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UPDATED ASSESSMENT OF PROGRESS TOWARDS AICHI BIODIVERSITY TARGET 12

Note by the Executive Secretary

INTRODUCTION

1. In its decision X/2, paragraph 14, the Conference of the Parties decided that at its future meetings, it would review progress in the implementation of the Strategic Plan for Biodiversity 2011-2020, and requested the Executive Secretary to prepare an analysis/synthesis of national, regional and other actions, including targets as appropriate, established in accordance with the Strategic Plan for Biodiversity 2011-2020 (para. 17(b)).

2. Further to decision XII/1, SBSTTA-19 was requested to identify further opportunities and additional key actions, including for those Aichi Biodiversity Targets for which there has been the least progress at the global level. A list of such targets was contained in an annex to the note by the Executive Secretary for that session (UNEP/CBD/SBSTTA/19/2) pursuant to the assessment of progress provided in the fourth edition of the *Global Biodiversity Outlook*. As outlined in the annex, a number of activities were under way to enhance progress towards their achievement.

3. The present information note provides an updated and detailed assessment of progress towards Aichi Biodiversity Target 12. Section I introduces the target. Section II presents the strategy and technical support for collecting and sharing information and data on status and priority actions. Section III presents information on progress towards the various elements of Aichi Biodiversity Target 12 in two clusters: assessment of the conservation status of species; and preventing the extinction of known threatened species and improving their conservation status, particularly of those most in decline. Conclusions and next steps based on lessons learned are given in section IV.

I. INTRODUCTION TO AICHI BIODIVERSITY TARGET 12

4. Aichi Biodiversity Target 12 is: “By 2020 the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained.”

* UNEP/CBD/SBSTTA/20/1/Rev.1.

** UNEP/CBD/SBI/1/1/Rev.1.

5. The Conference of the Parties at its twelfth meeting, in 2014, undertook a midterm evaluation of the status of Aichi Biodiversity Targets on the basis of the fourth edition of the *Global Biodiversity Outlook*.¹ It was concluded that Aichi Biodiversity Target 12, based on our current trajectory, will not be met by 2020, as the trend towards greater extinction risk for several taxonomic groups has not decelerated since 2010. More specifically, the prevention of the extinction of known threatened species showed no significant overall progress, with further extinctions being likely by 2020, while the element relating to the improvement of the conservation status of those species most in decline is moving away from the target, with the Red List Index still declining and no sign overall of reduced risk of extinction across groups of species. The fourth edition of the *Global Biodiversity Outlook* did not evaluate progress towards the assessment of the conservation status of described species.

II. STRATEGY AND TECHNICAL SUPPORT FOR COLLECTING INFORMATION ON STATUS AND PRIORITY ACTIONS

6. In order to facilitate the achievement of Aichi Biodiversity Target 12, since May 2015, the Secretariat, in collaboration with partner organizations, has undertaken efforts to reach out to Parties including through the organization of regional capacity-building workshops and has collected information on the status of all elements of Aichi Biodiversity Target 12 as well as draft priority actions that Parties will undertake in the next five years. These efforts include the following steps: renewing partnerships and commitments from partner organizations; developing baseline data for countries in the form of information dossiers; providing capacity development to Parties; securing the submission of questionnaires, success stories on species conservation, status matrices, and national priority actions (road maps); and collating country submissions into a coherent report. Details of the approach and technical support provided are described in the information note UNEP/CBD/SBSTTA/20/INF/43.

7. Four subregional workshops have been held to date: for countries in Africa, mainland Asia, Latin America and the Caribbean. The results are very encouraging: to date, of 133 countries invited, 95 attended the workshops, 64 submitted status information on Aichi Biodiversity Target 12, 59 submitted their priority actions to achieve this target in the next five years, and more submissions are expected as the deadline given to African countries was 24 April 2016. Response rates and information submitted by countries is summarized in section III. Further workshops, covering Parties in the rest of the world, will be conducted in 2016, subject to availability of funds. The information collected in the entire series will be made available to the Conference of the Parties at its thirteenth meeting.

III. STATUS AND PROJECTIONS

8. Each subsection below presents information at the global, regional and national level as per the International Union for Conservation of Nature (IUCN) Red List of Threatened Species², the World Database of Protected Areas³, National Biodiversity Strategies and Actions Plans (NBSAPs), fifth national reports, as well as more detailed status and projections as per data collected through the workshops. Examples of Parties' actions, as per nationally submitted information, and suggestions for furthering the achievement of the element are also provided.

A. Assessment of the conservation status of species

9. The Red List of Threatened Species developed by IUCN, the Red List Partnership (BirdLife International, Botanic Gardens Conservation International, Conservation International, Microsoft, NatureServe, Royal Botanic Gardens Kew, Sapienza University of Rome, Texas A&M University,

¹ Secretariat of the Convention on Biological Diversity (2014), *Global Biodiversity Outlook 4*. Montreal, Canada, 155 pages.

² IUCN 2015. *The IUCN Red List of Threatened Species*. Version 2015-4. <http://www.iucnredlist.org>. Downloaded on 19 November 2015.

³ Dubois, G., Bastin, L., Martinez-Lopez J., Cottam, A., Temperley, H., Bertzky, B., Graziano, M. (2015). The Digital Observatory for Protected Areas (DOPA) Explorer 1.0. EUR 27162 EN. Publications Office of the European Union, Luxembourg, 53 p. http://dopa-explorer.jrc.ec.europa.eu/dopa_explorer/.

Wildscreen, and the Zoological Society of London) and collaborators provides a widely recognized standard for evaluating the conservation status of species. Assessing the conservation status of species is essential to highlight taxonomic groups threatened with extinction and therefore promote their conservation. As of March 2016, the conservation status of more than 76,000 species has been assessed by the IUCN Red List.⁴ Even though the IUCN Red List of Threatened Species is the most comprehensive evaluation of the conservation status of species at the global level, the assessment of the conservation status of species is incomplete for most taxonomic groups. Table 1 presents the estimated number of described species worldwide by major taxonomic groups and the percentage of those species that have been evaluated by the latest version of the IUCN Red List.

Table 1. Estimated number of described species globally and percent of species evaluated by the latest version of the IUCN Red List of Threatened Species⁵

	Estimated number of described species	Percent of species evaluated by the 2015 IUCN Red List version 2015-4
VERTEBRATES		
Mammals	5,515	99.8
Birds	10,424	100.0
Reptiles	10,272	45.0
Amphibians	7,448	87.0
Fishes	33,200	44.0
Subtotal	66,859	62.0
INVERTEBRATES		
Insects	1,000,000	0.6
Molluscs	85,000	8.0
Crustaceans	47,000	7.0
Corals	2,175	40.0
Arachnids	102,248	0.2
Velvet Worms	165	7.0
Horseshoe Crabs	4	100.0
Others	68,658	0.7
Subtotal	1,305,250	1.0
PLANTS		
Mosses	16,236	0.6
Ferns and Allies	12,000	3.0
Gymnosperms	1,052	96.0
Flowering Plants	268,000	7.0
Green Algae	6,050	0.2
Red Algae	7,104	0.8
Subtotal	310,442	7.0
FUNGI AND PROTISTS		
Lichens	17,000	0.1
Mushrooms	31,496	0.1
Brown Algae	3,784	0.4
Subtotal	52,280	0.1
TOTAL	1,734,831	5.0

⁴ International Union for Conservation of Nature and Natural Resources. (2015-4). "About." Available at <http://www.iucnredlist.org/about>

⁵ IUCN. (2015-4). "Numbers of threatened species by major groups of organisms (1996–2015)" Available at http://cmsdocs.s3.amazonaws.com/summarystats/2015-4_Summary_Stats_Page_Documents/2015_4_RL_Stats_Table_1.pdf

10. From table 1, it is evident that considerable gaps exist in the global assessment of the conservation status of species as only 5 percent of the world's described species have been assessed by the IUCN Red List of Threatened Species. Only four major taxonomic groups (amphibian, mammal, birds, gymnosperms) have been comprehensively evaluated (i.e., >87 percent of the described species have been assessed) and for most of the other taxonomic groups, such as reptiles, fishes, invertebrates, and lower plants, complete conservation status assessment is not available. For example, for flowering plants, only 7 percent of the approximately 268,000 described species have been assessed. We present throughout this document information on the conservation status of the three animal taxonomic groups in which almost all species have been assessed by the IUCN Red List of Threatened Species version 2015-4, as reporting the proportion of threatened species for taxonomic groups that have not been fully assessed hitherto could be heavily biased.

11. At the national level, information on the conservation status assessment is also very scant, and information is available only for a few countries, including some megadiverse countries. Brazil assessed the conservation status of all described vertebrate species as well as some selected invertebrates and plants, with a total of 18,873 species assessed⁶. China conducted a conservation status assessment of 34,450 plant species, including Bryophytes, Ferns, Gymnosperms, and Angiosperms⁷.

12. Without the establishment of a comprehensive baseline of data from which changes can be measured, it is impossible to monitor progress in the conservation of species and the prevention of their extinction, and highlight where to focus the conservation efforts. Further documentation on the conservation status of the taxonomic groups already assessed by the IUCN Red List and expansion of the assessment to taxonomic groups partially or not evaluated hitherto are urgently needed at the national and the global level.

13. Under the IUCN Red List, threatened species, or species at risk of extinction, include species classified as Vulnerable (VU), Endangered (EN) and Critically Endangered (CR).⁸ To be classified, the species is assessed according to a set of qualifying criteria with quantitative thresholds: reduction in population size, geographic range, decline in small populations, and restricted populations.

14. When it comes to prioritizing species for conservation action, countries should give particular consideration to those that are endemic, i.e. species occurring naturally within one country only. Within endemic species, the emphasis should be on Critically Endangered endemic species, as Critically Endangered species are species categorized as facing the highest risk of extinction in the wild or, as stated in Aichi Biodiversity Target 12, the species most in decline.

15. Globally, the number of threatened species listed by the IUCN Red List went from 15,000 in 2004 to over 23,000 in 2015⁹, mainly as a result of increases in the number of species assessed. Chart 1 presents global figures for Vulnerable, Endangered, Critically Endangered and threatened species for three taxonomic groups (amphibians, mammals, and birds) as of March 2016. Future updates to these totals can be found at www.iucnredlist.org. Globally, of the 6,480 evaluated amphibian species, 10.1 percent are Vulnerable, 12.5 percent are Endangered, and 8.1 percent are Critically Endangered, giving a total of 30.8 percent of evaluated amphibian species that are threatened. Of the 5,504 evaluated mammal species, 9.2 percent are Vulnerable, 8.7 percent are Endangered, and 3.8 percent are Critically Endangered, giving a total of 21.7 percent of evaluated mammal species that are threatened. Worldwide,

⁶ This data was presented by a representative of the Ministry of the Environment of Brazil on 1 October 2015 at the Capacity-building Workshop for Latin America and the Caribbean on achieving Aichi Biodiversity Targets 11 and 12 held in Curitiba, Paraná, Brazil.

⁷ Zhao, L. N., Qin, H. N. & Liu, H. Y. IUCN Red List and China Higher Plant Red List. Ma K. P. (ed.), *Advances in biodiversity conservation and research in China* X, 111-117. China Meteorological Press, (2014).

⁸ IUCN. (2012). IUCN Red List Categories and Criteria: Version 3.1. Second edition. Gland, Switzerland and Cambridge, UK: IUCN. iv + 32pp.

⁹ IUCN. (2015-4). "Summary Statistics." Available at <http://www.iucnredlist.org/about/summary-statistics>

of the 10,424 evaluated bird species, 7.1 percent are Vulnerable, 4.0 percent are Endangered, and 2.1 percent are Critically Endangered, giving a total of 13.2 percent of evaluated bird species that are threatened.

16. Charts 2 to 4 present IUCN Red List data on endemic, threatened endemic and Critically Endangered endemic species for three taxonomic groups (amphibians, mammals, and birds) for the three regions covered through the series of capacity building workshops held thus far (Africa, Asia, and Latin American and the Caribbean or GRULAC)¹⁰.

Chart 1. Number of globally Vulnerable, Endangered, Critically Endangered and threatened amphibian, mammal and bird species

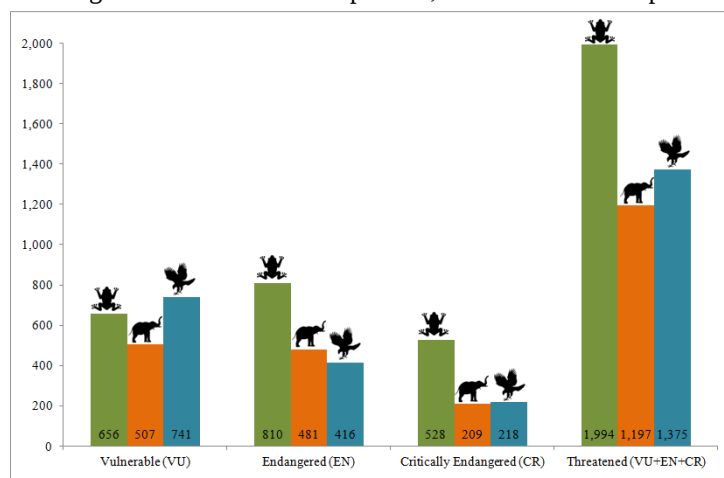


Chart 2. Number of endemic species for three taxonomic groups in three regions

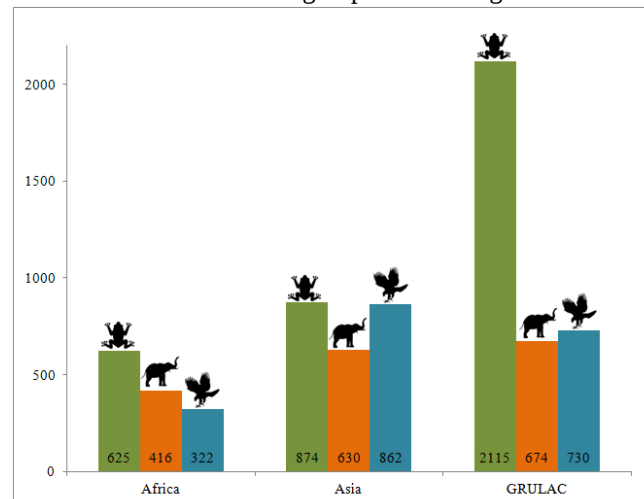


Chart 3. Number of threatened endemic species for three taxonomic groups in three regions

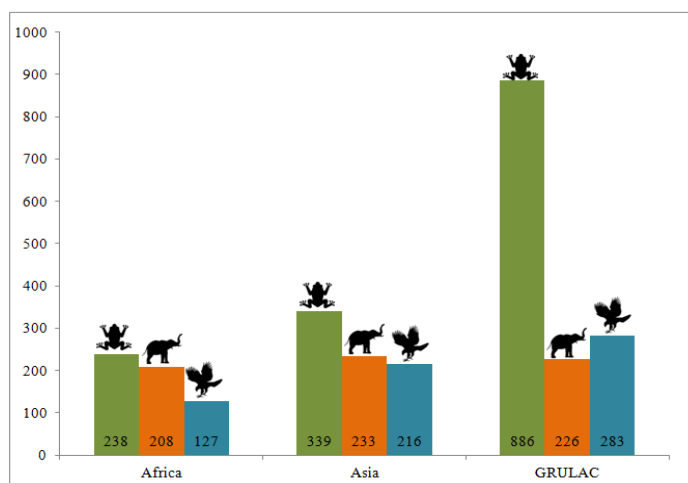
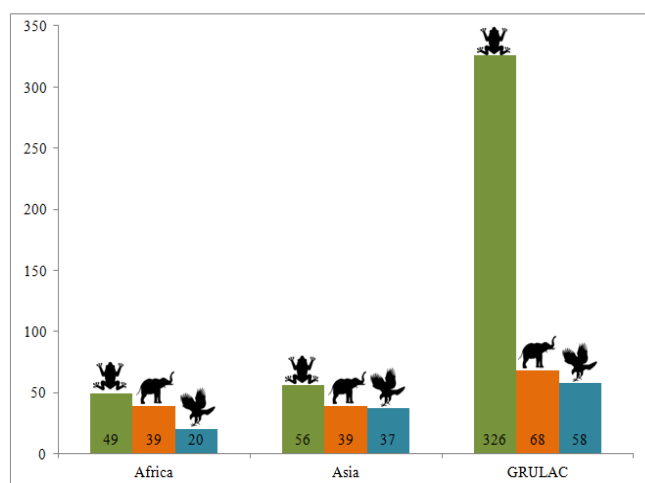


Chart 4. Number of Critically Endangered endemic species for three taxonomic groups in three regions



17. Worldwide, from chart 2, amphibians have the highest level of threat and face greater risk of extinctions than the other taxonomic groups assessed. Of the 6,480 assessed amphibian species, 9.6 percent are endemic to one country in Africa, 13.5 percent are endemic to one country in Asia and 32.6 percent are endemic to one country in GRULAC. Of the 5,504 assessed mammal species, 7.6 percent are endemic to one country in Africa, 11.4 percent are endemic to one country in Asia and 12.2 percent are endemic to one country in GRULAC. Of the 10,424 assessed bird species, 3.1 percent are endemic to one

¹⁰ This data was sent to the Secretariat directly from the IUCN Red List of Threatened Species in June 2015, as per the Secretariat's request.

country in Africa, 8.3 percent are endemic to one country in Asia and 7.0 percent are endemic to one country in GRULAC.

18. From charts 3 and 4, for Africa, of the 625 endemic amphibian, 416 endemic mammal and 322 endemic bird species, respectively, about 38.1, 50.0, and 39.4 percent are threatened and 7.8, 9.4, and 6.2 percent are Critically Endangered. For Asia, of the 874 endemic amphibian, 630 endemic mammal, and 862 endemic bird species, respectively, about 38.8, 37.0, and 25.1 percent are threatened and 6.4, 6.2, and 4.3 percent are Critically Endangered. For GRULAC, of the 2,115 endemic amphibian, 674 endemic mammal, and 730 endemic bird species, respectively, about 41.9, 33.5, and 38.8 percent are threatened and 15.4, 10.1, and 7.9 percent are Critically Endangered.

19. Out of the 95 countries that attended the workshops, 88 provided information on Aichi Biodiversity Target 12. From this information, it was calculated that 40 countries reported on assessing the conservation status of species. For example, Chile has assessed that 72 percent of the 819 species evaluated in the country are classified as threatened. Brazil has assessed the risk of extinction of all its known vertebrates, and thousands of plants and invertebrates, between 2009 and 2014; the country created a red list that includes 3,286 species, out of which 862 species are threatened. Sri Lanka reported it has identified threatened species in the country through the National Red List of Sri Lanka in 2012: about 44 percent of all flowering plants, 46 percent of vertebrate species, including 14 endemic mammal species and 16 birds, are threatened with extinction in Sri Lanka.¹¹ Egypt also reported the development of a national red list of threatened species.

20. Out of 59 countries that submitted priority actions on Aichi Biodiversity Target 12, 30 included actions they will take in the next five years to assess the conservation status of their species. Brazil aims to identify all threatened species found in protected areas. Vietnam aims to periodically investigate, monitor, update, and publish the list of threatened, rare, and precious species prioritized for protection. Cuba aims to assess the conservation status of 80 percent of native flora species, including all threatened species. Malawi aims to conduct conservation status assessments of 20 percent of amphibian and reptiles species in the Lower Elephant Marshes Wetlands, as well as the completion of a national red list of threatened species. Egypt aims to assess the conservation status of major threatened species and their habitats to determine the requirements and priorities for conservation to protect these plants and animals, using the IUCN standards.

21. In sum, the assessment of the conservation status of species for most of the major taxonomic groups is incomplete, and a complete evaluation, both at the global level by IUCN and at the national level by Parties, is urgently needed. Given sufficient information for only three taxonomic groups (amphibian, mammal and bird species), amphibians are the most threatened. Nationally, a few countries are in the process of assessing the conservation status of species as part of their priority actions. In each country, priority for the conservation of threatened species should be given to those species that are most threatened and for which the country has the greatest responsibility, for example, Critically Endangered endemic species.

B. Preventing the extinction of known threatened species and improving their conservation status, particularly of those most in decline

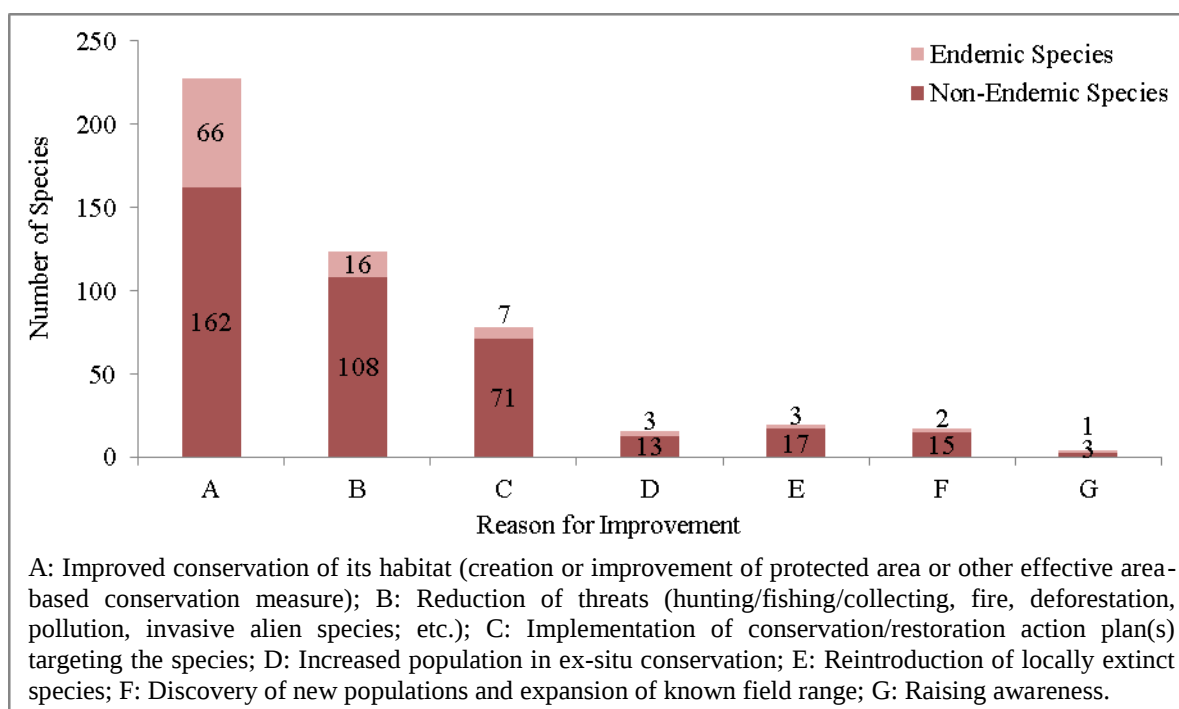
22. Recent studies estimated an exceptionally rapid loss of biodiversity over the last few centuries, indicating that the Earth's biota has entered a sixth mass extinction.¹² Even though data collected from the latest version of the IUCN Red List of Threatened Species and presented in the previous section show an alarming high proportion of threatened species, averting human-induced extinction of species is still possible through rapid, greatly intensified conservation efforts by all CBD Parties.

