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Item 10 of the provisional agenda*

UPDATED STATUS OF AICHI BIODIVERSITY TARGET 12

Note by the Executive Secretary

I. INTRODUCTION TO AICHI BIODIVERSITY TARGET 12

1. Aichi Biodiversity Target (ABT) 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.”

2. The Conference of the Parties (COP) to the Convention on Biological Diversity (CBD), at its twelfth meeting, in 2014, undertook a midterm evaluation of the status of the Aichi Biodiversity Targets which forms the basis of the fourth edition of the *Global Biodiversity Outlook (GBO-4)*²; the status of the two elements of ABT 12, were:

Element of Target 12:	Extinction of known threatened species	Conservation status of species
Status as reported in GBO-4		
	No significant overall progress (overall, we are neither moving towards the target nor away from it)	Moving away from target (things are getting worse rather than better).

3. It was concluded that Aichi Biodiversity Target 12, based on 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. The element relating to the

* UNEP/CBD/COP/13/1.

² Secretariat of the Convention on Biological Diversity (2014), *Global Biodiversity Outlook 4*. Montreal, Canada, 155 pages.

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.

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

4. 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. This process has enabled the collection of 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 four years. These efforts include: 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 and gaps 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 document UNEP/CBD/SBSTTA/20/INF/43 / UNEP/CBD/SBI/1/INF/41.

5. Six subregional workshops were held for countries in: Africa, mainland Asia and the Pacific region, Latin America and the Caribbean (GRULAC), and Central and Eastern Europe. Eighty-eight parties have submitted status information on Aichi Biodiversity Target 12 with more than seventy countries submitting over 300 priority actions to achieve this Target by 2020. Information collected and national case studies from on the last three workshops; Africa, Central and Eastern Europe, and the Pacific are presented in this updated information note. For national case studies from the previous workshops (mainland Asia and GRULAC), refer to information note UNEP/CBD/SBSTTA/20/INF/44.

III. STATUS

6. Global, regional and national information has been compiled from the International Union for Conservation of Nature's (IUCN) Red List of Threatened Species,³ the World Database of Protected Areas (WDPA) as analysed for the Digital Observatory for Protected Areas (DOPA),⁴ Parties' national biodiversity strategies and actions plans (NBSAPs) and fifth national reports to CBD.⁵ Information for future projections collected from Parties is in the form of priority actions roadmaps, status and actions matrices, questionnaires, and species success stories.

7. Each subsection below presents information at the global, regional and national level as per the IUCN Red List of Threatened Species and 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. Action roadmaps are the first step towards commitments to protect biodiversity leading to the thirteenth meeting of the Conference of the Parties.

8. The fourth edition of the *Global Biodiversity Outlook* evaluated knowledge and science based information relating to Target 19.⁶ Target 19 is showing progress as significant effort is being made to deliver information and knowledge on pressing biodiversity issues to decision makers. Relevant processes and institutions are already in place to help in assessment and conservation efforts. There are improvements in data analysis and interpretation with increased monitoring systems. With more coordination and sharing of knowledge between existing institutions, Target 19 can be achieved by 2020 aiding in the assessment of biodiversity as it relates to Target 12.

³ IUCN (2016). *The IUCN Red List of Threatened Species*. Available at: <http://www.iucnredlist.org>. Accessed September, 2016.

⁴ 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. Available at: http://dopa-explorer.jrc.ec.europa.eu/dopa_explorer/.

⁵ All NBSAPs and Fifth National Reports can be accessed at: <https://www.cbd.int/reports/search/>

⁶ Secretariat of the Convention on Biological Diversity (2014).

9. GBO-4 reported that preventing the extinction of known threatened species is unlikely by 2020 as it was understood that no significant overall progress has been made. Furthermore, the Red List Index is still declining and therefore moving away from the target rather than improving the conservation status of species, particularly of those most in decline. Protected Areas are the best mechanism to safeguard biodiversity. GBO-4 and UNEP/CBD/SBSTTA/20/INF/43 highlighted that many elements of Target 11 can be achieved with more effort. Protecting areas important for biodiversity as well as ecologically representative areas will contribute to reducing the risk of extinction of many taxonomic groups.

10. For achieving both the elements of Target 12 (the extinction of known threatened species has been prevented, and conservation status, particularly of those most in decline, has been improved and sustained), the foremost requirement is an understanding the conservation status of species and an understanding of the major threats to those species.

