on a daily basis covering the whole country, except NW Amazonia.
- data available: www.cptec.inpe.br/queimadas/

Biodiversity: Water Quality

- A quick country-wide survey of all major water basins was conducted using a small adapted hydroplane in 2004 totaling 1160 sample sites covering more than 500 water bodies in the 12 hydrographic regions of Brazil, including analysis of basic physic-chemical parameters, ionic composition, phosphate, phytoplankton, bacterioplankton and heavy metals (Talha Mar Project – Gérard & Margi Moss).
- 40% of sites were oligotrophic, 35% were mesotrophic and 25% were eutrophic.

Biodiversity: Alien Invasive Species

- The National Assessment of Alien Invasive Species completed in 2005 documents 284 species already established in Brazil and threatening its biodiversity, including 179 species in terrestrial ecosystems, 56 species in continental waters and 49 species in the marine zone.

Biodiversity: Overexploited Species

- Currently 56% of the marine fishery resources in Brazil are overexploited or fully exploited, varying from 34% in the northern coast to 84% in the southern coast.
- Currently 47 species of Fishes and aquatic Invertebrates are officially recognized as overexploited at the national level.

Biodiversity: Threatened Species

- The current National List of Threatened Species of Fauna in Brazil (MMA Normative Instructions 3/2003 & 5/2004 + 52/2005) recognizes 633 species, including 395 species of Mammals, Birds, Reptiles, Amphibians and terrestrials Invertebrates, and 238 species of Fishes and aquatic Invertebrates.

Biodiversity: Threatened Species

- Currently 114 species of nationally threatened species of fauna have an Action Plan elaborated (18% of the total) and 177 have a functioning Scientific Advisory Committee (28% of the total).
- Successful long term conservation programs have been running for about 25 years for several species of threatened monkeys, whales and turtles, among others.

Biodiversity: Protected Areas

- In 2007 Brazil has a total over 100 million hectares in Protected Areas within the National System of Conservation Units (SNUC), of which 70mi are under the stewardship of the National Institute for Biodiversity Conservation – the Chico Mendes Institute, and 30mi are under the stewardship of State Conservation Agencies.
- SNUC also includes municipal and private protected areas.

Biodiversity: Protected Areas

- Apart from the SNUC, Brazil has reserved over 110 million hectares as Indigenous Lands, which also play a key role as protected areas for biodiversity.
- Together, the SNUC and the Indigenous Lands cover more than 210 million hectares (or about 25% of the Brazilian Territory).
- Additionally, our Forestry Code requires each private property to set aside as Areas for Permanent Protection the natural vegetation along rivers, slopes, mountains and habitats for endangered species.

Agrobiodiversity: Genetic Resources

- Project Plants of the Future – five regions [selection and characterization of plants of economic potential]
- Conservation *ex situ*, on farm & *in situ* of genetic resources in the Center-West [identification & characterization of institutions and collections]
- Guidelines and methods for the conservation of plant genetic resources – DF, PA & MG

Agrobiodiversity: Mapping Local Varieties of Economic Plants:

- Genus *Gossypium* (cotton)
- Genus *Arachis* (peanut)
- Genus *Manihot* (cassava)
- Genus *Oryza* (rice)
- Genus *Cucurbita* (pumpkin)
- Genus *Bactris* (pupunha palm)
- Genus *Anacardium* (cashew)
- Genus *Zea* (corn/maiz)

Agrobiodiversity Ecosystem Services: Pollination

- 13 pilot projects have been supported by MMA covering 20 crops in 11 states: AM(1), BA(2), MA(1), MG(2), MT(1), PA(1), PB(1), PE(1), PR(1), RJ(1), SP(1)
- Amazon Region: cupuassu and assaí palm;
- Northeast Region: nance, cotton, soursop, acerola, mangaba, mango, passion fruit, guava and umbu;
- Central Region: araticum;
- Southeast and Southern Regions: passion fruit and tomato.

PROBIO - Rapid Assessments of Biodiversity:

- 20 projects supported by MMA in 16 States:
AM(3), AP(2), BA(3), CE(2), GO(1), MG(1),
MS(2), MT(2), PA(1), PB(1), PE(2), PI(1),
RJ(1), RS(2), SC(1), TO(1)

PROBIO – Impacts of Fragmentation of Ecosystems:

- 15 projects supported by MMA in 11 States:
AC(1), AP(1), BA(2), MA(1), MG(5), PA(2),
PR(1), RJ(3), RO(1), SC(1), SP(4), TO(1)

PROBIO – Studies on Impacts of Global Climate Change:

- Consolidation of basic climate surveys and databases for the 20th Century
- Regional Modeling of climate changes for the 21st Century – biome by biome
- Modeling the impacts of sea level elevation on the southern and southeastern coasts
- Testing bioindicators sensitive to climate parameters

Policy making

- Information collection
- Public consultations
- Stakeholder drafting
- Consolidation



Fourth National Report

- Grounded in existing activities under NBSAP
- Standard participatory process
- Chapter 1: status, trends and threats – Probio
- Chapter 3: mainstreaming – Conabio
- Chapters 2 and 4: NBSAP and goals and targets

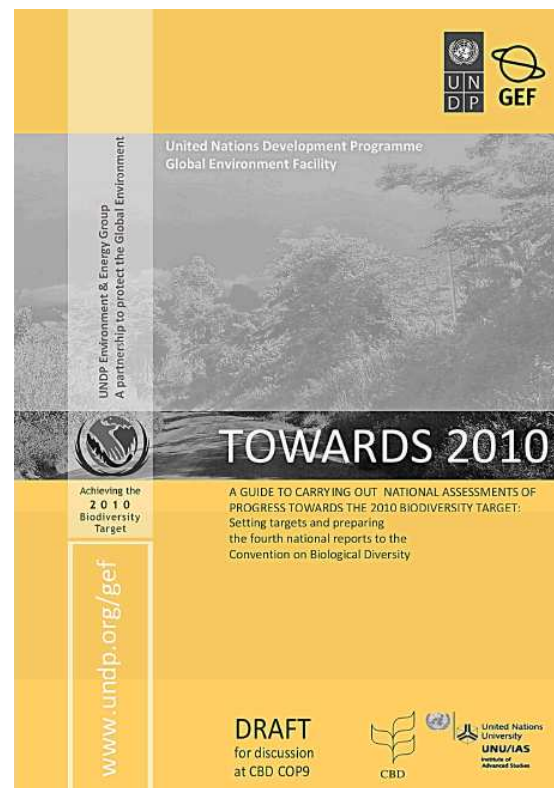
Fourth National Report

- Objective assessment
 - Bibliography survey – peer-reviewed assessments of implementation of NBSAP components
 - Re-run 2006 target setting process to measure achievements
 - Review and adoption by Conabio

Conclusions

- Grounded in existing implementation activities
- Snapshot of achievements since entry into force but basis for next implementation phase
- Therefore analytical narrative
- Stakeholder engagement – if not so far, from now on

Setting targets and preparing the fourth national reports



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- Thank you
 - Arigato
 - Obrigado
 - Salamat