¹¹ Percentages and number of species taken from Sri Lanka's fifth national report to the CBD. Available at <https://www.cbd.int/doc/world/lk/lk-nr-05-en.pdf>

¹² Ceballos, G., Ehrlich, P. R., Barnosky, A. D., García, A., Pringle, R. M., & Palmer, T. M. (2015). Accelerated modern human-induced species losses: Entering the sixth mass extinction. *Science Advances*, 1(5), e1400253.

23. Through the series of workshops held thus far, CBD Parties have identified reasons for the improvement of the conservation status of species by submitting success stories on conservation of species. Chart 5 presents seven reasons for the improvement of the conservation status of species in 23 countries¹³ according to the information they submitted. As shown below, according to country submissions, the improvement in the conservation of the species habitat was the principal reason for the improvement of the conservation status of 228 species, followed by the reduction of threats, which also played a large role in the improvement of the conservation status of 128 species, and the implementation of species specific conservation action plans, improving the conservation status of 77 species. Even though only 23 countries submitted this information, it indicates that three measures seem to have the most impact on improving the conservation status and preventing extinction of species: (i) improvement of the conservation of species habitat; (ii) reduction of threats; and (iii) implementation of conservation action plans targeting species. We present hereafter more information about the contribution of the conservation of species habitat and the implementation of species specific conservation action plans to the achievement of Aichi Biodiversity Target 12, as no information on the reduction of threats was compiled through the four workshops held thus far.

Chart 5. Reasons for the improvement of the conservation status of endemic and non-endemic species as described by CBD Parties through submissions of success stories on conservation of species in Africa, Asia, and GRULAC



1. Improvement of the conservation of species habitat

24. As habitat loss and degradation have been frequently cited as a principal threat that leads to the decline of species¹⁴, actions that can be carried out to improve the conservation status of a species and prevent its extinction are the protection and management of its habitat. As protected areas are regarded as

¹³ Afghanistan, Argentina, Bangladesh, Benin, Botswana, China, Colombia, Dominican Republic, Democratic Republic of the Congo, Eritrea, Ethiopia, Guinea, India, Kenya, Madagascar, Nigeria, Oman, Pakistan, Peru, Senegal, Tajikistan, Tunisia, and Vietnam.

¹⁴ Butchart, S. H., Stattersfield, A. J., & Collar, N. J. (2006). How many bird extinctions have we prevented?. *Oryx*, 40(03), 266-278.

a core strategy for conserving nature by their abilities to reduce the loss, degradation and fragmentation of natural habitats, the effectiveness of protected areas in preventing the extinction of threatened species has been recently studied. Researchers found that species occurring in sites with greater protected area coverage experienced smaller increases in extinction risk over the last few decades.¹⁵ The fourth edition of the *Global Biodiversity Outlook* even called for the development of more representative and better-managed protected area systems prioritizing sites of special importance to biodiversity, especially those that contain unique populations of threatened species, as actions that would be effective and would help to accelerate progress towards Aichi Biodiversity Target 12.

25. To effectively use protected areas as a tool to prevent the extinction of species, sites of particular importance for biodiversity, Key Biodiversity Areas (KBAs), such as Important Bird and Biodiversity Areas (IBAs; sites of global avian significance) and Alliance for Zero Extinction sites (AZEs; sites holding the last remaining population of one or more highly threatened species), must be adequately conserved, for example through protected areas.¹⁶ However, even though there is a recent increase in the protection of IBAs and AZEs, suggesting progress towards averting future extinctions, the fourth edition of the *Global Biodiversity Outlook* reported that 75 percent of such sites remain inadequately covered by protected areas. Furthermore, while the coverage of these sites by protected areas has increased recently, the proportion of protected areas covering IBAs and AZEs, as opposed to sites that have not been documented as important for biodiversity, has declined significantly since 1950, meaning that protected areas are increasingly being designated outside sites of importance for biodiversity, despite the high percentage of such sites that are not hitherto completely protected.¹⁷

26. Expansion of formal protected area networks and other effective area-based conservation measures to cover all partially protected and unprotected IBAs and AZEs would not only contribute to improving the conservation status of known threatened species and preventing their extinction, but would also increase terrestrial coverage of protected areas to 17.5 percent at the global level, meeting at the same time the 17 percent terrestrial coverage target of Aichi Biodiversity Target 11.¹⁸ Further conservation of areas of particular importance for biodiversity would hence not only contribute to achieve Aichi Biodiversity Target 12, but also some elements of Aichi Biodiversity Target 11. Therefore, better targeted expansion of protected area networks to effectively cover IBAs, AZEs, and other KBAs, would not only greatly improve biodiversity trends, but would also help to address the current incongruity between the current expansion of protected areas coverage and the on-going decline of species.

27. Currently, at the global level, a recent study found that the mean percentage of species' ranges covered by protected areas is 24.8 percent for amphibians (29.3 percent for threatened amphibians), 20.2 percent for mammals (27.5 percent for threatened mammals), and 19.7 percent for birds (25.7 percent for threatened birds).¹⁹ Moreover, many species at the global level have none of their spatial distribution under protection as 21.9 percent of amphibians (26.5 percent of threatened amphibians), 9.7 percent of mammals (16.0 percent of threatened mammals), and 5.6 percent of birds (19.1 percent of threatened birds) have less than 2 percent of their range covered by protected areas.²⁰ Furthermore, at the global level, 217 Critically Endangered amphibians, 62 Critically Endangered mammals, and 66 Critically Endangered birds have less than 2 percent of their range covered by protected areas. A list of these Critically Endangered amphibians, mammals and birds species that are not covered by protected areas is

¹⁵ Butchart, S. H., Scharlemann, J. P., Evans, M. I., Quader, S., Arico, S., Arinaitwe, J., ... & Boucher, T. M. (2012). Protecting important sites for biodiversity contributes to meeting global conservation targets. *PLoS One*, 7(3), e32529.

¹⁶ Idem

¹⁷ Idem

¹⁸ Idem

¹⁹ Butchart, S. H., Clarke, M., Smith, R. J., Sykes, R. E., Scharlemann, J. P., Harfoot, M., ... & Brooks, T. M. (2015). Shortfalls and solutions for meeting national and global conservation area targets. *Conservation Letters*, 8(5), 329-337.

²⁰ Butchart, S. H., Clarke, M., Smith, R. J., Sykes, R. E., Scharlemann, J. P., Harfoot, M., ... & Brooks, T. M. (2015). Shortfalls and solutions for meeting national and global conservation area targets. *Conservation Letters*, 8(5), 329-337.

presented in annex 1. These 345 Critically Endangered species that are not covered at all by protected areas should be targeted by countries as priorities for further protection as their imminent extinction could be prevented by the expansion of formal protected area networks and other effective area-based conservation measures to adequately and effectively cover at least some of their spatial range.

28. For the three regions covered through the series of workshops held thus far, charts 6 to 9 present the percentage of evaluated species with some of their range covered by protected areas for three taxonomic groups (amphibians, mammals, and birds). This information was compiled from the Digital Observatory for Protected Areas.²¹ It is important to note that the information presented include species that have their mapped range overlapping to some extent (>0 percent to 100 percent; this information could not be further disassociated) with protected area boundaries in the country, but this does not mean that this overlap provide adequate protection to the species. The four charts present information for evaluated, threatened, endemic and threatened endemic species.

29. From chart 6, amphibian species in Asia are the less protected taxon, with 28.8 percent of amphibian species having none of their range covered by protected areas, followed by amphibian species in GRULAC at 28.1 percent and bird species in GRULAC at 22.6 percent. From chart 7, threatened amphibian species in Asia are the less protected taxon, with 32.1 percent of threatened amphibian species having none of their range covered by protected areas, followed by threatened amphibian species in GRULAC at 30.0 percent and threatened bird species in GRULAC at 28.0 percent. From chart 8, endemic amphibian species in Africa are the less protected taxon, with 34.2 percent of endemic amphibian species having none of their range covered by protected areas, followed by endemic amphibian species in Asia at 33.0 percent and endemic amphibian species in GRULAC at 30.9 percent. From chart 9, threatened endemic amphibian species in GRULAC are the less protected taxon, with 34.2 percent of threatened endemic amphibian species having none of their range covered by protected areas, followed by threatened endemic amphibian species in Asia at 31.6 percent and threatened endemic mammal species in GRULAC at 30.3 percent.

30. In general, around 25 percent of threatened amphibian, mammal, and bird species in Africa, Asia and GRULAC have none of their spatial range covered to some extent by protected areas. These findings indicate opportunities for countries to improve the conservation status and prevent the extinction of these known threatened species by identifying priority actions for conservation targeting the expansion of formal protected areas and other effective area-based conservation measures to cover their spatial range. As shown above and in previous sections, amphibians are the less protected taxon, with approximatively 30 percent of evaluated, threatened, endemic, and threatened endemic species with none of their range overlapping with protected areas, and 217 Critically Endangered species having less than 2 percent of their range overlapping with protected areas. At the global level, 41 percent of evaluated amphibian species are threatened²², which make these species face greater risk of extinction than the other taxonomic groups assessed by the IUCN Red List of Threatened Species. Improving the conservation of amphibian habitats by including sites of particular importance for these species under protected areas or other effective area-based conservation measures could be an effective way to prevent their extinction.

²¹ Dubois, G., Bastin, L., Martinez-Lopez J., Cottam, A., Temperley, H., Bertzky, B., Graziano, M. (2015). The Digital Observatory for Protected Areas (DOPA) Explorer 1.0. EUR 27162 EN. Publications Office of the European Union, Luxembourg, 53 p. http://dopa-explorer.jrc.ec.europa.eu/dopa_explorer/.

²² IUCN. (2015-4). "Numbers of threatened species by major groups of organisms (1996–2015)" Available at http://cmsdocs.s3.amazonaws.com/summarystats/2015-4_Summary_Stats_Page_Documents/2015_4_RL_Stats_Table_1.pdf

Chart 6. Percent of evaluated species with some of their range (>0% to 100%) overlapping with protected areas for three taxonomic groups in three regions

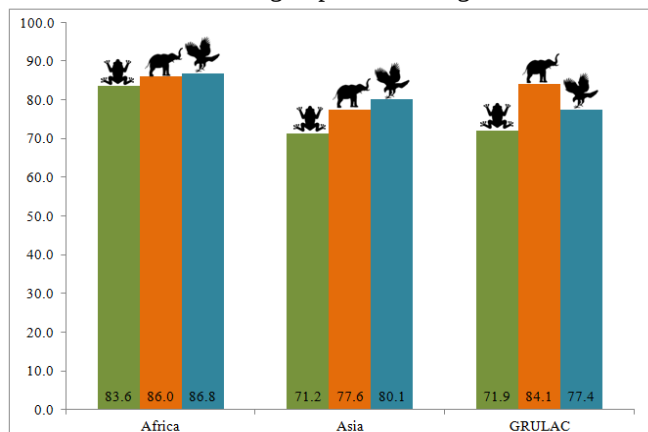


Chart 7. Percent of threatened species with some of their range (>0% to 100%) overlapping with protected areas for three taxonomic groups in three regions

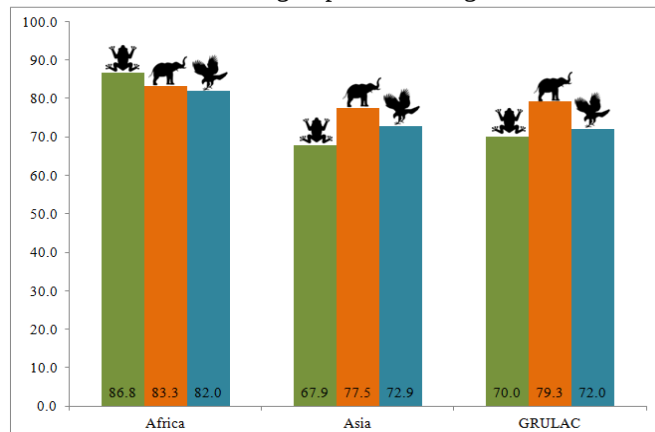


Chart 8. Percent of endemic species with some of their range (>0% to 100%) overlapping with protected areas for three taxonomic groups in three regions

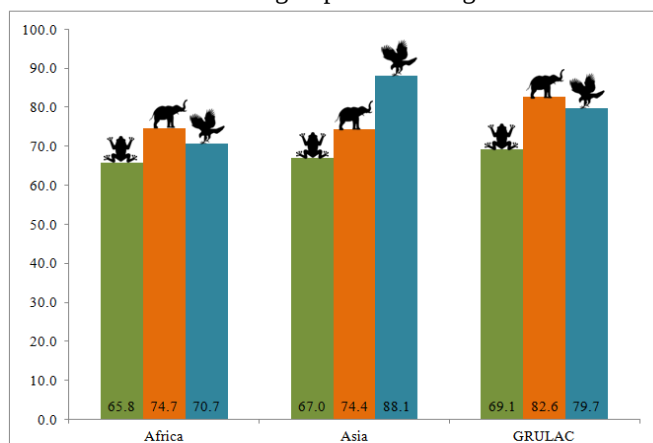
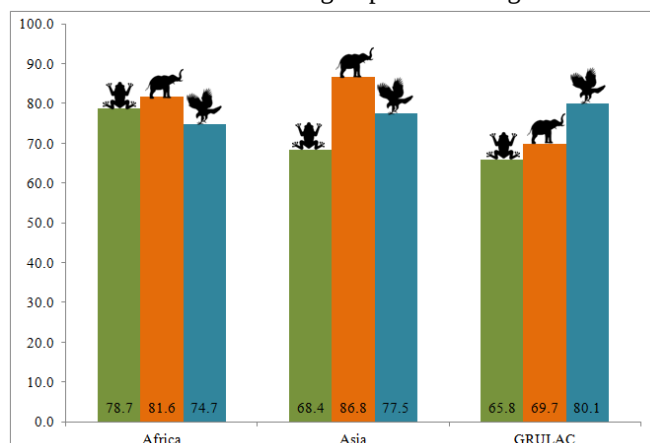


Chart 9. Percent of threatened endemic species with some of their range (>0% to 100%) overlapping with protected areas for three taxonomic groups in three regions



31. As stated in the previous section, from the four regional workshops held thus far, out of the 88 countries that submitted information on Aichi Biodiversity Target 12, 16 countries reported that improving the conservation of species habitat helped in improving their conservation status. For example, China reported that the creation of protected areas have improved the conservation status of 7 threatened species, of which 2 are endemic (*Neoechiropteris palatopedata* and *Amitostigma hemipilioides*). In particular, the crested ibis (*Nipponia nippon*) was listed as Critically Endangered in the IUCN Red List of Threatened Species database in 1994, but Endangered in 2013, as after the rediscovery of wild populations, the Chinese government established the Shaanxi Crested Ibis Nature Reserve to protect this species and its habitat. In Peru, the conservation status of 4 threatened species has improved through the demarcation of the Laquipampa Wildlife Refuge and two Regional Conservation Areas; in 2011, the population of the White-winged Guan (*Penelope albipennis*) has stabilized. The following paragraphs discuss three success stories for species conservation reported by countries.

32. Both Pakistan and Tajikistan listed the Markhor (*Capra falconeri*) as a success story for improving the conservation status of a threatened mammal species. In 2014, the IUCN Red List of Threatened Species designated the Markhor as Endangered; in 2015, its status was graded to Near threatened. Pakistan listed the development of key protected areas, including designated habitat of the flare-horned Markhor (*Capra falconeri falconeri*) subspecies, as the main reason for this improvement. Tajikistan listed the World Bank/Global Environmental Facility Dashtidzhum Biodiversity Conservation

project, which strengthened protected areas' management, planning, and monitoring activities in the Markhor's habitat, as the main reason for improvement in the status of this species. In Tajikistan, 80 percent of the Markhor are found in conservancies established and managed by local small family businesses and community based non-governmental organizations.

33. The Dominican Republic listed the humpback whale (*Megaptera novaeangliae*) as a success story. In 2007, the IUCN Red List of Threatened Species designated the humpback whale as Vulnerable; in 2007, it was designated as Least concerned. The Dominican Republic reported the creation of the Bancos de la Plata y de la Navidad marine protected area – a 22,526 km² area designated as IUCN protected area category 1b – as a reason for this improvement in the conservation status. Bancos de la Plata y de la Navidad is the area where the largest breeding aggregation of humpback whales occurs in the North Atlantic.

34. The greater one-horned rhino (*Rhinoceros unicornis*) is an example of a threatened species having its conservation status improved because of the development of protected areas. India listed the species as a success story: in 2007, the species was designated as Endangered by the IUCN Red List of Threatened Species, but in 2008, it was downlisted to the Vulnerable category. India reported the species currently occurs almost exclusively within and around protected areas. Therefore, the Indian Rhinoceros Recovery Plan and Indian Rhino Vision 2020 were developed to protect the species. The Indian Rhino Vision 2020 aims to attain a wild population of at least 3,000 greater one-horned rhinos in seven protected areas in the State of Assam by 2020.

35. In terms of priority actions identified by countries whose implementation in the next five years will contribute to achieve Aichi Biodiversity Target 12, 25 countries reported they aim to improve the conservation of species habitat. For example, Colombia aims to increase protection of 62 threatened species and 250 species with restricted ranges through overlaps with protected areas. Chile aims to develop an Alliance for Zero Extinction project under the Global Environment Facility (GEF) to conserve irreplaceable sites for threatened species in Isla Mocha, Mehuín, and Mehuín 1. Indonesia aims to monitor the spatial ranges and populations of 25 priority species and to establish 50 sanctuaries for them. Zambia aims to develop management plans for all its existing protected areas and for other areas of importance for biodiversity that contain endemic, rare, and threatened species.

36. In sum, countries reported that the improvement of the protection of species habitat helped in improving their conservation status. As such, the overlap of the range of amphibian, mammal and birds species with protected areas in three regions was examined using available data. In general, amphibians are the less protected and the most threatened taxon. Three case studies demonstrate the value of using better targeted expansion of protected area networks to effectively cover threatened species' spatial range and areas important for biodiversity to address the on-going decline of species.

2. Implementation of conservation action plans targeting species

37. As stated in the previous section, in the regional workshops held thus far, countries reported that the implementation of species specific conservation action plans played a large role in the improvement of the conservation status of threatened species. Yet, data on how many threatened species have conservation action plans is reported only sporadically.

38. A note prepared by the Executive Secretary (UNEP/CBD/SBI/1/2/Add.2), to be presented at the first meeting of the Subsidiary Body of Implementation (SBI), assess the extent to which the national targets or similar commitments contained in the revised or updated national biodiversity strategies and action plans (NBSAPs) correspond to the global aspirations set out in the Aichi Biodiversity Targets.

39. Only 26 percent of the NBSAPs considered in this assessment contain national targets which have a similar scope and level of ambition to what is set out in Aichi Biodiversity Target 12. These NBSAPs are from Afghanistan, Austria, Belarus, Bhutan, Brazil, Cameroon, Canada, Congo, Dominican Republic, Eritrea, Finland, Georgia, Hungary, Japan, Sudan, Uganda, United Kingdom, Venezuela, Vietnam, and

Zimbabwe. Fifty-seven percent of the assessed NBSAPs include targets which are either lower or do not cover all elements of Aichi Biodiversity Target 12, while 17 percent of NBSAPs do not contain any national targets or commitments related to this Aichi Target. Moreover, most NBSAPs assessed did not include any specific actions related to the implementation of conservation action plans targeting threatened species, but only generic actions.

40. To fill this gap, fifth national reports of all countries covered by regional workshops thus far were examined for information related to species specific conservation action plans. As of 26 February 2016, 48 African countries, 35 Asian countries and 28 GRULAC countries had submitted their fifth national reports to the Secretariat, for a total of 111 countries. Out of these, 51 countries reported 199 species conservation action plans, the majority of which are for mammals (107 plans), followed by birds (51 plans) and reptiles (25 plans).²³ Species conservation action plans mostly target threatened species (145 plans)²⁴, with 54 plans for the conservation of Vulnerable species, 58 plans for the conservation of Endangered species, and 33 plans for the conservation of Critically Endangered species. Out of the 33 plans for Critically Endangered species, 11 are for mammals, 10 are for birds and 8 are for reptiles. From table 2, 32 percent of the conservation action plans targeting threatened non-endemic species were reported by African countries, 50 percent plans were reported by Asian countries and 18 percent were reported by GRULAC countries. Overall, 17 percent of the conservation action plans target endemic species (33 plans), with 19 percent of the conservation action plans targeting threatened endemic species (28 plans). Four conservation action plans target Vulnerable endemic species, 8 plans target Endangered endemic species, and 16 conservation action plans target Critically Endangered endemic species.

Table 2. Number of species specific conservation action plans per conservation status and region as reported from 111 fifth national reports examined.

	Vulnerable		Endangered		Critically Endangered		Threatened	
	Non-endemic	Endemic	Non-endemic	Endemic	Non-endemic	Endemic	Non-endemic	Endemic
Africa	25	0	6	1	16	11	47	12
Asia	20	0	41	3	11	3	72	6
GRULAC	9	4	11	4	6	2	26	10
Total	54	4	58	8	33	16	145	28

41. Accordingly with information presented in charts 2, 3 and 4 from the previous section of this document, with as few as 28 conservation action plans targeting threatened endemic species and 16 conservation action plans targeting Critically Endangered endemic species, between 0 and 0.3 percent of threatened endemic species and Critically Endangered endemic species in Africa, Asia, and GRULAC have species specific conservation action plans. Of the total 692 amphibian, mammal, and bird Critically Endangered species endemic to one country in Africa, Asia, and GRULAC, only 12 of these species have species specific conservation action plans: the Malabar Civet (*Viverra civettina*) and the Jerdon's Courser (*Rhinoptilus bitorquatus*) in India; the Sumatran Orangutan (*Pongo abelii*) in Indonesia; the Araripe Manakin (*Antilophia bokermanni*) and the Spix Macaw (*Cyanopsitta spixii*) in Brazil; the São Tomé Ibis (*Bostrychia bocagei*), the São Tomé Fiscal (*Lanius newtoni*), and the São Tomé Grosbeak (*Neospiza concolor*) in São Tomé and Príncipe; the Golden Mantella Frog (*Mantella aurantica*) and the Madagascan pochard (*Aythya innotata*) in Madagascar; and the Taita apalis (*Apalis fuscicularis*) and the Taita thrush (*Turdus helleri*) in Kenya.