A - Assessment of the conservation status of species

11. Assessing the conservation status of species is essential for determining which taxonomic groups are threatened with extinction. The IUCN Red List of Threatened Species is the most comprehensive evaluation of the conservation status of species at the global level even though the assessment of the conservation status of species is incomplete for most taxonomic groups. According to Figure 1, almost 85,000 species' conservation status has been assessed for the IUCN Red List and the number of threatened species nears 25, 000⁷. Table 1 reveals that there are considerable gaps in the assessment of the conservation status of species, where only 5 per cent of estimated species' conservation status has been assessed.⁸ National red lists are baseline datasets that provide countries with key information about the status and trends (when reassessments are made) of species threat status within their national boundaries. Plants are the most assessed of all taxonomic groups represented in national red list; vascular and non-vascular plants have been assessed by 88% and 76% of countries with national red lists, respectively.

12. From the six regional workshops, 71 Parties submitted 146 priority actions towards the continued assessment of species. Parties were asked to identify the status of their national Red Lists or equivalent assessment data and to identify gaps and opportunities. Sixty-one parties reported they wanted to update their national Red List. When implemented, these actions will give parties the tools necessary to create effective species conservation plans.

⁷ IUCN (2016).

⁸ Ibid.

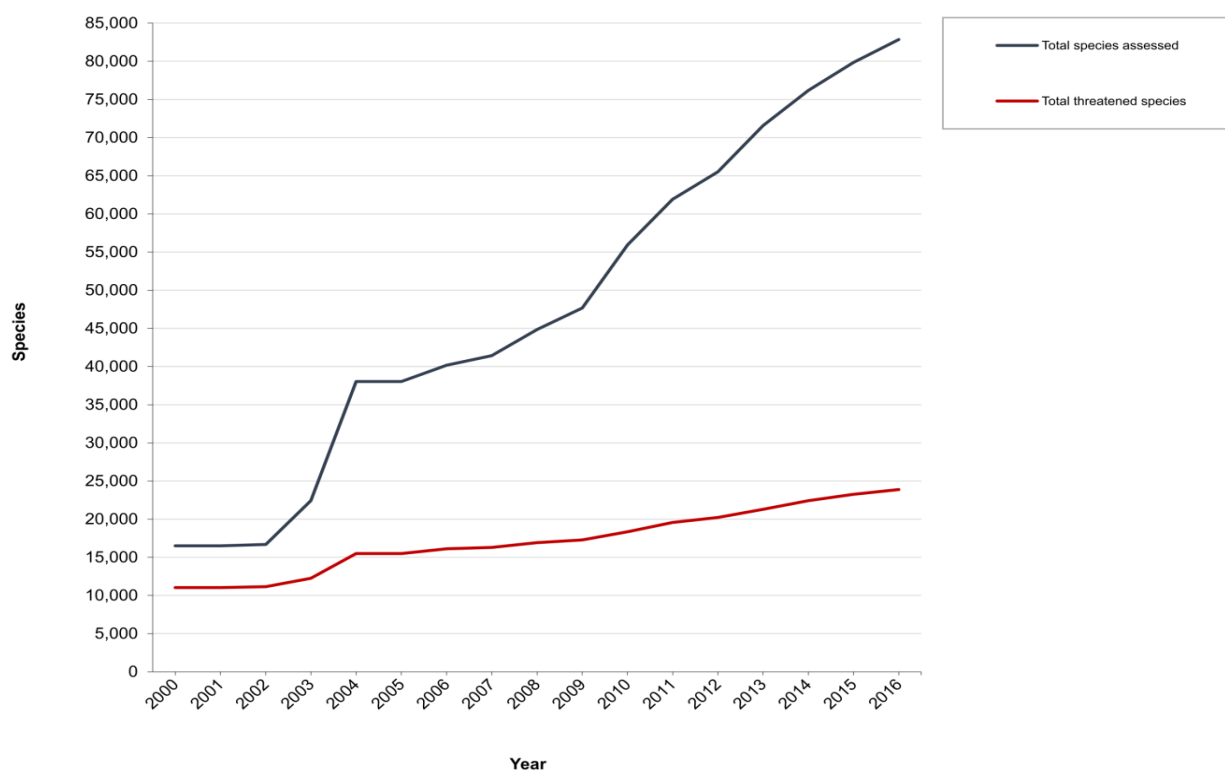


Figure 1 Number of assessed species (blue) compared to number of threatened species (red) for all species assessed by the IUCN Red List.