²³ Only species specific conservation plans or programmes or strategies were extracted. Some conservation plans have been discarded when information about the species were not provided or too general.

²⁴ The IUCN conservation status was not available for seven species.

42. In Africa, 19 countries out of the 49 with fifth national reports reported 64 species specific conservation plans, 13 of which were for endemic species in South Africa, Cabo Verde, São Tomé and Príncipe, Madagascar, and Kenya. South Africa has a Biodiversity Management Plan for the endemic and Critically Endangered gymnosperm *Encephalartos latifrons*. São Tomé and Príncipe has Actions Plans for three Critically Endangered endemic bird species: São Tomé Ibis (*Bostrychia Bocagei*), São Tomé Fiscal (*Lanius newtoni*), and São Tomé Grosbeak (*Neospiza concolor*). Madagascar has six plans for threatened endemic species: the Golden Mantella Frog Conservation Strategy, for the Critically Endangered *Mantella aurantica*; the Global action plan in the management of Madagascar turtle, for the Critically Endangered *Astrochylis yniphora*; the Action Plan for the Conservation of *Aythya innotata*, Critically Endangered; the Conservation strategy for Granddier's Baobab tree, for the Endangered *Andansonia grandidieri*; the Belalanda chameleon Conservation Strategy, for the Critically Endangered *Furcifer belalandaensis*; and the Antanosy gecko Conservation Strategy, for the Critically Endangered *Phelsuma antanosy*.

43. In Asia, 20 countries out of the 37 with fifth national reports reported 88 species specific conservation plans, 6 of which were for endemic species in India and Indonesia. India has Species Recovery Plans for the endemic and Endangered Nilgiri Tahr (*Nilgiritragus hylocrius*), and the Critically Endangered endemic Malabar Civet (*Viverra civettina*) and Jerdon's Courser (*Rhinoptilus bitorquatus*). Indonesia has a Conservation Strategy and Action Plan of Threatened Species for the Endangered endemic Javan Hawk Eagle (*Nisaetus bartelsi*) and Silvery Gibbon (*Hylobates moloch*), and the Critically Endangered endemic Sumatran Orangutan (*Pongo abelii*).

44. In GRULAC, 12 countries out of the 28 with fifth national reports reported 47 species specific conservation plans, 13 of which were for endemic species in Saint Vincent and the Grenadines, Saint Lucia, Brazil, Chile, and Peru. In Saint Vincent and the Grenadines, a Research-based Conservation plan is in place for the Vulnerable endemic St Vincent Parrot (*Amazona guildingii*). Chile has a Conservation Program for the Endangered endemic Pitao (*Pituvia punctata*). In Brazil, the Chico Mendes Institute for Biodiversity Conservation (ICMBio) and the National Centre for Plant Conservation of the Rio de Janeiro Botanic Garden Research Institute (CNCFlora/IPJBRJ), between 2004 and 2016, adopted 56 National Conservation Action Plans targeting one or more threatened species. Annex 2 presents the names of said action plans, their year of adoption, and the species they target. These National Conservation Action Plans target 225 threatened species according to IUCN and 568 threatened species according to the Brazilian Official Lists of Threatened Species of Fauna and Flora issued by the Brazilian Ministry of the Environment. The complete list of these threatened species, their conservation status, assessed both by IUCN and by a national assessment, and the action plans that target them, are presented in annex 3.

45. As stated in the previous section, from the four regional workshops held thus far, out of the 88 countries that submitted information on Aichi Biodiversity Target 12, 50 reported having developed 1,179 conservation action plans targeting species to help improve their conservation status. Ten countries also reported being in the process of preparing species conservation action plans, for a total of 51 such plans being currently prepared. For example, Tajikistan has developed the National Action Plan for Snow Leopard (*Panthera unica*) Conservation in Tajikistan and management plans for the conservation of the Bukhara deer (*Cervus elaphus bactrianus*) and the Markhor (*Capra falconeri*). India has developed the Long Term Conservation Plan for Hangul in 2009 which is under implementation, for the Critically Endangered Kashmir stag (*Cervus elaphus hanglu*). Vietnam has two national conservation programs approved by the Prime Minister: the National Elephant Conservation Program 2013-2020, with an urgent elephant conservation action plan by 2020, and the National Tiger Conservation Program 2013-2020. The country also has conservation programs carried out by national and international non-governmental organizations for bears, primates, pangolins, turtles, and small carnivores.

46. In terms of priority actions identified by countries whose implementation in the next five years will contribute to achieve Aichi Biodiversity Target 12, 11 countries reported that they will develop and/or implement 111 conservation action plans targeting species. Fifteen countries also reported the

creation of species conservation plans as part of their priority actions but did not specify the number of plans they are aiming to create and/or implement. For example, Chile aims to implement a national action plan for the conservation of native and threatened species. As part of Brazil's priority actions, the country aims to develop a national strategy for species conservation and to have 80 percent of all threatened species under a protection plan by 2020. Sri Lanka aims to prepare conservation plans for identified threatened endemic species and implement them through relevant government agencies and indigenous people and local communities. The Democratic Republic of the Congo aims to assess conservation action plans and their level of implementation, as well as their strengths and weaknesses.

47. In sum, countries reported that specific species conservation action plans help in improving the conservation status of species. As most NBSAPs do not present specific actions related to the implementation of conservation actions plans targeting species, fifth national reports were examined to assess the numbers of threatened species that have conservation action plans. Of the total 692 amphibian, mammal, and bird Critically Endangered species endemic to one country in Africa, Asia, and GRULAC, only 12 of these species have species specific conservation action plans.

IV. CONCLUSION, LESSONS LEARNED, AND NEXT STEPS

48. In order to facilitate the achievement of Aichi Biodiversity Target 12, the Secretariat, in collaboration with partner organizations, has undertaken efforts to reach out to Parties, including developing baseline data for countries in the form of information dossiers, building capacity to better understand and fulfil the achievement of this target, and securing the submission of questionnaires, success stories on species conservation, status matrices, and national priority actions (road maps) through regional workshops. Based on submissions from four regional workshops in Africa, mainland Asia and Latin America and the Caribbean, and from publicly available data, an updated assessment of progress was compiled.

49. Only 5 percent of the world's described species have been assessed by the IUCN Red List of Threatened Species. Given sufficient information for only three taxonomic groups (amphibian, mammal and bird species), amphibians are the most threatened, with 41 percent assessed amphibian species being threatened. The improvement of the conservation of species habitat and the implementation of conservation action plans targeting species should be used by countries to improve the conservation status and prevent the extinction of known threatened species. Priority for the conservation of threatened species should be given to endemic species, with Critically Endangered endemic species coming first. There are 217 Critically Endangered species having less than 2 percent of their range overlapping with protected areas. Of the total 692 amphibian, mammal, and bird Critically Endangered species endemic to one country in Africa, Asia, and GRULAC, only 12 of these species have species specific conservation action plans.

50. In order to achieve Aichi Biodiversity Target 12, a complete conservation status assessment of more taxonomic groups both at the global level by the IUCN Red List of Threatened Species and at the national level by CBD Parties is urgently needed. However, even if only 5 percent of all described species have been assessed for their conservation status, enough information is available to immediately take action to prevent the extinction of more species. The expansion of formal protected area networks and other effective area-based conservation measures to cover partially protected and unprotected areas important for biodiversity (in particular, KBAs such as IBAs and AZEs), and the implementation of species specific conservation action plans targeting all threatened species in the country, starting with Critically Endangered species, should be used by countries as means to improve and sustained the conservation status of species, particularly those species most in decline, and to prevent the extinction of known threatened species.

51. Achieving Aichi Biodiversity Target 12 is crucial as the loss of biodiversity lead to the loss of vital ecosystem services such as water purification, crop pollination, carbon storage, and protection from extreme weather and climatic events. As the disappearance of natural habitats is listed as one of the main

causes of biodiversity loss at the species and the ecosystem levels, the conservation of natural habitats, and especially of areas of particular importance for biodiversity, is by far the better way to prevent massive extinction and limit the damages caused to the planet by the on-going sixth mass extinction.

Annex 1. Critically Endangered amphibian, mammal, and bird species with less than 2 percent of their range covered by protected areas²⁵.

Amphibians	Mammals	Birds
<i>Alsodes montanus</i>	<i>Abrocoma boliviensis</i>	<i>Francolinus ochropectus</i>
<i>Alsodes vanzolinii</i>	<i>Brachyteles hypoxanthus</i>	<i>Tadorna cristata</i>
<i>Ambystoma lermaense</i>	<i>Callicebus oenanthe</i>	<i>Rhodonessa caryophyllacea</i>
<i>Ambystoma mexicanum</i>	<i>Cercopithecus dryas</i>	<i>Aythya innotata</i>
<i>Paradactylodon mustersi</i>	<i>Chinchilla lanigera</i>	<i>Anthracoseros montani</i>
<i>Paradactylodon gorganensis</i>	<i>Crateromys australis</i>	<i>Todiramphus godeffroyi</i>
<i>Eleutherodactylus semipalmatus</i>	<i>Cremnomys elvira</i>	<i>Todiramphus gambieri</i>
<i>Bokermannohyla izecksohni</i>	<i>Cryptochloris wintoni</i>	<i>Charmosyna toxopei</i>
<i>Platymantis insulatus</i>	<i>Dendrolagus scottae</i>	<i>Prioniturus verticalis</i>
<i>Lithobates tlaloci</i>	<i>Dipodomys margaritae</i>	<i>Anodorhynchus glaucus</i>
<i>Rhinoderma rufum</i>	<i>Dobsonia chapmani</i>	<i>Ara glaucogularis</i>
<i>Telmatobius pefauri</i>	<i>Phyllomys unicolor</i>	<i>Hapalopsittaca fuertesi</i>
<i>Telmatobius zapahuirensis</i>	<i>Geomys tropicalis</i>	<i>Lophornis brachylophus</i>
<i>Telmatobufo bullocki</i>	<i>Habromys chinanteco</i>	<i>Aegotheles savesi</i>
<i>Nototriton brodiei</i>	<i>Habromys lepturus</i>	<i>Leptotila wellsii</i>
<i>Cryptotriton wakei</i>	<i>Lepilemur septentrionalis</i>	<i>Gallicolumba menagei</i>
<i>Cardioglossa trifasciata</i>	<i>Marmosops handleyi</i>	<i>Gallicolumba erythroptera</i>
<i>Astylosternus nganhanus</i>	<i>Marmota vancouverensis</i>	<i>Gallinula pacifica</i>
<i>Leptodactylodon erythrogaster</i>	<i>Melanomys zunigae</i>	<i>Gallinula silvestris</i>
<i>Adenomys dasi</i>	<i>Melomys rubicola</i>	<i>Numenius tenuirostris</i>
<i>Andinophryne colomai</i>	<i>Mesocapromys sanfelipensis</i>	<i>Vanellus macropterus</i>
<i>Atelopus angelito</i>	<i>Microtus bavaricus</i>	<i>Sterna bernsteini</i>
<i>Atelopus arthuri</i>	<i>Millardia kondana</i>	<i>Podiceps gallardoi</i>
<i>Atelopus carauta</i>	<i>Mysateles garridoi</i>	<i>Phalacrocorax onslowi</i>
<i>Atelopus chocoensis</i>	<i>Mystacina robusta</i>	<i>Bostrychia bocagei</i>
<i>Atelopus ebenoides</i>	<i>Neotoma nelsoni</i>	<i>Pseudobulweria aterrima</i>
<i>Atelopus erythropus</i>	<i>Pappogeomys alcorni</i>	<i>Pseudobulweria becki</i>
<i>Atelopus eusebianus</i>	<i>Peromyscus bullatus</i>	<i>Pterodroma phaeopygia</i>
<i>Atelopus farci</i>	<i>Peromyscus mayensis</i>	<i>Puffinus auricularis</i>
<i>Atelopus guanujo</i>	<i>Peromyscus mekisturus</i>	<i>Diomedea amsterdamensis</i>
<i>Atelopus guitarraensis</i>	<i>Petaurus abidi</i>	<i>Cinclodes palliatus</i>
<i>Atelopus lynchi</i>	<i>Phalanger matanim</i>	<i>Aphrastura masafueriae</i>
<i>Atelopus minutulus</i>	<i>Pharotis imogene</i>	<i>Synallaxis maranonica</i>

²⁵ Butchart, S. H., Clarke, M., Smith, R. J., Sykes, R. E., Scharlemann, J. P., Harfoot, M., ... & Brooks, T. M. (2015). Shortfalls and solutions for meeting national and global conservation area targets. *Conservation Letters*, 8(5), 329-337.

<i>Atelopus monohernandezii</i>	<i>Pteralopex pulchra</i>	<i>Merulaxis stresemanni</i>
<i>Atelopus pedimarmoratus</i>	<i>Pteropus insularis</i>	<i>Lanius newtoni</i>
<i>Atelopus pinangoi</i>	<i>Pteropus rodricensis</i>	<i>Corvus unicolor</i>
<i>Atelopus reticulatus</i>	<i>Pteropus tuberculatus</i>	<i>Corvus kubaryi</i>
<i>Atelopus seminiferus</i>	<i>Solomys ponceleti</i>	<i>Eutrichomyias rowleyi</i>
<i>Atelopus sernai</i>	<i>Sorex sclateri</i>	<i>Terpsiphone corvina</i>
<i>Atelopus sonsonensis</i>	<i>Sorex stizodon</i>	<i>Pomarea nigra</i>
<i>Atelopus subornatus</i>	<i>Tylomys tumbalensis</i>	<i>Pomarea whitneyi</i>
<i>Rhinella chavin</i>	<i>Uromys imperator</i>	<i>Monarcha boanensis</i>
<i>Incilius cristatus</i>	<i>Uromys porculus</i>	<i>Turdus helleri</i>
<i>Duttaphrynus sumatranus</i>	<i>Zyzomys palatalis</i>	<i>Aplonis pelzelni</i>
<i>Rhinella rostrata</i>	<i>Myotis yanbarensis</i>	<i>Toxostoma guttatum</i>
<i>Centrolene ballux</i>	<i>Macaca pagensis</i>	<i>Eurochelidon sirintarae</i>
<i>Hyloxalus edwardsi</i>	<i>Nilopegamys plumbeus</i>	<i>Phyllastrephus leucolepis</i>
<i>Allobates juanii</i>	<i>Orthogeomys lanius</i>	<i>Apalis fuscigularis</i>
<i>Hyloxalus ruizi</i>	<i>Ailurops melanotis</i>	<i>Zosterops rotensis</i>
<i>Ameerega ingeri</i>	<i>Suncus aequatorius</i>	<i>Heteromirafra archeri</i>
<i>Charadrahyla altipotens</i>	<i>Congosorex phillipsorum</i>	<i>Heteromirafra sidamoensis</i>
<i>Plectrohyla calthula</i>	<i>Ctenomys osvaldoreigi</i>	<i>Alauda razae</i>
<i>Plectrohyla calvicollina</i>	<i>Pteropus aruensis</i>	<i>Neospiza concolor</i>
<i>Plectrohyla celata</i>	<i>Pipanaoctomys aureus</i>	<i>Loxioides bailleui</i>
<i>Plectrohyla cembra</i>	<i>Habromys ixtlani</i>	<i>Loxops caeruleirostris</i>
<i>Plectrohyla chryses</i>	<i>Pteralopex flanneryi</i>	<i>Leucopezia semperi</i>
<i>Plectrohyla crassa</i>	<i>Habromys schmidlyi</i>	<i>Nemosia rourei</i>
<i>Plectrohyla cyanomma</i>	<i>Ctenomys roigi</i>	<i>Colluricincla sanghirensis</i>
<i>Hypsiboas cymbalum</i>	<i>Salinoctomys loschalchalersorum</i>	<i>Otus moheliensis</i>
<i>Ptychohyla dendrophasma</i>	<i>Tarsius tumpara</i>	<i>Leptodon forbesi</i>
<i>Bromeliohyla dendroscarta</i>	<i>Rhinopithecus strykeri</i>	<i>Otus siaoensis</i>
<i>Ecnomiohyla echinata</i>	<i>Callicebus caquetensis</i>	<i>Zosterops nehrkorni</i>
<i>Plectrohyla hazelae</i>		<i>Oceanites maorianus</i>
<i>Megastomatohyla mixe</i>		<i>Amaurospiza carrizalensis</i>
<i>Plectrohyla pachyderma</i>		<i>Eriocnemis isabellae</i>
<i>Megastomatohyla pellita</i>		<i>Turdus xanthorhynchus</i>
<i>Exerodonta perkinsi</i>		
<i>Plectrohyla psarosema</i>		
<i>Plectrohyla sabrina</i>		
<i>Ecnomiohyla salvaje</i>		
<i>Plectrohyla thorectes</i>		
<i>Charadrahyla trux</i>		
<i>Phyllomedusa ayeaye</i>		

<i>Plectrohyla acanthodes</i>
<i>Plectrohyla pycnochila</i>
<i>Plectrohyla tecunumani</i>
<i>Plectrohyla teuchestes</i>
<i>Ptychohyla macrotympanum</i>
<i>Ptychohyla sanctaecrucis</i>
<i>Scinax alcatraz</i>
<i>Alexteroon jynx</i>
<i>Atopophrynus syntomopus</i>
<i>Pristimantis albericoi</i>
<i>Eleutherodactylus bartonsmithi</i>
<i>Pristimantis bernali</i>
<i>Eleutherodactylus bresslerae</i>
<i>Eleutherodactylus caribe</i>
<i>Craugastor coffeus</i>
<i>Eleutherodactylus darlingtoni</i>
<i>Eleutherodactylus dixonii</i>
<i>Eleutherodactylus glanduliferoides</i>
<i>Craugastor glaucus</i>
<i>Eleutherodactylus grandis</i>
<i>Craugastor guerreroensis</i>
<i>Pristimantis hamiotae</i>
<i>Eleutherodactylus lucioi</i>
<i>Eleutherodactylus mariposa</i>
<i>Craugastor merendonensis</i>
<i>Craugastor olanchano</i>
<i>Craugastor omoaensis</i>
<i>Eleutherodactylus oxyrhynchus</i>
<i>Eleutherodactylus parapelates</i>
<i>Eleutherodactylus paulsoni</i>
<i>Eleutherodactylus pezopetrus</i>
<i>Pristimantis phragmipleuron</i>
<i>Craugastor polymniae</i>
<i>Eleutherodactylus poolei</i>
<i>Eleutherodactylus rhodesi</i>
<i>Eleutherodactylus rufescens</i>
<i>Eleutherodactylus sciagraphus</i>
<i>Eleutherodactylus thorectes</i>
<i>Craugastor trachydermus</i>
<i>Eleutherodactylus ventrilineatus</i>

<i>Eleutherodactylus warreni</i>
<i>Oreobates zongoensis</i>
<i>Odontophrynus moratoi</i>
<i>Phrynopus dagmarae</i>
<i>Phrynopus heimorum</i>
<i>Phrynopus juninensis</i>
<i>Phrynopus kauneorum</i>
<i>Hypodactylus lucida</i>
<i>Oreobates pereger</i>
<i>Pristimantis simonsii</i>
<i>Telmatobius gigas</i>
<i>Boophis williamsi</i>
<i>Mantella cowanii</i>
<i>Mantella milotympanum</i>
<i>Mantidactylus pauliani</i>
<i>Albericus siegfriedi</i>
<i>Stumpffia helenae</i>
<i>Xenopus longipes</i>
<i>Fejervarya murthii</i>
<i>Indirana gundia</i>
<i>Micrixalus kottigeharensis</i>
<i>Lithobates chichicuahutla</i>
<i>Lithobates omiltemanus</i>
<i>Lithobates pueblae</i>
<i>Odorrana wuchuanensis</i>
<i>Raorchestes chalazodes</i>
<i>Pseudophilautus lunatus</i>
<i>Pseudophilautus papillosus</i>
<i>Pseudophilautus procax</i>
<i>Philautus sanctisilvaticus</i>
<i>Raorchestes shillongensis</i>
<i>Pseudophilautus simba</i>
<i>Pseudophilautus amboli</i>
<i>Polypedates fastigo</i>
<i>Ambystoma amblycephalum</i>
<i>Ambystoma andersoni</i>
<i>Ambystoma bombypellum</i>
<i>Ambystoma dumerilii</i>
<i>Ambystoma taylori</i>
<i>Bolitoglossa capitana</i>

<i>Bradytriton silus</i>
<i>Chiropterotriton arboreus</i>
<i>Chiropterotriton chiropterus</i>
<i>Chiropterotriton lavae</i>
<i>Chiropterotriton terrestris</i>
<i>Dendrotriton cuchumatanus</i>
<i>Dendrotriton rabbi</i>
<i>Pseudoeurycea nigra</i>
<i>Pseudoeurycea parva</i>
<i>Nototriton major</i>
<i>Parvimolge townsendi</i>
<i>Pseudoeurycea ahuitzotl</i>
<i>Pseudoeurycea anitae</i>
<i>Pseudoeurycea aquatica</i>
<i>Pseudoeurycea exspectata</i>
<i>Pseudoeurycea juarezi</i>
<i>Pseudoeurycea lynchi</i>
<i>Pseudoeurycea naucampatepetl</i>
<i>Pseudoeurycea praecellens</i>
<i>Pseudoeurycea saltator</i>
<i>Pseudoeurycea smithi</i>
<i>Pseudoeurycea tlahcuiloh</i>
<i>Thorius aureus</i>
<i>Thorius infernalis</i>
<i>Thorius minutissimus</i>
<i>Thorius minydemus</i>
<i>Thorius narisovalis</i>
<i>Thorius pennatulus</i>
<i>Thorius smithi</i>
<i>Thorius spilogaster</i>
<i>Echinotriton chinhaiensis</i>
<i>Neurergus kaiseri</i>
<i>Cardioglossa alsco</i>
<i>Werneria iboundji</i>
<i>Gastrotheca zeugocystis</i>
<i>Cophyla berara</i>
<i>Bolitoglossa oresbia</i>
<i>Lyciasalamandra billae</i>
<i>Boulengerula niedeni</i>
<i>Phrynopus tautzorum</i>

<i>Eleutherodactylus juanariveroi</i>
<i>Scinax peixotoi</i>
<i>Atelopus pyrodactylus</i>
<i>Rana holtzi</i>
<i>Psychrophrynella illimani</i>
<i>Hyla heinzsteinitzi</i>
<i>Telmatobius punctatus</i>
<i>Scinax faivovichi</i>
<i>Atelopus epikeisthos</i>
<i>Atelopus onorei</i>
<i>Atelopus eusebiodiazi</i>
<i>Atelopus patazensis</i>
<i>Melanophryniscus langonei</i>
<i>Ecnomiohyla rabborum</i>
<i>Pelophryne murudensis</i>
<i>Pelophryne linanitensis</i>
<i>Nyctibatrachus dattatreyaensis</i>
<i>Arthroleptella rugosa</i>
<i>Xenopus itombwensis</i>
<i>Raorchestes chlorosomma</i>
<i>Raorchestes kaikatti</i>
<i>Raorchestes marki</i>
<i>Xanthophryne tigerina</i>
<i>Dendrotriton chujorum</i>

Annex 2. National Action Plans targeting one or more threatened species in Brazil adopted by the Chico Mendes Institute for Biodiversity Conservation (ICMBio) between 2004 and 2016 and by the National Centre for Plant Conservation of the Rio de Janeiro Botanic Garden Research Institute (CNCFlora/IPJBRJ) in 2014 and 2015²⁶

PAN Number	Year	Name of PAN	Species or Number of Species per Order included	Number of Species
1	2004/2012	Red-billed Curassow	<i>Crax blumenbachii</i> (Galliformes)	1 Bird
2	2006/2012	Albatrosses and Petrels	Procellariiformes (11)	11 Birds
3	2006/2012	Brazilian Merganser	<i>Mergus octosetaceus</i> (Anseriformes)	1 Bird
4	2006/2013	Lear's Macaw	<i>Anodorhynchus leari</i> (Psittaciformes)	1 Bird
5	2006/2008	Raptor Birds	Falconiformes (8)	8 Birds
6	2008	Threatened Galliformes	Galliformes (8)	8 Birds
7	2007	Alagoas Curassow	Alagoas Curassow (Galliformes)	1 Bird
8	2010	Restinga Antwren	<i>Formicivora littoralis</i> (Passeriformes)	1 Bird

²⁶ ICMBio = Chico Mendes Institute for Biodiversity Conservation, a branch of the Brazilian Ministry of the Environment

CNCFlora/IPJBRJ = National Center for Plant Conservation of the Rio de Janeiro Botanic Garden Research Institute, a branch of the Brazilian Ministry of the Environment

MMA = Brazilian Ministry of the Environment ("Ministério do Meio Ambiente")

PAN = National Action Plan ("Plano de Ação Nacional")

MMA, 2008. *Red Book of Brazilian Threatened Species of Fauna*. Brasília, Ministério do Meio Ambiente, 2 vols. [describes the species included in the Official National List of Threatened Species of Fauna issued by Normative Instruction 3 by the Brazilian Ministry of the Environment in 27 May 2003 and the in the Official National List of Threatened Species of Aquatic Fauna issued by Normative Instruction 5 by the Brazilian Ministry of the Environment in 21 May 2004, with amendments issued by Normative Instruction 52 by the Brazilian Ministry of the Environment in 8 November 2005]

CNCFlora, 2013. *Red Book of Brazilian Threatened Species of Flora*. Rio de Janeiro, Centro Nacional de Conservação da Flora (CNCFlora)/Rio de Janeiro Botanic Garden Research Institute, 1 vol. [describes the species included in the Official National List of Threatened Species of Flora issued by Administrative Directive (Portaria) 443 by the Brazilian Ministry of the Environment in 17 December 2014]

The 2014 Red Lists are available at:

MMA Administrative Directive (Portaria) nº 443/2014 on Threatened Flora
<http://pesquisa.in.gov.br/imprensa/jsp/visualiza/index.jsp?data=18/12/2014&jornal=1&pagina=110&totalArquivos=144>

MMA Administrative Directive (Portaria) nº 444/2014 on Threatened Fauna
<http://pesquisa.in.gov.br/imprensa/jsp/visualiza/index.jsp?jornal=1&pagina=121&data=18/12/2014>

MMA Administrative Directive (Portaria) nº 445/2014 on Threatened Aquatic Fauna at:
<http://pesquisa.in.gov.br/imprensa/jsp/visualiza/index.jsp?jornal=1&pagina=126&data=18/12/2014>

The 2013 Plant Red Databook is available at:

<http://cncflora.jbrj.gov.br/arquivos/arquivos/pdfs/LivroVermelho.pdf>

The 2014 Fauna Online Red Databook is available at: <http://www.icmbio.gov.br/portal/biodiversidade/fauna-brasileira/lista-de-especies.html>

The National Conservation Action Plans adopted by ICMBio are available at:
<http://www.icmbio.gov.br/portal/biodiversidade/fauna-brasileira/planos-de-acao-nacional.html>

The National Conservation Action Plans adopted by CNCFlora are available at:
<http://cncflora.jbrj.gov.br/portal/pt-br/livros>

9	2012	Spix' Macaw	<i>Cyanopsitta spixii</i> (Psittaciformes)	1 Bird
10	2010	Franciscana Dolphin	<i>Pontoporia blainvillei</i> (Cetacean)	1 Mammal
11	2010/2013	Woolly Spider Monkeys	Primates (2)	2 Mammals
12	2010/2013	Manatees	Sirenia (2)	2 Mammals
13	2010	Threatened Butterflies	Lepidoptera (56)	56 Insects
14	2009/2011	Large Cetaceans & Pinnipeds	Cetaceans (6) [plus 8 non threatened species]	6 Mammals
15	2010	Araripe Manakin	<i>Antilophia bokermanni</i> (Passeriformes)	1 Bird
16	2010/2015	Aquatic Fauna of the Paraiba do Sul Basin	Testudines (1), Characiformes (6), Siluriformes (5), Cyprinodontiformes (1), Crustacea (3), Bivalvia (3)	1 Reptile 12 Fishes 3 Crustacea 3 Molluscs
17	2010/2011	Thin-spines Porcupine	<i>Chaetomys subspinosus</i> (Rodentia)	1 Mammal
18	2010/2011	Small Cetaceans	[7 non threatened Cetaceans]	0 Mammal
19	2010/2013	Jaguar	<i>Panthera onca</i> (Carnivora)	1 Mammal
20	2010/2011	Parrots of the Atlantic Forest	Psittaciformes (4)	4 Birds
21	2009/2011	Insular Herpetofauna in SE Brazil	Squamata (3), Anura (1)	3 Reptiles 1 Amphibian
22	2010/2012	Threatened Deers	Artiodactyla (4) [plus 4 non threatened species]	4 Mammals
23	2010/2013	Mammals of Central Atlantic Forest	Primates (13), Rodentia (10), Chiroptera (2), Artiodactyla (1)	26 Mammals
24	2011	Threatened Cactaceae	Caryophyllales (28)	28 Plants
25	2010/2011	Marine Turtles	Testudines (5)	5 Reptiles
26	2010	Nectar Bat of the Cerrado Biome	<i>Lonchophylla dekeyseri</i> (Chiroptera)	1 Mammal
27	2011/2012	Threatened Fauna of the Karst Caves of the San Francisco Basin	Chiroptera (2), Characiformes (1), Siluriformes (1), Gymnotiformes (1), Coleoptera (2), Opiliones (2), Amblipigi (1), Aranea (1)	2 Mammals 3 Fishes 2 Insects 4 Arachnida
28	2010/2012	Giant Otter	<i>Pteronura brasiliensis</i> (Carnivora) [plus 1 non threatened species]	1 Mammal
29	2011/2013	Bare-faced Tamarin	<i>Saguinus bicolor</i> (Primates)	1 Mammal
30	2009	Maned Wolf	<i>Chrysocyon brachyurus</i> (Carnivora)	1 Mammal
31	2011	Passeriformes of Southern Grasslands	Passeriformes (22)	22 Birds
32	2011	Birds of the Caatinga Biome	Apodiformes (2), Cuculiformes (1), Falconiformes (1), Galliformes (2), Passeriformes (24), Piciformes (1), Psittaciformes (1), Tinamiformes (1)	33 Birds
33	2011/2013	Primates from Northeastern Brazil	Primates (5)	5 Mammals
34	2011	Fauna of Mid and Lower Xingu Region	Psittaciformes (2), Carnivora (5), Sirenia (1), Primates (2), Pilosa (1),	2 Birds 10 Mamals

			Cingulata (1), Characiformes (1), Siluriformes (1), Bivalvia (4)	2 Fishes 4 Molluscs
35	2015	Aquatic Fauna of Moji and Pardo Basin	Characiformes (3), Siluriformes (2), Cyprinodontiformes (1)	6 Fishes
36	2011	Herpetofauna of Southern Brazil	Squamata (3), Anura (2)	3 Reptiles 2 Amphibians
37	2011	Herpetofauna of the Espinhaço Range	Squamata (4), Anura (1)	4 Reptiles 1 Amphibian
38	2011	Threatened Pipeworts (Eriocaulaceae)	Poales (13) [plus 1 non threatened species]	13 Plants
39	2011	Puma	<i>Panthera onca</i> (Carnivora)	1 Mammal
40	2012	Threatened Killifish (Rivulidae)	Cyprinodontiformes (52)	52 Fishes
41	2013	Herpetofauna of Northeastern Brazil	Squamata (3), Anura (3)	3 Reptiles 3 Amphibians
42	2012	Migratory Coastal Birds	[Charadriiformes (27), all non-threatened]	27 Birds
43	2012	Bush Dog	<i>Speothos venaticus</i> (Carnivora)	1 Mammal
44	2012	Birds of the Amazonia Biome	Galliformes (3), Tinamiformes (1), Gruiformes (2), Psittaciformes (4), Falconiformes (2), Apodiformes (3), Piciformes (4), Cuculiformes (2), Passeriformes (24)	45 Birds
45	2013	Small Felines	Carnivora (4)	4 Mammals
46	2013	Birds of the Cerrado and Pantanal Biomes	Galliformes (1), Tinamiformes (2), Gruiformes (2), Pelecaniformes (2), Psittaciformes (6), Falconiformes (5), Caprimulgiformes (1), Columbiformes (1), Apodiformes (3), Piciformes (2), Passeriformes (22)	47 Birds
47	2014	Three-banded Armadillos	Cingulata (2)	2 Mammals
48	2014	Threatened Sharks and Rays	Elasmobranchii (12)	12 Fishes
49	2015	Threatened Fauna of Mangroves	Charadriiformes (1), Pelecaniformes (1), Psittaciformes (2), Passeriformes (2), Tinamiformes (1), Cetacean (1), Sirenia (2), Primates (2), Perciformes (1), Elasmobranchii (6), Crustacea (2)	7 Birds 5 Mammals 7 Fishes 2 Crustacean
50	2015	Amazon Turtles	Testudines (3) [also includes 14 non threatened turtle species]	3 Reptiles
51	2015	Aquatic Fauna of the San Francisco River	Characiformes (3), Siluriformes (5), Cyprinodontiformes (1)	9 Fishes
52	2015	Herpetofauna of SE Atlantic	Squamata (4), Testudines (1),	5 Reptiles

		Forest	Anura (9)	9 Amphibians
53	2016	Coral Reefs Fauna	Scorpaeniformes (1), Syngnathiformes (4), Perciformes (25), Orectolobiformes (1), Carcharhiniformes (4), Rajiformes (2), Gastropoda (3), Asteroidea (3), Echinoidea (1), Holothuroidea (1), Anthozoa (3), Hydrozoa (1), Demospongiae (3)	37 Fishes 3 Mollusca 5 Echinoder- mata 4 Cnidaria 3 Porifera
54	2014	Wilson's Bean Tree	<i>Dimorphandra wilsonii</i> (Fabaceae)	1 Plant
55	2015	Threatened Plants of Serra do Espinhaço South	Poales (13), Asparagales (6), Liliales (3), Arecales (1); Asterales (7), Gentianales (7), Myrtales (3), Malpighinales (2), Lamiales (2), Fabales (1), Geraniales (1)	46 Plants
56	2015	Threatened Plants of the Serra Grão-Mogol [Serra do Espinhaço North]	Poales (3), Asparagales (1), Liliales (1); Caryophyllales (2), Gentianales (1), Myrtales (2), Lamiales (1), Fabales (1)	12 Plants

Annex 3. Threatened species with National Action Plans in Brazil adopted by the Chico Mendes Institute for Biodiversity Conservation (ICMBio) between 2004 and 2016 and by the National Centre for Plant Conservation of the Rio de Janeiro Botanic Garden Research Institute (CNCFlora/IPJBRJ) in 2014 and 2015

Species	Taxon Group (Order)	National Action Plan	Date of Plan	Endemic	Status IUCN	Status MMA
AVES						
<i>Crax blumenbachii</i>	Galliformes	PAN 1. Red-billed Curassow PAN 6. Threatened Galliformes	2004 2008	Endemic	EN (2012)	EN (2008)
<i>Crax pinima</i>	Galliformes	PAN 6. Threatened Galliformes PAN 44. Birds of the Amazonia Biome	2008 2012	Endemic	CR (2015)	EN (2008)
<i>Crax globulosa</i>	Galliformes	PAN 44. Birds of the Amazonia Biome	2012	No	EN (2012)	EN (2008)
<i>Mitu mitu</i>	Galliformes	PAN 7. Alagoas Curassow PAN 6. Threatened Galliformes	2007 2008	Endemic	EW (2012)	EW(2008))
<i>Aburria jacutinga</i>	Galliformes	PAN 6. Threatened Galliformes	2008	No	EN (2006)	EN (2008)
<i>Penelope superciliaris alagoensis</i>	Galliformes	PAN 6. Threatened Galliformes	2008	Endemic ssp	-	EN (2008)
<i>Penelope ochrogaster</i>	Galliformes	PAN 6. Threatened Galliformes PAN 46. Birds of the Cerrado and Pantanal	2008 2013	Endemic	VU (2006)	VU (2008)
<i>Penelope jacucaca</i>	Galliformes	PAN 6. Threatened Galliformes PAN 32. Birds of the Caatinga Biome	2008 2011	Endemic	VU (2006)	VU (2008)
<i>Penelope pileata</i>	Galliformes	PAN 44. Birds of the Amazonia Biome	2012	Endemic	VU (2012)	VU (2014)
<i>Odontophorus capueira plumbeicollis</i>	Galliformes	PAN 6. Threatened Galliformes PAN 32. Birds of the Caatinga Biome	2008 2011	Endemic ssp	-	EN (2008) CR (2014)
<i>Crypturellus noctivagus noctivagus</i>	Tinamiformes	PAN 49. Threatened Fauna of Mangroves	2015	Endemic ssp	NT (2012)	VU (2008)
<i>Crypturellus noctivagus zabele</i>	Tinamiformes	PAN 32. Birds of the Caatinga Biome	2011	Endemic ssp	-	VU (2008)
<i>Tinamus tao</i>	Tinamiformes	PAN 44. Birds of the Amazonia Biome	2012	No	VU (2012)	VU (2014)

<i>Taoniscus nanus</i>	Tinamiformes	PAN 46. Birds of the Cerrado and Pantanal Biomes	2013	Endemic (EX in AR PA)	VU(2006)	VU (2008) EN (2014)
<i>Nothura minor</i>	Tinamiformes	PAN 46. Birds of the Cerrado and Pantanal Biomes	2013	Mostly [eastern PA]	VU(2006)	VU (2008) EN (2014)
<i>Psophia dextralis</i>	Gruiformes	PAN 44. Birds of the Amazonia Biome	2012	Endemic	EN (2014)	VU (2014)
<i>Psophia obscura</i>	Gruiformes	PAN 44. Birds of the Amazonia Biome	2012	Endemic	CR (2015)	EN (2008)
[<i>Micropygia schomburgkii</i>]	Gruiformes	PAN 46. Birds of the Cerrado and Pantanal	2013	No	LC (2012)	
<i>Laterallus xenopterus</i>	Gruiformes	PAN 46. Birds of the Cerrado and Pantanal Biomes	2013	Mostly {+ Bo & PA]	VU (2012)	
<i>Diomedea dabbenena</i>	Procellariiformes	PAN 2. Albatrosses and Petrels	2006	No	EN (2004)	EN (2008)
<i>Diomedea epomophora</i>	Procellariiformes	PAN 2. Albatrosses and Petrels	2006	No	VU (2004)	VU (2008)
<i>Diomedea exulans</i>	Procellariiformes	PAN 2. Albatrosses and Petrels	2006	No	VU (2004)	VU (2008)
<i>Diomedea sanfordi</i>	Procellariiformes	PAN 2. Albatrosses and Petrels	2006	No	EN (2004)	EN (2008)
<i>Thalassarche chlororhynchos</i>	Procellariiformes	PAN 2. Albatrosses and Petrels	2006	No	EN (2004)	VU (2008)
<i>Thalassarche chrysostoma</i>	Procellariiformes	PAN 2. Albatrosses and Petrels	2006	No	VU (2004)	
<i>Thalassarche melanophris</i>	Procellariiformes	PAN 2. Albatrosses and Petrels	2006	No	EN (2004)	VU (2008)
<i>Procellaria aequinoctialis</i>	Procellariiformes	PAN 2. Albatrosses and Petrels	2006	No	VU (2004)	VU (2008)
<i>Procellaria conspicillata</i>	Procellariiformes	PAN 2. Albatrosses and Petrels	2006	No	CR (2004)	EN (2008)
<i>Pterodroma arminjoniana</i>	Procellariiformes	PAN 2. Albatrosses and Petrels	2006	No [breeds in BR]	VU (2004)	VU (2008)
<i>Puffinus lherminieri</i>	Procellariiformes	PAN 2. Albatrosses and Petrels	2006	No [breeds in BR]	LC	CR (2008)
<i>Thalasseus maximus</i>	Charadriiformes	PAN 49. Threatened Fauna of Mangroves	2015	No	LC	VU (2008) EN (2014)
<i>Charadrius wilsonia</i>	Charadriiformes	PAN 42. Migratory Coastal Birds	2012	No	LC	VU (2014)
<i>Calidris canutus</i>	Charadriiformes	PAN 42. Migratory Coastal Birds	2012	No	NT	EN (2014)
<i>Calidris pusilla</i>	Charadriiformes	PAN 42. Migratory Coastal Birds	2012	No	NT	EN (2014)
<i>Tryngites subruficollis</i>	Charadriiformes	PAN 42. Migratory Coastal Birds	2012	No	NT	VU (2014)
<i>Limnodromus griseus</i>	Charadriiformes	PAN 42. Migratory	2012	No	LC	CR (2014)

Coastal Birds						
[<i>Pluvialis dominica</i> , <i>Pluvialis squatarola</i> , <i>Charadrius semipalmatus</i> , <i>Haematopus palliatus</i> , <i>Limosa haemastica</i> , <i>Numenius phaeopus</i> , <i>Bartramia longicauda</i> , <i>Actitis macularius</i> , <i>Tringa solitaria</i> , <i>Tringa melanoleuca</i> , <i>Tringa semipalmata</i> , <i>Tringa flavipes</i> , <i>Arenaria interpres</i> , <i>Calidris alba</i> , <i>Calidris minutilla</i> , <i>Calidris fuscicollis</i> , <i>Calidris bairdii</i> , <i>Calidris melanotos</i> , <i>Calidris himantopus</i> , <i>Phalaropus tricolor</i> , <i>Charadrius falklandicus</i> , <i>Charadrius modestus</i> , <i>Oreopholus ruficollis</i>]	Charadriiformes	PAN 42. Migratory Coastal Birds [deals with 23 species which are not threatened with extinction]	2012	No	LC (2012)	
<i>Tigrisoma fasciatum</i>	Pelecaniformes	PAN 49. Threatened Fauna of Mangroves PAN 46. Birds of the Cerrado and Pantanal	2015 2013	Mostly [AR: [Misiones]	LC	EN (2008)
<i>Agamia agami</i>	Pelecaniformes	PAN 46. Birds of the Cerrado and Pantanal	2013	No	VU (2012)	
<i>Mergus octosetaceus</i>	Anseriformes	PAN 3. Brazilian Merganser	2006	Mostly [AR: [Misiones]	CR (2006)	CR (2008)
<i>Anodorhynchus leari</i>	Psittaciformes	PAN 4. Lear's Macaw	2006	Endemic	CR (2006)	CR (2008)
<i>Anodorhynchus hyacinthinus</i>	Psittaciformes	PAN 34. Fauna of Mid and Lower Xingu PAN 46. Birds of the Cerrado and Pantanal	2011 2013	Mostly [+BO & PA]	EN (2006)	VU (2008)
[<i>Ara chloropterus</i>]	Psittaciformes	PAN 46. Birds of the Cerrado and Pantanal	2013	No	LC	
<i>Cyanopsitta spixii</i>	Psittaciformes	PAN 9. Spix's Macaw	2012	Endemic	CR (2004)	EW (2008)
<i>Guaruba guarouba</i>	Psittaciformes	PAN 34. Fauna of Mid and Lower Xingu	2011 2012	Endemic	EN (2006)	VU (2008)

		PAN 44. Birds of the Amazonia Biome				
<i>Amazona rhodocorytha</i>	Psittaciformes	PAN 20. Parrots of the Atlantic Forest	2011	Endemic	EN (2004)	EN (2008)
<i>Amazona pretrei</i>	Psittaciformes	PAN 20. Parrots of the Atlantic Forest	2011	Mostly [+Misiones: AR & PA]	VU (2004)	VU (2008)
<i>Amazona brasiliensis</i>	Psittaciformes	PAN 20. Parrots of the Atlantic Forest PAN 49. Threatened Fauna of Mangroves	2011 2015	Endemic	VU (2004)	VU (2008)
<i>Amazona vinacea</i>	Psittaciformes	PAN 20. Parrots of the Atlantic Forest	2011	Mostly [+PA & AR: Misiones]	EN (2004)	VU (2008)
[<i>Alipiopsitta xanthops</i> , <i>Pyrrhura devillei</i> , <i>Pyrrhura molinae</i>]	Psittaciformes	PAN 46. Birds of the Cerrado and Pantanal Biomes [these species are not threatened]	2013	No	NT (2012)	
<i>Pyrilia vulturina</i>	Psittaciformes	PAN 44. Birds of the Amazonia Biome	2012	Endemic	VU (2012)	VU (2014)
<i>Pyrrhura griseipectus</i>	Psittaciformes	PAN 32. Birds of the Caatinga Biome	2011	Endemic	CR (2015)	CR (2008)
<i>Pyrrhura lepida lepida</i>	Psittaciformes	PAN 44. Birds of the Amazonia Biome	2012	Endemic ssp	VU (2012)	EN (2008)
<i>Pyrrhura pfrimeri</i>	Psittaciformes	PAN 46. Birds of the Cerrado and Pantanal Biomes	2013	Endemic	EN (2012)	VU (2008)
<i>Touit melanonotus</i>	Psittaciformes	PAN 49. Threatened Fauna of Mangroves	2015	Endemic	EN (2006)	VU (2008)
<i>Aratinga solstitialis</i>	Psittaciformes	PAN 44. Birds of the Amazonia Biome	2012	Mostly [+GU & SU]	EN (2014)	EN (2014)
<i>Circus cinereus</i>	Falconiformes	PAN 5. Raptor Birds	2008	No	LC	VU (2008)
<i>Leucopternis lacernulatus</i>	Falconiformes	PAN 5. Raptor Birds	2008	Endemic	VU (2006)	VU (2008)
<i>Leucopternis polionotus</i>	Falconiformes	PAN 5. Raptor Birds	2008	Mostly [+PA & UR]	NT	NT (2008)
<i>Urubitinga coronata</i> (= <i>Harpyhaliaetus coronatu</i>)	Falconiformes	PAN 5. Raptor Birds PAN 46. Birds of the Cerrado and Pantanal	2008 2013	Endemic	EN (2006)	VU (2008) EN (2014)
<i>Morphnus guianensis</i>	Falconiformes	PAN 5. Raptor Birds PAN 44. Birds of the Amazonia Biome	2008 2012	No	NT	NT (2008) VU (2014)
<i>Harpia harpyja</i>	Falconiformes	PAN 5. Raptor Birds PAN 44. Birds of the Amazonia Biome	2008 2012 2013	No	NT	NT (2008) VU (2014)

		PAN 46. Birds of the Cerrado and Pantanal					
<i>Spizaetus tyrannus tyrannus</i>	Falconiformes	PAN 5. Raptor Birds	2008	No	LC	NT (2008)	
<i>Leptodon forbesi</i>	Falconiformes	PAN 5. Raptor Birds PAN 32. Birds of the Caatinga Biome	2008 2011	Endemic	CR (2015)	DD (2008) EN (2008)	
[<i>Accipiter poliogaster</i> , <i>Ibycter Americanos</i> , <i>Falco deiroleucus</i>]	Falconiformes	PAN 46. Birds of the Cerrado and Pantanal [these species are not threatened]	2013	No	NT (2012)		
<i>Hydropsalis candicans</i> =(<i>Caprimulgus candicans</i>)	Caprimulgiformes	PAN 46. Birds of the Cerrado and Pantanal	2013	Mostly [+PA & BO]	EN (2006)	EN (2008)	
<i>Columbina cyanopsis</i>	Columbiformes	PAN 46. Birds of the Cerrado and Pantanal	2013	Endemic	CR (2006)	CR (2008)	
<i>Augastes lumachella</i>	Apodiformes	PAN 32. Birds of the Caatinga Biome	2011	Endemic	NT (2012)	EN (2008)	
<i>Thalurania watertonii</i>	Apodiformes	PAN 32. Birds of the Caatinga Biome	2011	Endemic	EN (2015)	VU (2008) EN (2014)	
<i>Lophornis gouldii</i>	Apodiformes	PAN 44. Birds of the Amazonia Biome	2012	Mostly [+East BO]	VU (2012)	VU (2014)	
<i>Phaethornis aethopyga</i>	Apodiformes	PAN 44. Birds of the Amazonia Biome	2012	Endemic	NT (2012)	VU (2014)	
<i>Phaethornis bourcierii major</i>	Apodiformes	PAN 44. Birds of the Amazonia Biome	2012	Endemic ssp		VU (2014)	
[<i>Phaethornis nattereri</i> , <i>Phaethornis subochraceus</i> , <i>Cypseloides fumigatus</i> and <i>Piculus leucolaemus</i>]	Apodiformes and Piciformes	PAN 46. Birds of the Cerrado and Pantanal [these species are not threatened]	2013	No	LC		
<i>Celeus obrieni</i>	Piciformes	PAN 46. Birds of the Cerrado and Pantanal	2013	Endemic	EN (2012)	VU (2014)	
<i>Piculus chrysochloros paraenses</i>	Piciformes	PAN 44. Birds of the Amazonia Biome	2012	Endemic ssp		EN (2014)	
<i>Picumnus varzeae</i>	Piciformes	PAN 44. Birds of the Amazonia Biome	2012	Endemic	EN (2013)	EN (2014)	
<i>Selenidera gouldii baturitensis</i>	Piciformes	PAN 32. Birds of the Caatinga Biome	2011	Endemic ssp		EN (2008)	
<i>Pteroglossus bitorquatus bitorquatus</i>	Piciformes	PAN 44. Birds of the Amazonia Biome	2012	Endemic ssp	EN (2014)-	VU (2008)	
<i>Capito dayi</i>	Piciformes	PAN 44. Birds of the Amazonia Biome	2012	Mostly [+East BO]	VU (2012)	VU (2014)	
<i>Neomorphus geoffroyi geoffroyi</i>	Cuculiformes	PAN 32. Birds of the Caatinga Biome	2011	Endemic	VU (2015)	CR (2008)	
<i>Neomorphus geoffroyi amazonicus</i>	Cuculiformes	PAN 44. Birds of the Amazonia Biome	2012	No		VU (2014)	

<i>Neomorphus squamiger</i>	Cuculiformes	PAN 44. Birds of the Amazonia Biome	2012	Mostly [+BO]		VU (2014)
<i>Formicivora littoralis</i>	Passeriformes	PAN 8. Restinga Antwren	2010	Endemic	CR (2004)	CR (2008)
<i>Formicivora grantsau</i>	Passeriformes	PAN 32. Birds of the Caatinga Biome	2011	Endemic	NT (2012)	EN (2008)
<i>Antilophia bokermanni</i>	Passeriformes	PAN 15. Soldadinho-do-Araripe	2010	Endemic	CR (2004)	CR (2008)
<i>Terenura sicki</i>	Passeriformes	PAN 32. Birds of the Caatinga Biome	2011	Endemic	EN (2012)	CR (2008)
<i>Conopophaga lineata cearae</i>	Passeriformes	PAN 32. Birds of the Caatinga Biome	2011	Endemic ssp		EN (2008)
<i>Lepidocolaptes wagleri</i>	Passeriformes	PAN 32. Birds of the Caatinga Biome	2011	Endemic	VU	EN (2008)
<i>Myrmoderus ruficaudus</i>	Passeriformes	PAN 32. Birds of the Caatinga Biome	2011	Endemic	EN	EN (2008)
<i>Phylloscartes beckeri</i>	Passeriformes	PAN 32. Birds of the Caatinga Biome	2011	Endemic	EN	EN (2008)
<i>Phylloscartes roquettei</i>	Passeriformes	PAN 32. Birds of the Caatinga Biome	2011	Endemic	EN	EN (2008)
<i>Rhopornis ardesiacus</i>	Passeriformes	PAN 32. Birds of the Caatinga Biome	2011	Endemic	EN	EN (2008)
<i>Scytalopus diamantinensis</i>	Passeriformes	PAN 32. Birds of the Caatinga Biome	2011	Endemic	NT	EN (2008)
<i>Synallaxis infuscata</i>	Passeriformes	PAN 32. Birds of the Caatinga Biome	2011	Endemic	EN	EN (2008)
<i>Xiphorhynchus guttatus gracilirostris</i>	Passeriformes	PAN 32. Birds of the Caatinga Biome	2011	Endemic ssp		EN (2008)
<i>Conopophaga melanops nigrifrons</i>	Passeriformes	PAN 32. Birds of the Caatinga Biome	2011	Endemic ssp		VU (2008)
<i>Hemitriccus mirandae</i>	Passeriformes	PAN 32. Birds of the Caatinga Biome	2011	Endemic	VU	VU (2008)
<i>Platyrinchus mystaceus niveigularis</i>	Passeriformes	PAN 32. Birds of the Caatinga Biome	2011	Endemic ssp		VU (2008)
<i>Pyriglena pernambucensis</i>	Passeriformes	PAN 32. Birds of the Caatinga Biome	2011	Endemic		VU (2008)
<i>Sclerurus cearensis</i>	Passeriformes	PAN 32. Birds of the Caatinga Biome	2011	Endemic		VU (2008)
<i>Sporagra yarrellii</i>	Passeriformes	PAN 32. Birds of the Caatinga Biome	2011	Endemic	VU	VU (2008)
<i>Tangara cyanocephala cearensis</i>	Passeriformes	PAN 32. Birds of the Caatinga Biome	2011	Endemic ssp		VU (2008)
<i>Tangara fastuosa</i>	Passeriformes	PAN 32. Birds of the Caatinga Biome	2011	Endemic	VU	VU (2008)
<i>Thamnophilus caerulescens cearensis</i>	Passeriformes	PAN 32. Birds of the Caatinga Biome	2011	Endemic ssp		VU (2008)
<i>Thamnophilus caerulescens</i>	Passeriformes	PAN 32. Birds of the	2011	Endemic		VU (2008)

<i>pernambucensis</i>		Caatinga Biome		ssp		
<i>Xenops minutus alagoanus</i>	Passeriformes	PAN 32. Birds of the Caatinga Biome	2011	Endemic ssp		VU (2008)
<i>Xiphocolaptes falcirostris</i>	Passeriformes	PAN 32. Birds of the Caatinga Biome	2011	Endemic	VU	VU (2008)
<i>Xiphorhynchus atlanticus</i>	Passeriformes	PAN 32. Birds of the Caatinga Biome	2011	Endemic		VU (2008)
<i>Sporophila falcirostris</i>	Passeriformes	PAN 49. Threatened Fauna of Mangroves	2015	Mostly [PA & Misiones AR]	VU (2012)	VU (2014)
<i>Sporophila frontalis</i>	Passeriformes	PAN 49. Threatened Fauna of Mangroves	2015	Mostly [PA & Misiones AR]	VU (2012)	VU (2014)
<i>Alectrurus tricolor</i>	Passeriformes	PAN 31. Passeriformes of Southern Grasslands	2011	No	VU (2010)	VU (2008)
<i>Anthus nattereri</i>	Passeriformes	PAN 31. Passeriformes of Southern Grasslands	2011	No	VU (2010)	VU (2008)
[<i>Asthenes hudsoni</i>]	Passeriformes	PAN 31. Passeriformes of Southern Grasslands [species not threatened]	2011	No	NT (2012)	DD (2008)
<i>Coryphistera alaudina</i>	Passeriformes	PAN 31. Passeriformes of Southern Grasslands	2011	No	LC (2010)	CR (2008)
<i>Culicivora caudacuta</i>	Passeriformes	PAN 31. Passeriformes of Southern Grasslands	2011	No	VU (2010)	VU (2008)
<i>Drymornis bridgesii</i>	Passeriformes	PAN 31. Passeriformes of Southern Grasslands	2011	No	LC (2010)	CR (2008)
<i>Gubernatrix cristata</i>	Passeriformes	PAN 31. Passeriformes of Southern Grasslands	2011	No	EN (2010)	CR (2008)
<i>Leptasthenura platensi</i>	Passeriformes	PAN 31. Passeriformes of Southern Grasslands	2011	No	LC (2010)	CR (2008)
<i>Limnoctites rectirostris</i>	Passeriformes	PAN 31. Passeriformes of Southern Grasslands	2011	No	NT (2010)	VU (2008)
<i>Polystictus pectoralis</i>	Passeriformes	PAN 31. Passeriformes of Southern Grasslands	2011	No	NT (2010)	VU (2008)
<i>Pseudoseisura lophotes</i>	Passeriformes	PAN 31. Passeriformes of Southern Grasslands	2011	No	LC (2010)	CR (2008)
<i>Scytalopus iraiensis</i>	Passeriformes	PAN 31. Passeriformes of	2011	Endemic	EN (2010)	EN (2008)

		Southern Grasslands				
<i>Spartonoica maluroides</i>	Passeriformes	PAN 31. Passeriformes of Southern Grasslands	2011	No	NT (2010)	VU (RS)*
<i>Sporophila cinnamomea</i>	Passeriformes	PAN 31. Passeriformes of Southern Grasslands	2011	No	VU (2010)	EN (2008)
<i>Sporophila hypoxantha</i>	Passeriformes	PAN 31. Passeriformes of Southern Grasslands	2011	No	LC (2010)	CR (RS)*
<i>Sporophila melanogaster</i>	Passeriformes	PAN 31. Passeriformes of Southern Grasslands	2011	Endemic	NT (2010)	VU (2008)
<i>Sporophila palustres</i>	Passeriformes	PAN 31. Passeriformes of Southern Grasslands	2011	No	EN (2010)	EN (2008)
<i>Sporophila pileata</i>	Passeriformes	PAN 31. Passeriformes of Southern Grasslands	2011	No	LC (2010)	EN (SP)*
<i>Sporophila plumbea</i>	Passeriformes	PAN 31. Passeriformes of Southern Grasslands	2011	No	LC (2012)	CR (RS)*
<i>Sporophila ruficollis</i>	Passeriformes	PAN 31. Passeriformes of Southern Grasslands	2011	No	NT (2010)	CR (SP)*
<i>Xanthopsar flavus</i>	Passeriformes	PAN 31. Passeriformes of Southern Grasslands	2011	No	VU (2010)	VU (2008)
<i>Xolmis dominicanus</i>	Passeriformes	PAN 31. Passeriformes of Southern Grasslands	2011	No	VU (2010)	VU (RS)*
<i>Campylorhamphus mulostratus sensu Portes</i>	Passeriformes	PAN 44. Birds of the Amazonia Biome	2012	Endemic		VU (2014)
<i>Chamaeza nobilis fulvipectus</i>	Passeriformes	PAN 44. Birds of the Amazonia Biome	2012	Endemic ssp		VU (2014)
<i>Phlegopsis nigromaculata confinis</i>	Passeriformes	PAN 44. Birds of the Amazonia Biome	2012	Endemic ssp		VU (2014)
<i>Phlegopsis nigromaculata paraenses</i>	Passeriformes	PAN 44. Birds of the Amazonia Biome	2012	Endemic ssp		VU (2014)
<i>Tangara velia signata</i>	Passeriformes	PAN 44. Birds of the Amazonia Biome	2012	Endemic ssp		VU (2014)
<i>Clytoctantes atrogularis</i>	Passeriformes	PAN 44. Birds of the Amazonia Biome	2012	Endemic	VU (2012)	
<i>Hylopezus paraenses</i>	Passeriformes	PAN 44. Birds of the Amazonia Biome	2012	Endemic		VU (2014)
[<i>Hylophilus ochraceiceps rubrifrons</i>]	Passeriformes	PAN 44. Birds of the Amazonia Biome [species not threatened]	2012	Endemic ssp		
<i>Lepidothrix iris iris</i>	Passeriformes	PAN 44. Birds of the	2012	Endemic	VU	

		Amazonia Biome			(2012)	
<i>Lepidothrix vilasboasi</i>	Passeriformes	PAN 44. Birds of the Amazonia Biome	2012	Endemic	VU (2012)	
<i>Rhegmatorhina gymnops</i>	Passeriformes	PAN 44. Birds of the Amazonia Biome	2012	Endemic	VU (2012)	VU (2014)
<i>Dendrexetastes rufigula paraenses</i>	Passeriformes	PAN 44. Birds of the Amazonia Biome	2012	Endemic ssp		EN (2008)
<i>Dendrocolaptes medius</i>	Passeriformes	PAN 44. Birds of the Amazonia Biome	2012	Endemic		VU (2014)
<i>Hypocnemis ochrogyna</i>	Passeriformes	PAN 44. Birds of the Amazonia Biome	2012	Mostly [+BO]	LC	VU (2014)
<i>Cranioleuca muelleri</i>	Passeriformes	PAN 44. Birds of the Amazonia Biome	2012	Endemic	EN (2012)	VU (2014)
<i>Thamnophilus nigrocinereus tschudii</i>	Passeriformes	PAN 44. Birds of the Amazonia Biome	2012	Endemic ssp	NT	EN (2014)
<i>Procnias albus wallacei</i>	Passeriformes	PAN 44. Birds of the Amazonia Biome	2012	Endemic ssp		VU (2014)
<i>Synallaxis kollari</i>	Passeriformes	PAN 44. Birds of the Amazonia Biome	2012	Mostly [+GU]	CR	
<i>Myrmotherula klagesi</i>	Passeriformes	PAN 44. Birds of the Amazonia Biome	2012	Endemic	NT	VU (2014)
<i>Dendrocincla merula badia</i>	Passeriformes	PAN 44. Birds of the Amazonia Biome	2012	Mostly [+GU & SU]		EN (2008)
<i>Hylexetastes brigidai</i>	Passeriformes	PAN 44. Birds of the Amazonia Biome	2012	Endemic	VU	VU (2014)
<i>Piprites chloris grisescens</i>	Passeriformes	PAN 44. Birds of the Amazonia Biome	2012	Endemic ssp		VU (2014)
<i>Xiphocolaptes carajaensis</i>	Passeriformes	PAN 44. Birds of the Amazonia Biome	2012	Endemic	-	VU (2014)
<i>Stigmatura napensis napensis</i>	Passeriformes	PAN 44. Birds of the Amazonia Biome	2012	No	LC (2012)	VU (2014)
<i>Conothraupis mesoleuca</i>	Passeriformes	PAN 46. Birds of the Cerrado and Pantanal Biomes	2013	Endemic	CR (2013)	EN (2014)
<i>Geositta poeciloptera</i> (=Geobates poecilopterus)	Passeriformes	PAN 46. Birds of the Cerrado and Pantanal Biomes	2013	No	VU (2012)	EN (2014)
<i>Scytalopus novacapitalis</i>	Passeriformes	PAN 46. Birds of the Cerrado and Pantanal Biomes	2013	Endemic	NT (2012)	EN (2014)
<i>Scytalopus iraiensis</i>	Passeriformes	PAN 46. Birds of the Cerrado and Pantanal Biomes	2013	Endemic	EN (2013)	EN (2014)
[<i>Sporophila crassirostris</i> (=Oryzoborus crassirostris)]	Passeriformes	PAN 44. Birds of the Amazonia Biome [species not threatened]	2012	No	LC (2012)	
<i>Sporophila nigrorufa</i>	Passeriformes	PAN 46. Birds of the	2013	No	VU	VU (2014)

		Cerrado and Pantanal Biomes			(2012)	
<i>Sporophila melanops</i>	Passeriformes	PAN 46. Birds of the Cerrado and Pantanal Biomes	2013	Endemic	CR (2012)	
<i>Sporophila cinnamomea</i>	Passeriformes	PAN 46. Birds of the Cerrado and Pantanal Biomes	2013	No	VU (2012)	EN (2008)
[<i>Sporophila hypochroma</i>]	Passeriformes	PAN 46. Birds of the Cerrado and Pantanal Biomes [species not threatened]	2013	No	NT (2012)	
<i>Sporophila hypoxantha</i>	Passeriformes	PAN 46. Birds of the Cerrado and Pantanal Biomes	2013	No	LC (2012)	VU (2014)
<i>Sporophila melanogaster</i>	Passeriformes	PAN 46. Birds of the Cerrado and Pantanal Biomes	2013	Endemic	NT (2012)	VU (2014)
<i>Sporophila palustres</i>	Passeriformes	PAN 46. Birds of the Cerrado and Pantanal Biomes	2013	No	EN (2012)	VU (2014)
<i>Sporophila ruficollis</i>	Passeriformes	PAN 46. Birds of the Cerrado and Pantanal Biomes	2013	No	NT (2012)	VU (2014)
<i>Sporophila maximiliani</i> (= <i>Oryzoborus maximiliani</i>)	Passeriformes	PAN 46. Birds of the Cerrado and Pantanal Biomes	2013	No	VU (2015)	CR (2014)
<i>Alectrurus tricolor</i>	Passeriformes	PAN 46. Birds of the Cerrado and Pantanal Biomes	2013	No	VU (2012)	VU (2014)
<i>Cercomacra ferdinandi</i>	Passeriformes	PAN 46. Birds of the Cerrado and Pantanal Biomes	2013	Endemic	VU (2012)	VU (2014)
[<i>Asthenes luizae</i>]	Passeriformes	PAN 46. Birds of the Cerrado and Pantanal Biomes [species not threatened]	2013	Endemic	NT (2012)	
<i>Coryphaspiza melanotis</i>	Passeriformes	PAN 46. Birds of the Cerrado and Pantanal Biomes	2013	No	VU (2012)	EN (2014)
[<i>Phyllomyias reiseri</i>]	Passeriformes	PAN 46. Birds of the Cerrado and Pantanal Biomes [species not threatened]	2013	Mostly [+PA]	LC (2012)	
<i>Culicivora caudacuta</i>	Passeriformes	PAN 46. Birds of the Cerrado and Pantanal Biomes	2013	No	VU (2012)	

[<i>Suiriri islerorum</i>]	Passeriformes	PAN 46. Birds of the Cerrado and Pantanal Biomes [species not threatened]	2013	Mostly [+BO]	NT	
[<i>Syndactyla dimidiata</i>]	Passeriformes	PAN 46. Birds of the Cerrado and Pantanal Biomes [species not threatened]	2013	Mostly [+PA]	LC (2012)	
<i>Synallaxis simoni</i>	Passeriformes	PAN 46. Birds of the Cerrado and Pantanal Biomes	2013	Endemic		VU (2008)
Mammals						
<i>Pontoporia blainvillei</i>	Cetartiodactyla	PAN 10. Franciscana dolphin PAN 49. Threatened Fauna of Mangroves	2010 2015	No	VU (2008)	EN (2008) CR (2014)
<i>Inia geoffrensis</i>	Cetartiodactyla	PAN 18. Small Cetaceans	2011	No	VU (1996) DD (2013)	EN (2014)
<i>Sotalia guianensis</i>	Cetartiodactyla	PAN 18. Small Cetaceans	2011	No	DD (2012)	VU (2014)
[<i>Orcinus orca</i> , <i>Sotalia fluviatilis</i> , <i>Stenella longirostris</i> , <i>Stena bredanensis</i> e <i>Tursiops truncatus</i>]	Cetartiodactyla	PAN 18. Small Cetaceans [five species, none of which are formally recognized as threatened with extinction]	2011	No		
<i>Balaenoptera borealis</i>	Cetartiodactyla	PAN 14. Large Cetaceans & Pinnipeds	2011	No	EN (2009)	EN (2014)
<i>Balaenoptera musculus</i>	Cetartiodactyla	PAN 14. Large Cetaceans & Pinnipeds	2011	No	EN (2009)	CR (2008)
<i>Balaenoptera physalus</i>	Cetartiodactyla	PAN 14. Large Cetaceans & Pinnipeds	2011	No	EN (2009)	EN (2008)
<i>Eubalaena australis</i>	Cetartiodactyla	PAN 14. Large Cetaceans & Pinnipeds	2011	No [breeds]	LC (2013)	EN (2008)
<i>Megaptera novaeangliae</i>	Cetartiodactyla	PAN 14. Large Cetaceans & Pinnipeds	2011	No [breeds]	LC (2008)	VU (2008)
<i>Physeter macrocephalus</i>	Cetartiodactyla	PAN 14. Large Cetaceans & Pinnipeds	2011	No	VU (2009)	VU (2008)

<i>Blastocerus dichotomus</i>	Cetartiodactyla	PAN 22. Threatened Cervids (Deers)	2012	No	VU (2008)	VU (2008)
<i>Ozotoceros bezoarticus</i>	Cetartiodactyla	PAN 22. Threatened Cervids (Deers)	2012	No	NT (2008)	VU (2014)
<i>Mazama nana</i>	Cetartiodactyla	PAN 22. Threatened Cervids (Deers)	2012	Mostly [AR: Misiones & PA]	VU (2015)	VU (2008) VU (2014)
<i>Mazama bororo</i>	Cetartiodactyla	PAN 22. Threatened Cervids (Deers) PAN 23. Mammals of Central Atlantic F	2012 2010	No	VU (2008)	VU (2014)
[<i>Mazama americana</i> , <i>Mazama gouazoubira</i> , <i>Mazama nemorivaga</i> , <i>Odocoileus virginianus cariacou</i>]	Cetartiodactyla	PAN 22. Threatened Cervids (Deers) [4 species dealt in this Action Plan are currently not formally recognized as threatened with extinction]	2012	No		
[<i>Balaenoptera edeni</i> , <i>Otaria flavescens</i> , <i>Arctocephalus australis</i> , <i>Arctocephalus tropicalis</i> , <i>Arctocephalus gazelle</i> , <i>Hydrurga leptonyx</i> , <i>Mirounga leonine</i> , <i>Lobodon carcinophaga</i>]	Cetartiodactyla & Carnivora	PAN 14. Large Cetaceans & Pinnipeds [8 species dealt in this Action Plan are currently not formally recognized as threatened with extinction]	2011	No		
<i>Pteronura brasiliensis</i>	Carnivora	PAN 28. Giant Otter PAN 34. Fauna of the Mid and Lower Xingu	2012 2011	No	EN (2015)	VU (2008)
[<i>Lontra longicaudis</i>]	Carnivora	PAN 28. Giant Otter [Species also dealt in this Action Plan but currently not formally recognized as threatened with extinction]	2012	No	NT (2015)	
<i>Panthera onca</i>	Carnivora	PAN 19. Jaguar PAN 34. Fauna of the Mid and Lower Xingu	2013 2011	No	NT (2008)	VU (2008)
<i>Puma concolor</i>	Carnivora	PAN 39. Puma PAN 34. Fauna of the Mid and Lower Xingu	2011 2011	No	LC (2015)	VU (2008)
<i>Leopardus wiedii</i>	Carnivora	PAN 45. Small Felines	2013 2011	No	NT (2015)	VU (2008)

		PAN 34. Fauna of the Mid and Lower Xingu					
<i>Leopardus tigrinus</i>	Carnivora	PAN 45. Small Felines	2013	No	VU (2008)	VU (2008)	EN (2014)
<i>Leopardus colocolo</i>	Carnivora	PAN 45. Small Felines	2013	No	NT (2015)		VU (2008)
<i>Leopardus pardalis</i>	Carnivora	PAN 45. Small Felines	2013	No	LC (2015)		
<i>Chrysocyon brachyurus</i>	Carnivora	PAN 30. Maned Wolf	2009	No	NT (2015)		VU (2008)
<i>Speothos venaticus</i>	Carnivora	PAN 43. Bush Dog PAN 34. Fauna of the Mid and Lower Xingu	2012 2011	No	NT (2011)		VU (2008)
<i>Trichechus manatus</i>	Sirenia	PAN 12. Manatees PAN 49. Threatened Fauna of Mangroves	2010 2015	No	VU (2008)		CR (2008)
<i>Trichechus inunguis</i>	Sirenia	PAN 12. Manatees PAN 34. Fauna of the Mid and Lower Xingu PAN 49. Threatened Fauna of Mangroves	2010 2011 2015	No	VU (2008)		VU (2008)
<i>Brachyteles arachnoides</i>	Primates	PAN 11. Woolly Spider Monkeys PAN 23. Mammals of the Central Atlantic F	2010 2010	Endemic	EN (2008)		CR (2008) EN (2014)
<i>Brachyteles hypoxanthus</i>	Primates	PAN 11. Woolly Spider Monkeys PAN 23. Mammals of the Central Atlantic F	2010 2010	Endemic	EN (2006)		EN (2008) CR (2014)
<i>Ateles marginatus</i>	Primates	PAN 34. Fauna of the Mid and Lower Xingu	2011	Endemic	EN (2006)		EN (2008)
<i>Chiropotes utahicki</i>	Primates	PAN 34. Fauna of the Mid and Lower Xingu	2011	Endemic	VU (2006)		VU (2008)
<i>Saguinus bicolor</i>	Primates	PAN 29. Bare-faced Tamarin	2011	Endemic	EN (2006)		CR (2008)
<i>Alouatta belzebul</i>	Primates	PAN 33. Primates from Northeastern Brazil	2011	Endemic	VU (2008)		VU (2008)
<i>Alouatta guariba guariba</i>	Primates	PAN 23. Mammals of the Central Atlantic F	2010	Endemic	CR (2006)		CR (2008)
<i>Alouatta ululata</i>	Primates	PAN 49. Threatened Fauna of Mangroves	2015	Endemic	CR (2006)		CR (2008) EN (2014)

<i>Sapajus flavius</i>	Primates	PAN 33. Primates of Northeastern Brazil	2011	Endemic	CR (2015)	EN (2014)
<i>Sapajus robustus</i>	Primates	PAN 23. Mammals of the Central Atlantic Forest	2010	Endemic	VU (2006)	VU (2008) EN (2014)
<i>Sapajus xanthosternos</i>	Primates	PAN 23. Mammals of the Central Atlantic Forest PAN 33. Primates of Northeastern Brazil PAN 49. Threatened Fauna of Mangroves	2010 2011 2015	Endemic	CR (2006)	CR (2008) EN (2014)
<i>Callicebus barbarabrownae</i>	Primates	PAN 33. Primates of Northeastern Brazil	2011	Endemic	CR (2006)	CR (2008)
<i>Callicebus coimbrai</i>	Primates	PAN 33. Primates of Northeastern Brazil	2011	Endemic	CR (2006)	CR (2008) EN (2014)
<i>Callicebus melanochir</i>	Primates	PAN 23. Mammals of the Central Atlantic Forest	2010	Endemic	VU (2006)	VU (2008)
<i>Callicebus personatus</i>	Primates	PAN 23. Mammals of the Central Atlantic Forest	2010	Endemic	VU (2006)	VU (2008)
<i>Callithrix aurita</i>	Primates	PAN 23. Mammals of the Central Atlantic Forest	2010	Endemic	EN (2006)	VU (2008) EN (2014)
<i>Callithrix flaviceps</i>	Primates	PAN 23. Mammals of the Central Atlantic Forest	2010	Endemic	EN (2006)	EN (2008)
<i>Leontopithecus caissara</i>	Primates	PAN 23. Mammals of the Central Atlantic Forest	2010	Endemic	CR (2006)	CR (2008) EN (2014)
<i>Leontopithecus chrysomelas</i>	Primates	PAN 23. Mammals of the Central Atlantic Forest	2010	Endemic	EN (2006)	EN (2008)
<i>Leontopithecus chrysopygus</i>	Primates	PAN 23. Mammals of the Central Atlantic Forest	2010	Endemic	CR (2006)	CR (2008) EN (2014)
<i>Leontopithecus rosalia</i>	Primates	PAN 23. Mammals of the Central Atlantic Forest	2010	Endemic	EN (2006)	EN (2008)
<i>Bradypus torquatus</i>	Pilosa	PAN 23. Mammals of the Central Atlantic Forest	2010	Endemic	EN (2006) VU (2014)	VU (2008)
<i>Myrmecophaga tridactyla</i>	Pilosa	PAN 34. Fauna of the Mid and Lower Xingu Region	2011	No	VU (2014)	VU (2008)
<i>Priodontes maximus</i>	Cingulata	PAN 34. Fauna of the Mid and Lower Xingu Region	2011	No	VU (2014)	VU (2008)

<i>Tolypeutes tricinctus</i>	Cingulata	PAN 47. Three-banded Armadillos	2014	Endemic	VU (2014)	EN (2014)
<i>Tolypeutes matacus</i>	Cingulata	PAN 47. Three-banded Armadillos	2014	No	NT (2014)	
<i>Chaetomys subspinosus</i>	Rodentia	PAN 17. Thin-spines Porcupine PAN 23. Mammals of the Central Atlantic Forest	2011 2010	Endemic	VU (2008)	VU (2008)
<i>Callistomys pictus</i>	Rodentia	PAN 23. Mammals of the Central Atlantic Forest	2010	Endemic	EN (2008)	VU (2008) EN (2014)
<i>[Trinomys paratus]</i>	Rodentia	PAN 23. Mammals of the Central Atlantic Forest [Species also dealt in this Action Plan but not formally recognized as threatened with extinction]	2010	Endemic	DD (2008)	
<i>Trinomys moojeni</i>	Rodentia	PAN 23. Mammals of the Central Atlantic Forest	2010	Endemic	EN (2008)	EN (2008)
<i>Trinomys eliasi</i>	Rodentia	PAN 23. Mammals of the Central Atlantic Forest	2010	Endemic	EN (2008)	EN (2008) VU (2014)
<i>Phyllomys brasiliensis</i>	Rodentia	PAN 23. Mammals of the Central Atlantic Forest	2010	Endemic	EN (2008)	EN (2008)
<i>Phyllomys thomasi</i>	Rodentia	PAN 23. Mammals of the Central Atlantic Forest	2010	Endemic	EN (2008)	EN (2008)
<i>Phyllomys unicolor</i>	Rodentia	PAN 23. Mammals of the Central Atlantic Forest	2010	Endemic	CR (2008)	CR (2008)
<i>Phaenomys ferrugineus</i>	Rodentia	PAN 23. Mammals of the Central Atlantic Forest	2010	Endemic	EN (2006)	VU (2008)
<i>Rhagomys rufescens</i>	Rodentia	PAN 23. Mammals of the Central Atlantic Forest	2010	Endemic	CR (2006)	VU (2008)
<i>Lonchophylla dekeyseri</i>	Chiroptera	PAN 26. Nectar Bat of the Cerrado Biome PAN 27. Karst Caves of the San Francisco Basin	2010 2012	Endemic	VU (2006)	VU (2008) EN (2014)
<i>Lonchophylla bokermanni</i>	Chiroptera	PAN 27. Karst Caves of the San	2012 2010	Endemic	VU (2006)	VU (2008)

		Francisco Basin PAN 23. Mammals of the Central Atlantic Forest					
<i>Lasiurus ebonus</i>	Chiroptera	PAN 23. Mammals of the Central Atlantic Forest	2010	Endemic	VU (1996) DD (2008)	VU (2008)	
Reptiles							
<i>Ameivula littoralis</i> (=Cnemidophorus)	Squamata	PAN 52. Herpetofauna of SE Atlantic Forest	2015	Endemic		EN (2014)	
<i>Ameivula nativo</i> (=Cnemidophorus)	Squamata	PAN 52. Herpetofauna of SE Atlantic Forest	2015	Endemic		EN (2014)	
<i>Ameivula abaetensis</i> (=Cnemidophorus)	Squamata	PAN 41. Herpetofauna of Northeastern Brazil	2013	Endemic		EN (2014)	
<i>Contomastix vacariensis</i> (=Cnemidophorus)	Squamata	PAN 36. Herpetofauna of Southern Brazil	2011	Endemic		VU (2014)	
<i>Liolaemus lutzae</i>	Squamata	PAN 52. Herpetofauna of SE Atlantic Forest	2015	Endemic	VU (2000)	CR (2014)	
<i>Liolaemus occipitalis</i>	Squamata	PAN 36. Herpetofauna of Southern Brazil	2011	Endemic	VU (2000)	VU (2014)	
<i>Placosoma cipoense</i>	Squamata	PAN 37. Herpetofauna of the Espinhaço Range	2011	Endemic		EN (2014)	
<i>Enyalius erythroceneus</i>	Squamata	PAN 37. Herpetofauna of the Espinhaço Range	2011	Endemic		CR (2014)	
<i>Heterodactylus lundii</i>	Squamata	PAN 37. Herpetofauna of the Espinhaço Range	2011	Endemic		VU (2014)	
<i>Heterodactylus septentrionalis</i>	Squamata	PAN 37. Herpetofauna of the Espinhaço Range	2011	Endemic		EN (2014)	
<i>Anisolepis undulatus</i>	Squamata	PAN 36. Herpetofauna of Southern Brazil	2011	No	VU (2000)	VU (2008)	
<i>Bothrops pirajai</i>	Squamata	PAN 41. Herpetofauna of Northeastern Brazil	2013	Endemic	VU (2000)	EN (2014)	
<i>Corallus cropanii</i>	Squamata	PAN 52. Herpetofauna of SE Atlantic Forest	2015	Endemic	EN (2010)	VU (2014)	
<i>Bothropoides alcatraz</i>	Squamata	PAN 21. Insular	2011	Endemic	CR	CR (2008)	

		Herpetofauna in SE Brazil			(2004)	
<i>Bothropoides insulares</i>	Squamata	PAN 21. Insular Herpetofauna in SE Brazil	2011	Endemic	CR (2004)	CR (2008)
<i>Dipsas albifrons cavaleiroi</i>	Squamata	PAN 21. Insular Herpetofauna in SE Brazil	2011	Endemic	CR (2000)	CR (2008)
<i>Caretta caretta</i>	Testudines	PAN 25. Marine Turtles	2011	No	EN (1996) VU (2015)	EN (2014)
<i>Chelonia mydas</i>	Testudines	PAN 25. Marine Turtles	2011	No	EN (2004)	VU (2014)
<i>Dermochelys coriacea</i>	Testudines	PAN 25. Marine Turtles	2011	No	CR (2000) VU (2013)	CR (2014)
<i>Eretmochelys imbricata</i>	Testudines	PAN 25. Marine Turtles	2011	No	CR (2008)	CR (2014)
<i>Lepidochelys olivacea</i>	Testudines	PAN 25. Marine Turtles	2011	No	VU (2008)	EN (2014)
<i>Mesoclemmys hogei</i>	Testudines	PAN 16. Aquatic Fauna of Paraiba do Sul PAN 52. Herpetofauna of SE Atlantic Forest	2015 2015	Endemic	EN (1996)	EN (2008) CR (2014)
<i>Podocnemis unifilis</i>	Testudines	PAN 50. Amazon Turtles	2015	No	VU (1996)	
<i>Podocnemis sextuberculata</i>	Testudines	PAN 50. Amazon Turtles	2015	No	VU (1996)	
[<i>Podocnemis expansa</i> , <i>Podocnemis erythrocephala</i> , <i>Peltocephalus dumerilianus</i> , <i>Chelus fimbriatus</i> , <i>Platemys platycephala</i> , <i>Mesoclemmys nasuta</i> , <i>Mesoclemmys raniceps</i> , <i>Mesoclemmys gibba</i> , <i>Phrynops geoffroanus</i> , <i>Phrynops tuberosus</i> , <i>Rhinemys rufipes</i> , <i>Kinosternon scorpioides</i> , <i>Rhinoclemmys punctularia</i> , <i>Chelonoidis carbonaria</i> , <i>Chelonoidis denticulata</i>]		PAN 50. Amazon Turtles [these 15 species are also dealt in the Action Plan but they are not currently considered threatened]	2015			
Amphibians						
<i>Agalychnis granulosa</i>	Anura	PAN 41.	2013	Endemic	LC	CR (2008)

		Herpetofauna of Northeastern Br			(2004)	VU (2014)
<i>Adelophryne baturitensis</i>	Anura	PAN 41. Herpetofauna of Northeastern Br	2013	Endemic	VU (2007)	VU (2008)
<i>Adelophryne maranguapensis</i>	Anura	PAN 41. Herpetofauna of Northeastern Br	2013	Endemic	EN (2007)	EN (2008) VU (2014)
<i>Holoaden bradei</i>	Anura	PAN 52. Herpetofauna of SE Atlantic Forest	2015	Endemic	CR (2007)	CR (2008) CR (2014)
<i>Proceratophrys moratoi</i> (=Odontophrynus)	Anura	PAN 52. Herpetofauna of SE Atlantic Forest	2015	Endemic	CR (2007)	CR (2008) EN (2014)
<i>Paratelmatobius lutzii</i>	Anura	PAN 52. Herpetofauna of SE Atlantic Forest	2015	Endemic	DD (2004)	CR (2008) CR (2014)
<i>Physalaemus soaresi</i>	Anura	PAN 52. Herpetofauna of SE Atlantic Forest PAN 40. Threatened Killifish (Rivlidae)	2015 2012	Endemic	EN (2007)	EN (2008) CR (2014)
<i>Physalaemus maximus</i>	Anura	PAN 37. Herpetofauna of the Espinhaço	2011	Endemic	DD (2008)	VU (2014)
<i>Thoropa lutzi</i>	Anura	PAN 52. Herpetofauna of SE Atlantic Forest	2015	Endemic	EN (2007)	VU (2008)
<i>Thoropa petropolitana</i>	Anura	PAN 52. Herpetofauna of SE Atlantic Forest	2015	Endemic	VU (2007)	EN (2008) EN (2014)
<i>Hypsiboas cymbalum</i> (=Hyla)	Anura	PAN 52. Herpetofauna of SE Atlantic Forest	2015	Endemic	CR (2007)	CR (2008) CR (2014)
<i>Phyllomedusa ayeaye</i>	Anura	PAN 52. Herpetofauna of SE Atlantic Forest	2015	Endemic	CR (2007)	CR (2008)
<i>Bokermannohyla izecksohni</i> (=Hyla)	Anura	PAN 52. Herpetofauna of SE Atlantic Forest	2015	Endemic	CR (2007)	CR (2008)
<i>Melanophryniscus dorsalis</i>	Anura	PAN 36. Herpetofauna of Southern Brazil	2011	Endemic	VU (2007)	VU (2008) VU (2014)
<i>Melanophryniscus macrogranulosus</i> .	Anura	PAN 36. Herpetofauna of Southern Brazil	2011	Endemic	VU (2007)	CR (2008) EN (2014)
<i>Scinax alcatraz</i>	Anura	PAN 21. Insular Herpetofauna in SE Brazil	2011	Endemic	CR (2007)	CR (2008) CR (2014)

Fishes (Actinopterygii)						
<i>Brycon insignis</i>	Characiformes	PAN 16. Aquatic Fauna of the Paraíba do Sul Basin	2011	Endemic		CR (2008)
<i>Brycon opalinus</i>	Characiformes	PAN 16. Aquatic Fauna of the Paraíba do Sul Basin	2011	Endemic		VU (2008)
<i>Brycon nattereri</i>	Characiformes	PAN 35. Aquatic Fauna of Moji and Pardo PAN 51. Aquatic Fauna of the San Francisco River	2015	Endemic		VU (2008)
<i>Brycon orbignyanus</i>	Characiformes	PAN 35. Aquatic Fauna of Moji and Pardo Basin	2011	No		EN (2008)
<i>Prochilodus vimboides</i>	Characiformes	PAN 16. Aquatic Fauna of the Paraíba do Sul Basin	2011	Endemic		VU (2014)
<i>Stygichthys typhlops</i>	Characiformes	PAN 27. Karst Caves of the San Francisco Basin	2012	Endemic		VU (2008)
<i>Ossubtus xinguense</i>	Characiformes	PAN 34. Fauna of the Mid and Lower Xingu Region	2011	Endemic		VU (2008)
<i>Kolpotocheiroduon theloura</i>	Characiformes	PAN 51. Aquatic Fauna of the San Francisco River	2015	Endemic		VU (2014)
<i>Hypomasticus thayeri</i>	Characiformes	PAN 16. Aquatic Fauna of the Paraíba do Sul Basin	2011	Endemic		EN (2014)
<i>Hyphessobrycon duragenys</i>	Characiformes	PAN 16. Aquatic Fauna of the Paraíba do Sul Basin	2011	Endemic		CR (2008)
<i>Characidium lagosantense</i>	Characiformes	PAN 16. Aquatic Fauna of the Paraíba do Sul Basin	2011	Endemic		VU (2008)
<i>Myleus tiete</i>	Characiformes	PAN 35. Aquatic Fauna of Moji and Pardo Basin	2011	Endemic		VU (2008)
<i>Chasmocranus brachynema.</i>	Siluriformes	PAN 35. Aquatic Fauna of Moji and Pardo Basin	2011	Endemic		VU (2008)
<i>Pogonopoma parahybae</i>	Siluriformes	PAN 16. Aquatic Fauna of the Paraíba do Sul Basin	2011	Endemic		CR (2008) EN (2014)
<i>Steindachneridion parahybae</i>	Siluriformes	PAN 16. Aquatic Fauna of the Paraíba do Sul Basin	2011	Endemic		CR (2008)
<i>Steindachneridion scriptum</i>	Siluriformes	PAN 35. Aquatic	2011	Endemic		EN (2008)

		Fauna of Moji and Pardo Basin			
<i>Taunayia bifasciata</i>	Siluriformes	PAN 16. Aquatic Fauna of the Paraiba do Sul Basin	2011	Endemic	VU (2008)
<i>Delturus parahybae</i>	Siluriformes	PAN 16. Aquatic Fauna of the Paraiba do Sul Basin	2011	Endemic	CR (2008)
[<i>Pseudotocinclus parahybae</i>]	Siluriformes	PAN 16. Aquatic Fauna of the Paraiba do Sul Basin	2011	Endemic	
<i>Trichomycterus itacarambiensis</i>	Siluriformes	PAN 27. Karst Caves of the San Francisco Basin	2012	Endemic	VU (2008)
<i>Trichomycterus novalimensis</i>	Siluriformes	PAN 51. Aquatic Fauna of the San Francisco River	2015	Endemic	EN (2014)
<i>Hypancistrus zebra</i>	Siluriformes	PAN 34. Fauna of the Mid and Lower Xingu Region	2011	Endemic	VU (2008)
<i>Bagropsis reinhardti</i>	Siluriformes	PAN 51. Aquatic Fauna of the San Francisco River	2015	Endemic	VU (2014)
<i>Conorhynchus conirostris</i>	Siluriformes	PAN 51. Aquatic Fauna of the San Francisco River	2015	Endemic	VU (2008)
<i>Lophiosilurus alexandri</i>	Siluriformes	PAN 51. Aquatic Fauna of the San Francisco River	2015	Endemic	VU (2014)
<i>Pareiorhaphis mutuca</i>	Siluriformes	PAN 51. Aquatic Fauna of the San Francisco River	2015	Endemic	VU (2008)
<i>Eigenmannia vicentespelaea</i>	Gymnotiformes	PAN 27. Karst Caves of the San Francisco Basin	2012	Endemic	VU (2008)
<i>Pamphorichthys pertapeh</i>	Cyprinodontiformes	PAN 51. Aquatic Fauna of the San Francisco River	2015	Endemic	CR (2014)
<i>Phallotorynus fasciolatus</i>	Cyprinodontiformes	PAN 16. Aquatic Fauna of the Paraiba do Sul Basin	2011	Endemic	VU (2008)
<i>Phallotorynus jucundus</i>	Cyprinodontiformes	PAN 35. Aquatic Fauna of Moji and Pardo Basin	2011	Endemic	EN (2014)
<i>Austrolebias adloffii</i>	Cyprinodontiformes	PAN 40. Threatened Killifish (Rivlidae)	2012	Endemic	CR (2008)
<i>Austrolebias alexandri</i>	Cyprinodontiformes	PAN 40. Threatened Killifish (Rivlidae)	2012	No	VU (2208)
<i>Austrolebias carvalhoi</i>	Cyprinodontiformes	PAN 40. Threatened Killifish (Rivlidae)	2012	Endemic	CR (2008)

<i>Austrolebias charrua</i>	Cyprinodontiformes	PAN 40. Threatened Killifish (Rivlidae)	2012	No	EN (2008)
<i>Austrolebias cyaneus</i>	Cyprinodontiformes	PAN 40. Threatened Killifish (Rivlidae)	2012	Endemic	EN (2008)
<i>Austrolebias ibicuiensis</i>	Cyprinodontiformes	PAN 40. Threatened Killifish (Rivlidae)	2012	Endemic	CR (2008)
<i>Austrolebias luteoflammulatus</i>	Cyprinodontiformes	PAN 40. Threatened Killifish (Rivlidae)	2012	No	VU (2008)
<i>Austrolebias minuano</i>	Cyprinodontiformes	PAN 40. Threatened Killifish (Rivlidae)	2012	Endemic	EN (2008)
<i>Austrolebias nigrofasciatus</i>	Cyprinodontiformes	PAN 40. Threatened Killifish (Rivlidae)	2012	Endemic	EN (2008)
<i>Austrolebias periodicus</i>	Cyprinodontiformes	PAN 40. Threatened Killifish (Rivlidae)	2012	Endemic	VU (2008)
<i>Austrolebias affinis</i> (= <i>A. juanlangi</i>)	Cyprinodontiformes	PAN 40. Threatened Killifish (Rivlidae)	2012	No	VU (2008)
<i>Campellobias brucei</i>	Cyprinodontiformes	PAN 40. Threatened Killifish (Rivlidae)	2012	Endemic	CR (2008)
<i>Campellobias chrysolineatus</i>	Cyprinodontiformes	PAN 40. Threatened Killifish (Rivlidae)	2012	Endemic	VU (2008)
<i>Campellobias dorsimaculatus</i>	Cyprinodontiformes	PAN 40. Threatened Killifish (Rivlidae)	2012	Endemic	VU (2008)
<i>Cynolebias griséus</i>	Cyprinodontiformes	PAN 40. Threatened Killifish (Rivlidae)	2012	Endemic	EN (2008)
<i>Hypsolebias alternatus</i>	Cyprinodontiformes	PAN 40. Threatened Killifish (Rivlidae)	2012	Endemic	VU (2008)
<i>Hypsolebias auratus</i>	Cyprinodontiformes	PAN 40. Threatened Killifish (Rivlidae)	2012	Endemic	EN (2008)
<i>Hypsolebias fulminantis</i>	Cyprinodontiformes	PAN 40. Threatened Killifish (Rivlidae)	2012	Endemic	VU (2008)
<i>Hypsolebias ghisolfii</i>	Cyprinodontiformes	PAN 40. Threatened Killifish (Rivlidae)	2012	Endemic	VU (2008)
<i>Hypsolebias hellneri</i>	Cyprinodontiformes	PAN 40. Threatened Killifish (Rivlidae)	2012	Endemic	VU (2008)
<i>Hypsolebias magnificus</i>	Cyprinodontiformes	PAN 40. Threatened Killifish (Rivlidae)	2012	Endemic	VU (2008)
<i>Hypsolebias rufus</i>	Cyprinodontiformes	PAN 40. Threatened Killifish (Rivlidae)	2012	Endemic	VU (2008)
<i>Hypsolebias similis</i>	Cyprinodontiformes	PAN 40. Threatened Killifish (Rivlidae)	2012	Endemic	VU (2008)
<i>Hypsolebias stellatus</i>	Cyprinodontiformes	PAN 40. Threatened Killifish (Rivlidae)	2012	Endemic	VU (2008)
<i>Hypsolebias trilineatus</i>	Cyprinodontiformes	PAN 40. Threatened Killifish (Rivlidae)	2012	Endemic	VU (2008)
<i>Leptolebias citrinipinnis</i>	Cyprinodontiformes	PAN 40. Threatened Killifish (Rivlidae)	2012	Endemic	EN (2008)
<i>Leptolebias leitaoi</i>	Cyprinodontiformes	PAN 40. Threatened Killifish (Rivlidae)	2012	Endemic	CR (2008)
<i>Leptolebias marmoratus</i>	Cyprinodontiformes	PAN 40. Threatened	2012	Endemic	CR (2008)

		Killifish (Rivlidae)			
<i>Leptolebias opalescens</i>	Cyprinodontiformes	PAN 40. Threatened Killifish (Rivlidae)	2012	Endemic	CR (2008)
<i>Leptolebias splendens</i>	Cyprinodontiformes	PAN 40. Threatened Killifish (Rivlidae)	2012	Endemic	CR (2008)
<i>Maratecoara formosa</i>	Cyprinodontiformes	PAN 40. Threatened Killifish (Rivlidae)	2012	Endemic	VU (2008)
<i>Megalebias wolterstorffi</i>	Cyprinodontiformes	PAN 40. Threatened Killifish (Rivlidae)	2012	Endemic	CR (2008)
<i>Nematolebias whitei</i>	Cyprinodontiformes	PAN 40. Threatened Killifish (Rivlidae)	2012	Endemic	CR (2008)
<i>Notholebias cruzi</i>	Cyprinodontiformes	PAN 40. Threatened Killifish (Rivlidae)	2012	Endemic	CR (2008)
<i>Notholebias fractifasciatus</i>	Cyprinodontiformes	PAN 40. Threatened Killifish (Rivlidae)	2012	Endemic	CR (2008)
<i>Notholebias minimus</i>	Cyprinodontiformes	PAN 40. Threatened Killifish (Rivlidae)	2012	Endemic	VU (2008)
<i>Ophthalmolebias bokermanni</i>	Cyprinodontiformes	PAN 40. Threatened Killifish (Rivlidae)	2012	Endemic	VU (2008)
<i>Ophthalmolebias constanciae</i>	Cyprinodontiformes	PAN 40. Threatened Killifish (Rivlidae)	2012	Endemic	CR (2008)
<i>Ophthalmolebias perpendicularis</i>	Cyprinodontiformes	PAN 40. Threatened Killifish (Rivlidae)	2012	Endemic	VU (2008)
<i>Ophthalmolebias rosaceus</i>	Cyprinodontiformes	PAN 40. Threatened Killifish (Rivlidae)	2012	Endemic	VU (2008)
<i>Plesiolebias xavantei</i>	Cyprinodontiformes	PAN 40. Threatened Killifish (Rivlidae)	2012	Endemic	EN (2008)
<i>Simpsonichthys boitonei</i>	Cyprinodontiformes	PAN 40. Threatened Killifish (Rivlidae)	2012	Endemic	VU (2008)
<i>Simpsonichthys flammeus</i>	Cyprinodontiformes	PAN 40. Threatened Killifish (Rivlidae)	2012	Endemic	EN (2008)
<i>Simpsonichthys marginatus</i>	Cyprinodontiformes	PAN 40. Threatened Killifish (Rivlidae)	2012	Endemic	EN (2008)
<i>Simpsonichthys multiradiatus</i>	Cyprinodontiformes	PAN 40. Threatened Killifish (Rivlidae)	2012	Endemic	EN (2008)
<i>Simpsonichthys notatus</i>	Cyprinodontiformes	PAN 40. Threatened Killifish (Rivlidae)	2012	Endemic	EN (2008)
<i>Simpsonichthys parallelus</i>	Cyprinodontiformes	PAN 40. Threatened Killifish (Rivlidae)	2012	Endemic	VU (2008)
<i>Simpsonichthys santanae</i>	Cyprinodontiformes	PAN 40. Threatened Killifish (Rivlidae)	2012	Endemic	EN (2008)
<i>Simpsonichthys zonatus</i>	Cyprinodontiformes	PAN 40. Threatened Killifish (Rivlidae)	2012	Endemic	EN (2008)
<i>Spectrolebias semiocellatus</i>	Cyprinodontiformes	PAN 40. Threatened Killifish (Rivlidae)	2012	Endemic	VU (2008)
<i>Xenurolebias izecksohni</i>	Cyprinodontiformes	PAN 40. Threatened Killifish (Rivlidae)	2012	Endemic	VU (2008)
<i>Xenurolebias myersi</i>	Cyprinodontiformes	PAN 40. Threatened Killifish (Rivlidae)	2012	Endemic	EN (2008)

<i>Scorpaenodes insularis</i>	Scorpaeniformes	PAN 53. Coral Reefs Fauna	2016	No	LC (2015)	VU (2014)
<i>Hippocampus erectus</i>	Syngnathiformes	PAN 53. Coral Reefs Fauna	2016	No	VU (2003)	VU (2014)
<i>Hippocampus patagonicus</i>	Syngnathiformes	PAN 53. Coral Reefs Fauna	2016	No		VU (2014)
<i>Hippocampus reidi</i>	Syngnathiformes	PAN 53. Coral Reefs Fauna	2016	No	DD (2003)	VU (2014)
<i>Micrognathus erugatus</i>	Syngnathiformes	PAN 53. Coral Reefs Fauna	2016	Endemic		CR (2014)
<i>Polyprion americanus</i>	Perciformes	PAN 53. Coral Reefs Fauna	2016	No	DD (2003)	CR (2014)
<i>Cerdale fasciata</i>	Perciformes	PAN 53. Coral Reefs Fauna	2016	Endemic		EN (2014)
<i>Choranthias salmopunctatus</i>	Perciformes	PAN 53. Coral Reefs Fauna	2016	Endemic	LC (2015)	VU (2008)
<i>Elacatinus figaro</i>	Perciformes	PAN 53. Coral Reefs Fauna	2016	Endemic		VU (2008)
<i>Epinephelus itajara</i>	Perciformes	PAN 53. Coral Reefs Fauna	2016	No	CR (2011)	CR (2014)
<i>Epinephelus marginatus</i>	Perciformes	PAN 53. Coral Reefs Fauna	2016	No	EN (2004)	VU (2014)
<i>Epinephelus morio</i>	Perciformes	PAN 53. Coral Reefs Fauna	2016	No	NT (2004)	VU (2014)
<i>Halichoeres rubrovirens</i>	Perciformes	PAN 53. Coral Reefs Fauna	2016	No	LC (2015)	VU (2014)
<i>Hyporthodus nigrilus</i>	Perciformes	PAN 53. Coral Reefs Fauna	2016	No	CR (2006)	EN (2014)
<i>Hyporthodus niveatus</i>	Perciformes	PAN 53. Coral Reefs Fauna	2016	No	VU (2008)	VU (2014)
<i>Lutjanus cyanopterus</i>	Perciformes	PAN 53. Coral Reefs Fauna	2016	No	VU (1996)	VU (2014)
<i>Lutjanus purpureus</i>	Perciformes	PAN 53. Coral Reefs Fauna	2016	No		VU (2014)
<i>Malacoctenus brunoi</i>	Perciformes	PAN 53. Coral Reefs Fauna	2016	Endemic		VU (2014)
<i>Microspathodon chrysurus</i>	Perciformes	PAN 53. Coral Reefs Fauna	2016	No	LC (2015)	VU (2014)
<i>Mycteroperca bonaci</i>	Perciformes	PAN 53. Coral Reefs Fauna	2016	No	NT (2008)	VU (2014)
<i>Mycteroperca interstitialis</i>	Perciformes	PAN 53. Coral Reefs Fauna	2016	No	VU (2008)	VU (2014)
<i>Prognathodes obliquus</i>	Perciformes	PAN 53. Coral Reefs Fauna	2016	Endemic	DD (2010)	VU (2008)
<i>Scarus guacamaia</i>	Perciformes	PAN 49. Threatened Fauna of Mangroves	2015	No	NT (2012)	VU (2008)
<i>Scarus trispinosus</i>	Perciformes	PAN 53. Coral Reefs Fauna	2016	Endemic	EN (2012)	EN (2014)
<i>Scarus zelindae</i>	Perciformes	PAN 53. Coral Reefs	2016	Endemic	DD	VU (2014)

		Fauna			(2012)	
<i>Sparisoma axillare</i>	Perciformes	PAN 53. Coral Reefs Fauna	2016	Endemic	DD (2012)	VU (2014)
<i>Sparisoma frondosum</i>	Perciformes	PAN 53. Coral Reefs Fauna	2016	No	DD (2012)	VU (2014)
<i>Sparisoma rocha</i>	Perciformes	PAN 53. Coral Reefs Fauna	2016	Endemic	DD (2012)	VU (2014)
<i>Stegastes rocasensis</i>	Perciformes	PAN 53. Coral Reefs Fauna	2016	Endemic		VU (2014)
<i>Stegastes sanctipauli</i>	Perciformes	PAN 53. Coral Reefs Fauna	2016	Endemic	LC (2015)	VU (2008)
<i>Stegastes trinidadensis</i>	Perciformes	PAN 53. Coral Reefs Fauna	2016	endemic		VU (2014)
Fishes (Chondrichthyes)						
<i>Cetorhinus maximus</i>	Lamniformes	PAN 48. Threatened Sharks and Rays	2014	No	VU (2007)	VU (2008)
<i>Rhincodon typus</i>	Orectolobiformes	PAN 48. Threatened Sharks and Rays	2014	No	VU (2007)	VU (2008)
<i>Ginglymostoma cirratum</i>	Orectolobiformes	PAN 48. Threatened Sharks and Rays PAN 49. Threatened Fauna of Mangroves PAN 53. Coral Reefs Fauna	2014 2015 2016	No	DD (2006)	VU (2008)
<i>Galeorhinus galeus</i>	Carcharhiniformes	PAN 48. Threatened Sharks and Rays	2014	No	VU (2007)	CR (2008)
<i>Isogomphodon oxyrinchus</i>	Carcharhiniformes	PAN 48. Threatened Sharks and Rays PAN 49. Threatened Fauna of Mangroves	2014 2015	No	CR (2007)	EN (2008)
<i>Mustelus schmitti</i>	Carcharhiniformes	PAN 48. Threatened Sharks and Rays	2014	No	EN (2007)	VU (2008)
<i>Negaprion brevirostris</i>	Carcharhiniformes	PAN 48. Threatened Sharks and Rays PAN 49. Threatened Fauna of Mangroves PAN 53. Coral Reefs Fauna	2014 2015 2016	No	VU (2007)	VU (2008)
<i>Carcharhinus galapagensis</i>	Carcharhiniformes	PAN 53. Coral Reefs Fauna	2016	No	NT (2003)	CR (2014)
<i>Carcharhinus plumbeus</i>	Carcharhiniformes	PAN 53. Coral Reefs Fauna	2016	No	VU (2009)	CR (2014)
<i>Carcharhinus perezii</i>	Carcharhiniformes	PAN 53. Coral Reefs Fauna	2016	No	NT (2006)	VU (2014)
<i>Pristis pectinata</i>	Rajiformes	PAN 48. Threatened Sharks and Rays PAN 49. Threatened Fauna of Mangroves	2014 2015	No	CR (2007)	EN (2008)
<i>Pristis pristis</i> (=Pristis	Rajiformes	PAN 48. Threatened	2014	No	CR	CR (2008)

<i>perotteti</i> - LV)		Sharks and Rays PAN 49. Threatened Fauna of Mangroves	2015		(2007)	
<i>Rhinobatos horkelii</i>	Rajiformes	PAN 48. Threatened Sharks and Rays PAN 49. Threatened Fauna of Mangroves	2014 2015	No	CR (2007)	EN (2008)
<i>Manta birostris</i>	Rajiformes	PAN 53. Coral Reefs Fauna	2016	No	VU (2011)	VU (2014)
<i>Mobula tarapacana</i>	Rajiformes	PAN 53. Coral Reefs Fauna	2016	No	DD (2006)	VU (2014)
<i>Squatina guggenheim</i>	Squatiniformes	PAN 48. Threatened Sharks and Rays	2014	No	EN (2007)	EN (2008)
<i>Squatina occulta</i> .	Squatiniformes	PAN 48. Threatened Sharks and Rays	2014	No	EN (2007)	EN (2008)
Crustacea						
<i>Atya gabonensis</i>	Malacostraca	PAN 16. Aquatic Fauna of the Paraiba do Sul Basin	2011	No	LC (2013)	VU (2008)
<i>Atya scabra</i>	Malacostraca	PAN 16. Aquatic Fauna of Paraiba do Sul PAN 49. Threatened Fauna of Mangroves	2011 2015	No	LC (2013)	VU (2008)
<i>Macrobrachium carcinus</i>	Malacostraca	PAN 16. Aquatic Fauna of Paraiba do Sul PAN 49. Threatened Fauna of Mangroves	2011 2015	No	LC (2013)	VU (2008)
Hexapoda						
<i>Coarazuphium bezerra</i>	Coleoptera	PAN 27. Karst Caves of the San Francisco Basin	2012	Endemic		VU (2008)
<i>Coarazuphium pains</i>	Coleoptera	PAN 27. Karst Caves of the San Francisco Basin	2012	Endemic		VU (2008)
<i>Actinote quadra</i>	Lepidoptera	PAN 13. Threatened Lepidoptera	2010	Endemic		VU (2008)
<i>Actinote zikani</i>	Lepidoptera	PAN 13. Threatened Lepidoptera	2010	Endemic		CR (2008)
<i>Arawacus aethesa</i>	Lepidoptera	PAN 13. Threatened Lepidoptera	2010	Endemic		VU (2008)
<i>Caenoptychia bouletti</i>	Lepidoptera	PAN 13. Threatened Lepidoptera	2010	Endemic		EN (2008)
<i>Callicore hydarnis</i>	Lepidoptera	PAN 13. Threatened Lepidoptera	2010	Endemic		VU (2008)
<i>Charonias theano</i>	Lepidoptera	PAN 13. Threatened Lepidoptera	2010	Endemic		EN (2008)

<i>Dasyophthalma delanira</i>	Lepidoptera	PAN 13. Threatened Lepidoptera	2010	Endemic	CR (2008)
<i>Dasyophthalma geraensis</i>	Lepidoptera	PAN 13. Threatened Lepidoptera	2010	Endemic	EN (2008)
<i>Dasyophthalma vertebralis</i>	Lepidoptera	PAN 13. Threatened Lepidoptera	2010	Endemic	CR (2008)
<i>Dirphia monticola</i>	Lepidoptera	PAN 13. Threatened Lepidoptera	2010	Endemic	CR (2008)
<i>Doxocopa zalmunna</i>	Lepidoptera	PAN 13. Threatened Lepidoptera	2010	Endemic	CR (2008)
<i>Drephalys miersi</i>	Lepidoptera	PAN 13. Threatened Lepidoptera	2010	Endemic	EN (2008)
<i>Drephalys mourei</i>	Lepidoptera	PAN 13. Threatened Lepidoptera	2010	Endemic	CR (2008)
<i>Episcada vitrea</i>	Lepidoptera	PAN 13. Threatened Lepidoptera	2010	Endemic	VU (2008)
<i>Eresia erysice erysice</i>	Lepidoptera	PAN 13. Threatened Lepidoptera	2010	Endemic	CR (2008)
<i>Eurytides iphitas</i>	Lepidoptera	PAN 13. Threatened Lepidoptera	2010	Endemic	CR (2008)
<i>Euselasia eberti</i>	Lepidoptera	PAN 13. Threatened Lepidoptera	2010	Endemic	CR (2008)
<i>Heliconius nattereri</i>	Lepidoptera	PAN 13. Threatened Lepidoptera	2010	Endemic	VU (2008)
<i>Heraclides himeros baia</i>	Lepidoptera	PAN 13. Threatened Lepidoptera	2010	Endemic	CR (2008)
<i>Heraclides himeros himeros</i>	Lepidoptera	PAN 13. Threatened Lepidoptera	2010	Endemic	EN (2008)
<i>Hesperocharis emeris</i>	Lepidoptera	PAN 13. Threatened Lepidoptera	2010	Endemic	EN (2008)
<i>Hyaliris fiammetta</i>	Lepidoptera	PAN 13. Threatened Lepidoptera	2010	Endemic	CR (2008)
<i>Hyaliris leptalina</i>	Lepidoptera	PAN 13. Threatened Lepidoptera	2010	Endemic	EN (2008)
<i>Magnastigma julia</i>	Lepidoptera	PAN 13. Threatened Lepidoptera	2010	Endemic	EN (2008)
<i>Mcclungia cymo fallens</i>	Lepidoptera	PAN 13. Threatened Lepidoptera	2010	Endemic	EN (2008)
<i>Melinaea mnasias thera</i>	Lepidoptera	PAN 13. Threatened Lepidoptera	2010	Endemic	CR (2008)
<i>Mimoides lysithous harrisianus</i>	Lepidoptera	PAN 13. Threatened Lepidoptera	2010	Endemic	CR (2008)
<i>Morpho epistrophus nikolajewna</i>	Lepidoptera	PAN 13. Threatened Lepidoptera	2010	Endemic	EN (2008)
<i>Morpho menelaus eberti</i>	Lepidoptera	PAN 13. Threatened Lepidoptera	2010	Endemic	EN (2008)
<i>Moschoneura pinthous methymna</i>	Lepidoptera	PAN 13. Threatened Lepidoptera	2010	Endemic	VU (2008)
<i>Napeogenes rhezia rhezia</i>	Lepidoptera	PAN 13. Threatened	2010	Endemic	VU (2008)

		Lepidoptera				
<i>Narope guilhermei</i>	Lepidoptera	PAN 13. Threatened Lepidoptera	2010	Endemic	CR (2008)	
<i>Nirodia belphegor</i>	Lepidoptera	PAN 13. Threatened Lepidoptera	2010	Endemic	CR (2008)	
<i>Ochropyge ruficauda</i>	Lepidoptera	PAN 13. Threatened Lepidoptera	2010	Endemic	VU (2008)	
<i>Olafia roscius iphimedia</i>	Lepidoptera	PAN 13. Threatened Lepidoptera	2010	Endemic	VU (2008)	
<i>Orobrassolis ornamentalis</i>	Lepidoptera	PAN 13. Threatened Lepidoptera	2010	Endemic	CR (2008)	
<i>Paititia neglecta</i>	Lepidoptera	PAN 13. Threatened Lepidoptera	2010	No	EN (2008)	
<i>Pampasatyrus glaucope boenninghausi</i>	Lepidoptera	PAN 13. Threatened Lepidoptera	2010	Endemic	EN (2008)	
<i>Pampasatyrus gyrtone</i>	Lepidoptera	PAN 13. Threatened Lepidoptera	2010	Endemic	EN (2008)	
<i>Panara ovifera</i>	Lepidoptera	PAN 13. Threatened Lepidoptera	2010	Endemic	CR (2008)	
<i>Parapoynx restingalis</i>	Lepidoptera	PAN 13. Threatened Lepidoptera	2010	Endemic	VU (2008)	
<i>Parelbella polyzona</i>	Lepidoptera	PAN 13. Threatened Lepidoptera	2010	Endemic	VU (2008)	
<i>Parides ascanius</i>	Lepidoptera	PAN 13. Threatened Lepidoptera	2010	Endemic	EN (2008)	
<i>Parides bunichus chamissonia</i>	Lepidoptera	PAN 13. Threatened Lepidoptera	2010	Endemic	VU (2008)	
<i>Parides burchellanus</i>	Lepidoptera	PAN 13. Threatened Lepidoptera	2010	Endemic	VU (2008)	
<i>Parides lysander mattogrossensis</i>	Lepidoptera	PAN 13. Threatened Lepidoptera	2010	Endemic	VU (2008)	
<i>Parides panthonus castilhoi</i>	Lepidoptera	PAN 13. Threatened Lepidoptera	2010	Endemic	CR (2008)	
<i>Perrhybris flava</i>	Lepidoptera	PAN 13. Threatened Lepidoptera	2010	Endemic	CR (2008)	
<i>Petrocerus catiena</i>	Lepidoptera	PAN 13. Threatened Lepidoptera	2010	Endemic	EN (2008)	
<i>Polygrapha suprema</i>	Lepidoptera	PAN 13. Threatened Lepidoptera	2010	Endemic	VU (2008)	
<i>Pseudocroniades machaon seabrai</i>	Lepidoptera	PAN 13. Threatened Lepidoptera	2010	Endemic	CR (2008)	
<i>Scada karschina delicata</i>	Lepidoptera	PAN 13. Threatened Lepidoptera	2010	Endemic	CR (2008)	
<i>Tithorea harmonia caissara</i>	Lepidoptera	PAN 13. Threatened Lepidoptera	2010	Endemic	VU (2008)	
<i>Turmada camposa</i>	Lepidoptera	PAN 13. Threatened Lepidoptera	2010	Endemic	EN (2008)	
<i>Voltinia sanarita</i>	Lepidoptera	PAN 13. Threatened Lepidoptera	2010	Endemic	EN (2008)	

Echinodermata

<i>Coscinasterias tenuispina</i>	Asteroidea	PAN 53. Coral Reefs Fauna	2016	No		VU (2008)
<i>Linckia guildingii</i>	Asteroidea	PAN 53. Coral Reefs Fauna	2016	No		VU (2008)
<i>Oreaster reticulatus</i>	Asteroidea	PAN 53. Coral Reefs Fauna	2016	No		EN (2008)
<i>Lytechinus variegatus</i>	Echinoidea	PAN 53. Coral Reefs Fauna	2016	No		VU (2014)
<i>Synaptula secreta</i>	Holothuroidea	PAN 53. Coral Reefs Fauna	2016	Endemic		CR (2008)
Cnidaria						
<i>Condylactis gigantea</i>	Anthozoa	PAN 53. Coral Reefs Fauna	2016	Endemic		VU (2008)
<i>Mussismilia harttii</i>	Anthozoa	PAN 53. Coral Reefs Fauna	2016	Endemic	DD (2008)	EN (2014)
<i>Mussismilia braziliensis</i>	Anthozoa	PAN 53. Coral Reefs Fauna	2016	Endemic	DD (2008)	VU (2014)
<i>Millepora laboreli</i>	Hydrozoa	PAN 53. Coral Reefs Fauna	2016	Endemic		VU (2014)
Porifera						
<i>Halichondria (Halichondria) cebimarensis</i>	Demospongiae	PAN 53. Coral Reefs Fauna	2016	Endemic		VU (2014)
<i>Halichondria (Halichondria) tenebrica</i>	Demospongiae	PAN 53. Coral Reefs Fauna	2016	Endemic		VU (2014)
<i>Latrunculia (Biannulata) janeirensis</i>	Demospongiae	PAN 53. Coral Reefs Fauna	2016	Endemic		VU (2014)
Plants (Magnoliophyta: Liliopsida)						
<i>Actinocephalus cipoensis</i>	Poales	PAN 38. Threatened Pipeworts PAN on Threatened Plants of Serra do Espinhaço South [elaborated by CNCFlora]	2011 2015	Endemic		TR (2008) CR (2014)
<i>Actinocephalus clausenianus</i>	Poales	PAN 38. Threatened Pipeworts (Eriocaulaceae)	2011	Endemic		TR (2008) VU (2014)
<i>Comanthera bahiensis</i>	Poales	PAN 38. Threatened Pipeworts (Eriocaulaceae)	2011	Endemic		TR (2008) EN (2014)
<i>Comanthera brasiliana</i>	Poales	PAN 38. Threatened Pipeworts (Eriocaulaceae)	2011	Endemic		TR (2008) CR (2014)
<i>Comanthera harleyi</i>	Poales	PAN 38. Threatened Pipeworts	2011	Endemic		TR (2008) VU (2014)

		(Eriocaulaceae)			
<i>Comanthera magnifica</i>	Poales	PAN 38. Threatened Pipeworts (Eriocaulaceae)	2011	Endemic	TR (2008) DD (2014)
<i>Comanthera mucugensis</i>	Poales	PAN 38. Threatened Pipeworts (Eriocaulaceae)	2011	Endemic	TR (2008) EN (2014)
<i>Comanthera suberosa</i>	Poales	PAN 38. Threatened Pipeworts (Eriocaulaceae)	2011	Endemic	TR (2008) DD (2014)
[<i>Comanthera vernonioides</i>]	Poales	PAN 38. Threatened Pipeworts (Eriocaulaceae)	2011	Endemic	DD (2014)
<i>Paepalanthus crinitus</i>	Poales	PAN 38. Threatened Pipeworts (Eriocaulaceae)	2011	Endemic	TR (2008) DD (2014)
<i>Paepalanthus extremensis</i>	Poales	PAN 38. Threatened Pipeworts (Eriocaulaceae)	2011	Endemic	TR (2008) DD (2014)
<i>Paepalanthus hydra</i>	Poales	PAN 38. Threatened Pipeworts (Eriocaulaceae)	2011	Endemic	TR (2008) EN (2014)
<i>Paepalanthus rhizomatosus</i>	Poales	PAN 38. Threatened Pipeworts (Eriocaulaceae)	2011	Endemic	TR (2008) DD (2014)
<i>Paepalanthus scytophyllus</i>	Poales	PAN 38. Threatened Pipeworts (Eriocaulaceae)	2011	Endemic	TR (2008) DD (2014)
<i>Eriocaulon cipoense</i>	Poales	PAN on Threatened Plants of Serra do Espinhaço South (Eriocaulaceae)	2015	Endemic	CR (2014)
<i>Leiothrix rupestris</i>	Poales	PAN on Threatened Plants of Serra do Espinhaço South (Eriocaulaceae)	2015	Endemic	CR (2014)
<i>Paepalanthus ater</i>	Poales	PAN on Threatened Plants of Serra do Espinhaço South (Eriocaulaceae)	2015	Endemic	CR (2014)
<i>Xyris dardanoi</i>	Poales	PAN on Threatened Plants of Serra do Espinhaço South (Xyridaceae)	2015	Endemic	CR (2014)
<i>Xyris hystrix</i>	Poales	PAN on Threatened Plants of Serra do Espinhaço South (Xyridaceae)	2015	Endemic	CR (2014)
<i>Xyris nigricans</i>	Poales	PAN on Threatened Plants of Serra do	2015	Endemic	CR (2014)

		Espinhaço South (Xyridaceae)			
<i>Xyris platystachya</i>	Poales	PAN on Threatened Plants of Serra do Espinhaço South (Xyridaceae)	2015	Endemic	CR (2014)
<i>Xyris tortilis</i>	Poales	PAN on Threatened Plants of Serra do Espinhaço South (Xyridaceae)	2015	Endemic	CR (2014)
<i>Dyckia ursina</i>	Poales	PAN on Threatened Plants of Serra do Espinhaço South (Bromeliaceae)	2015	Endemic	CR (2014)
<i>Encholirium biflorum</i>	Poales	PAN on Threatened Plants of Serra do Espinhaço South (Bromeliaceae)	2015	Endemic	CR (2014)
<i>Encholirium pedicellatum</i>	Poales	PAN on Threatened Plants of Serra do Espinhaço South (Bromeliaceae)	2015	Endemic	CR (2014)
<i>Encholirium vogelii</i>	Poales	PAN on Threatened Plants of Serra do Espinhaço South (Bromeliaceae)	2015	Endemic	CR (2014)
<i>Encholirium irwinii</i>	Poales	PAN on Threatened Plants of the Serra Grão-Mogol [Serra do Espinhaço North]	2015	Endemic	CR (2014)
<i>Orthophytum humile</i>	Poales	PAN on Threatened Plants of the Serra Grão-Mogol [Serra do Espinhaço North]	2015	Endemic	CR (2014)
<i>Pitcairnia bradei</i>	Poales	PAN on Threatened Plants of the Serra Grão-Mogol [Serra do Espinhaço North]	2015	Endemic	CR (2014)
<i>Barbacenia glutinosa</i>	Liliales	PAN on Threatened Plants of Serra do Espinhaço South (Velloziaceae)	2015	Endemic	CR (2014)
<i>Barbacenia longiscapa</i>	Liliales	PAN on Threatened Plants of Serra do Espinhaço South (Velloziaceae)	2015	Endemic	CR (2014)
<i>Barbacenia pungens</i>	Liliales	PAN on Threatened Plants of Serra do Espinhaço South (Velloziaceae)	2015	Endemic	CR (2014)

<i>Barbacenia riparia</i>	Liliales	PAN on Threatened Plants of the Serra Grão-Mogol [Serra do Espinhaço North]	2015	Endemic		CR (2014)
<i>Constantia cipoensis</i>	Asparagales	PAN on Threatened Plants of Serra do Espinhaço South (Orchidaceae)	2015	Endemic		CR (2014)
<i>Grobya cipoensis</i>	Asparagales	PAN on Threatened Plants of Serra do Espinhaço South (Orchidaceae)	2015	Endemic		CR (2014)
<i>Pseudolaelia cipoensis</i>	Asparagales	PAN on Threatened Plants of Serra do Espinhaço South (Orchidaceae)	2015	Endemic		CR (2014)
<i>Pseudotrimezia concava</i>	Asparagales	PAN on Threatened Plants of the Serra Grão-Mogol [Serra do Espinhaço North]	2015	Endemic		CR (2014)
<i>Pseudotrimezia brevistamina</i>	Asparagales	PAN on Threatened Plants of Serra do Espinhaço South (Iridaceae)	2015	Endemic		CR (2014)
<i>Pseudotrimezia gracilis</i>	Asparagales	PAN on Threatened Plants of Serra do Espinhaço South (Iridaceae)	2015	Endemic		CR (2014)
<i>Trimezia fistulosa</i> var. <i>longifolia</i>	Asparagales	PAN on Threatened Plants of Serra do Espinhaço South (Iridaceae)	2015	Endemic		CR (2014)
<i>Syagrus mendanhensis</i>	Arecales	PAN on Threatened Plants of Serra do Espinhaço South (Arecaceae)	2015	Endemic		CR (2014)
Plants (Magnoliophyta: Magnoliopsida)						
<i>Arthrocereus melanurus odorus</i>	Caryophyllales	PAN 24. Threatened Cactaceae	2011	Endemic	VU (2006)	TR (2008) EN (2014)
<i>Arthrocereus rondonianus</i>	Caryophyllales	PAN 24. Threatened Cactaceae	2011	Endemic	VU (2006)	TR (2008) EN (2014)
<i>Brasilicereus markgrafii</i>	Caryophyllales	PAN 24. Threatened Cactaceae	2011	Endemic	EN (2006)	TR (2008) EN (2014)
<i>Cipocereus crassisepalus</i>	Caryophyllales	PAN 24. Threatened Cactaceae	2011	Endemic	VU (2006)	TR (2008) EN (2014)
<i>Cipocereus laniflorus</i>	Caryophyllales	PAN 24. Threatened Cactaceae	2011	Endemic	EN (2006)	TR (2008) EN (2014)
<i>Cipocereus pusilliflorus</i>	Caryophyllales	PAN 24. Threatened	2011	Endemic	CR	TR (2008)

		Cactaceae			(2006)	CR (2014)
<i>Coleocephalocereus fluminensis decumbens</i>	Caryophyllales	PAN 24. Threatened Cactaceae	2011	Endemic	EN (2006)	TR (2008)
<i>Coleocephalocereus purpureus</i>	Caryophyllales	PAN 24. Threatened Cactaceae	2011	Endemic	CR (2006)	TR (2008) EN (2014)
<i>Discocactus horstii</i>	Caryophyllales	PAN 24. Threatened Cactaceae PAN on Threatened Plants of the Serra Grão-Mogol [Serra do Espinhaço North]	2011 2015	Endemic	EN (2006)	TR (2008) CR (2014)
<i>Discocactus pseudoinsignis</i>	Caryophyllales	PAN on Threatened Plants of the Serra Grão-Mogol [Serra do Espinhaço North]	2015	Endemic		CR (2014)
<i>Echinopsis calochlora</i>	Caryophyllales	PAN 24. Threatened Cactaceae	2011	No	DD (2006)	TR (2008) CR (2014)
<i>Espositoopsis dybowski</i>	Caryophyllales	PAN 24. Threatened Cactaceae	2011	Endemic	EN (2006)	TR (2008) EN (2014)
<i>Facheiroa cephalomelana estevesii</i>	Caryophyllales	PAN 24. Threatened Cactaceae	2011	Endemic	VU (2006)	TR (2008) EN (2014)
<i>Melocactus azureus</i>	Caryophyllales	PAN 24. Threatened Cactaceae	2011	Endemic	EN (2006)	TR (2008) EN (2014)
<i>Melocactus deinacanthus</i>	Caryophyllales	PAN 24. Threatened Cactaceae	2011	Endemic	CR (2006)	TR (2008) CR (2014)
<i>Melocactus glaucescens</i>	Caryophyllales	PAN 24. Threatened Cactaceae	2011	Endemic	CR (2006)	TR (2008) EN (2014)
<i>Melocactus pachyacanthus</i>	Caryophyllales	PAN 24. Threatened Cactaceae	2011	Endemic	EN (2006)	TR (2008) EN (2014)
<i>Melocactus pachyacanthus viridis</i>	Caryophyllales	PAN 24. Threatened Cactaceae	2011	Endemic	CR (2006)	
<i>Melocactus violaceus ritteri</i>	Caryophyllales	PAN 24. Threatened Cactaceae	2011	Endemic	CR (2006)	TR (2008) EN (2014)
<i>Micranthocereus auriazureus</i>	Caryophyllales	PAN 24. Threatened Cactaceae	2011	Endemic	EN (2006)	TR (2008) EN (2014)
<i>Micranthocereus polyanthus</i>	Caryophyllales	PAN 24. Threatened Cactaceae	2011	Endemic	EN (2006)	TR (2008) EN (2014)
<i>Micranthocereus streckeri</i>	Caryophyllales	PAN 24. Threatened Cactaceae	2011	Endemic	CR (2006)	TR (2008) CR (2014)
<i>Pilosocereus aurisetus aurilanatus</i>	Caryophyllales	PAN 24. Threatened Cactaceae	2011	Endemic	EN (2006)	TR (2008) EN (2014)
<i>Pilosocereus azulensis</i>	Caryophyllales	PAN 24. Threatened Cactaceae	2011	Endemic	CR (2006)	TR (2008) CR (2014)
<i>Pilosocereus brasiliensis</i>	Caryophyllales	PAN 24. Threatened Cactaceae	2011	Endemic	VU (2006)	TR (2008)
<i>Rhipsalis cereoides</i>	Caryophyllales	PAN 24. Threatened Cactaceae	2011	Endemic	VU (2006)	TR (2008) CR (2014)

<i>Tacinga braunii</i>	Caryophyllales	PAN 24. Threatened Cactaceae	2011	Endemic	VU (2006)	TR (2008) VU (2014)
<i>Uebelmannia buiningii</i>	Caryophyllales	PAN 24. Threatened Cactaceae	2011	Endemic	CR (2006)	TR (2008) CR (2014)
<i>Uebelmannia gummifera</i>	Caryophyllales	PAN 24. Threatened Cactaceae	2011	Endemic	VU (2006)	TR (2008) VU (2014)
<i>Ditassa auriflora</i>	Gentianales: Apocynaceae	PAN on Threatened Plants of the Serra Grão-Mogol [Serra do Espinhaço North] [elaborated by CNCFlora/JBRJ]	2015	Endemic		CR (2014)
<i>Hemipogon abietoides</i>	Gentianales: Apocynaceae	PAN on Threatened Plants of Serra do Espinhaço South [elaborated by CNCFlora/JBRJ]	2015	Endemic		CR (2014)
<i>Hemipogon hatschbachii</i>	Gentianales: Apocynaceae	PAN on Threatened Plants of Serra do Espinhaço South	2015	Endemic		CR (2014)
<i>Hemipogon piranii</i>	Gentianales: Apocynaceae	PAN on Threatened Plants of Serra do Espinhaço South	2015	Endemic		CR (2014)
<i>Minaria bifurcata</i>	Gentianales: Apocynaceae	PAN on Threatened Plants of Serra do Espinhaço South	2015	Endemic		CR (2014)
<i>Minaria diamantinensis</i>	Gentianales: Apocynaceae	PAN on Threatened Plants of Serra do Espinhaço South	2015	Endemic		CR (2014)
<i>Minaria hemipogonoides</i>	Gentianales: Apocynaceae	PAN on Threatened Plants of Serra do Espinhaço South	2015	Endemic		CR (2014)
<i>Spigelia cipoensis</i>	Gentianales: Loganiaceae	PAN on Threatened Plants of Serra do Espinhaço South	2015	Endemic		CR (2014)
<i>Ilex prostrata</i>	Asterales: Aquifoliaceae	PAN on Threatened Plants of Serra do Espinhaço South	2015	Endemic		CR (2014)
<i>Aspilia eglerii</i>	Asterales: Asteraceae	PAN on Threatened Plants of Serra do Espinhaço South	2015	Endemic		CR (2014)
<i>Aspilia jugata</i>	Asterales: Asteraceae	PAN on Threatened Plants of Serra do Espinhaço South	2015	Endemic		CR (2014)
<i>Lychnophora humillima</i>	Asterales: Asteraceae	PAN on Threatened Plants of Serra do Espinhaço South	2015	Endemic		CR (2014)
<i>Lychnophora souzae</i>	Asterales: Asteraceae	PAN on Threatened Plants of Serra do Espinhaço South	2015	Endemic		CR (2014)

<i>Piptolepis leptospermoides</i>	Asterales: Asteraceae	PAN on Threatened Plants of Serra do Espinhaço South	2015	Endemic	CR (2014)
<i>Richterago caulescens</i>	Asterales: Asteraceae	PAN on Threatened Plants of Serra do Espinhaço South	2015	Endemic	CR (2014)
<i>Dimorphandra wilsoni</i>	Fabales: Fabaceae	PAN on <i>Dimorphandra wilsoni</i> [elaborated by CNCFlora/JBRJ]	2014	Endemic	CR (2014)
<i>Chamaecrista ulmea</i>	Fabales: Fabaceae	PAN on Threatened Plants of the Serra Grão-Mogol [Serra do Espinhaço North]	2015	Endemic	CR (2014)
<i>Chamaecrista lagotois</i>	Fabales: Fabaceae	PAN on Threatened Plants of Serra do Espinhaço South	2015	Endemic	CR (2014)
[<i>Eriope angustifolia</i>]	Lamiales: Lamiaceae	PAN on Threatened Plants of Serra do Espinhaço South	2015	Endemic	
<i>Oocephalus piranii</i>	Lamiales: Lamiaceae	PAN on Threatened Plants of the Serra Grão-Mogol [Serra do Espinhaço North]	2015	Endemic	CR (2014)
<i>Agalinis schwackeana</i>	Lamiales: Orobanchaceae	PAN on Threatened Plants of Serra do Espinhaço South	2015	Endemic	CR (2014)
<i>Diplusodon glaziovii</i>	Myrtales: Lythraceae	PAN on Threatened Plants of Serra do Espinhaço South	2015	Endemic	CR (2014)
<i>Cuphea rubro-virens</i>	Myrtales: Lythraceae	PAN on Threatened Plants of the Serra Grão-Mogol [Serra do Espinhaço North]	2015	Endemic	CR (2014)
<i>Cuphea teleandra</i>	Myrtales: Lythraceae	PAN on Threatened Plants of the Serra Grão-Mogol [Serra do Espinhaço North]	2015	Endemic	CR (2014)
<i>Lavoisiera angustifolia</i>	Myrtales: Melastomataceae	PAN on Threatened Plants of Serra do Espinhaço South	2015	Endemic	CR (2014)
<i>Lavoisiera tetragona</i>	Myrtales: Melastomataceae	PAN on Threatened Plants of Serra do Espinhaço South	2015	Endemic	CR (2014)
<i>Byrsonima fonscae</i>	Malpighiales: Malpighiaceae	PAN on Threatened Plants of Serra do Espinhaço South	2015	Endemic	CR (2014)
<i>Peixotoa andersonii</i>	Malpighiales: Malpighiaceae	PAN on Threatened Plants of Serra do	2015	Endemic	CR (2014)

		Espinhaço South			
<i>Oxalis diamantinae</i>	Geraniales: Oxalidaceae	PAN on Threatened Plants of Serra do Espinhaço South	2015	Endemic	CR (2014)
[<i>Paepalanthus grao-mogolensis</i> (Eriocaulaceae), <i>Chamaecrista aristata</i> , <i>Chamaecrista strictifolia</i> (Fabaceae), <i>Callianthe monteiroi</i> (Malvaceae), <i>Lavoisiera mello-barretoii</i> (Melastomataceae)]		PAN on Threatened Plants of the Serra Grão-Mogol [Serra do Espinhaço North]	2015	All Endemic	DD (2014)
[<i>Eupatorium lineatum</i> (Asteraceae), <i>Actinocephalus ciliates</i> , <i>Leiothrix linearis</i> , <i>Paepalanthus uncinatus</i> (Eriocaulaceae), <i>Chamaecrista aristata</i> , <i>Lupinus parvifolius</i> (Fabaceae), <i>Callianthe monteiroi</i> (Malvaceae), <i>Lavoisiera sampaioana</i> , <i>Microlicia elegans</i> , <i>Microlicia juniperina</i> (Melastomataceae)]		PAN on Threatened Plants of Serra do Espinhaço South	2015	All Endemic	DD (2013)