Examples of Priority Actions identified by the Countries

13. Liberia is currently assessing and gathering data on the status of threatened species. As part of Liberia's priority actions, the country aims to conduct regular research and assessments in all protected areas, three seascapes, marine landscapes, and update the species listing in order to fill the data gaps present at the national, regional, and global level. The country also aims to conduct bio-monitoring in all proclaimed and proposed protected areas. When implemented, their proposed actions will help with protecting areas important for biodiversity, an element of Aichi Biodiversity Target 11.

14. Priority actions identified by some countries support decision X/17, a consolidated update of the Global Strategy for Plant Conservation 2011-2020 (GSPC). Objective I of the GSPC states that plant diversity is well understood, documented, and recognized.⁹ Box 1 (below) provides some background on the Global Strategy for Plant Conservation, while Figure 2 presents the relative numbers of flowering plant species around the world, based on the Checklist of Selected Plant Families, as discussed by Pimm et al. (2014)¹⁰.

15. Serbia seeks to complete Red Lists for all species with the partial inclusion of IUCN Red List categories. Their priority actions include monitoring systems for species and habitats and develop action plans for certain species, and coordinate activities to implement The Tunis Action plan (2013-2020) for the eradication of illegal killing, trapping and trade of wild birds. Monitoring of species will ensure that species specific conservation will focus on species in decline. More importantly, action plans can incorporate Aichi Biodiversity Targets within Strategic Goal B by reducing pressure on biodiversity and promoting sustainable use.

⁹ *Global Strategy for Plant Conservation* Available at: <https://www.cbd.int/gspc/targets.shtml> .

¹⁰ Pimm, S.L., et al. (2014). The biodiversity of species and their rates of extinction, distribution, and protection. *Science*, 344(6187): 987-997.

Table 1 Estimated number of described species globally and per cent of species evaluated by the latest version of the IUCN Red List of Threatened species¹¹.

	Estimated number of described species	Per cent 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

16. Samoa presented seven priority actions, starting with outreach to landowners and local communities, aiming towards the creation of community conserved areas while promoting planting of threatened plant species in ex situ conservation programmes (which can incorporate elements of Target 13 for reducing genetic erosion of cultivated plants). There are plans to control invasive species, particularly the crown of thorns that will contribute to meeting Target 9. Lastly, there are plans to develop a list of all

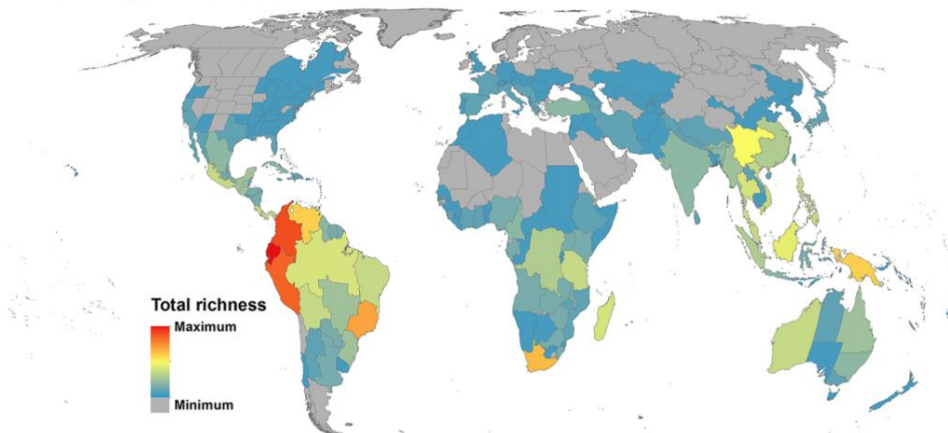
¹¹ IUCN. (2015-4). "Numbers of threatened species by major groups of organisms (1996–2015)" Available at http://cmsdocs.s3.amazonaws.com/summarystats/2015-4_Summary_Stats_Page_Documents/2015_4_RL_Stats_Table_1.pdf

threatened plant species and develop facilities for butterfly breeding programmes. When implemented, actions to control species also aim to protect turtles, as well as critical areas for ground nesting birds. Identifying and protecting critical biodiversity areas is an element in Target 11, areas important for biodiversity.

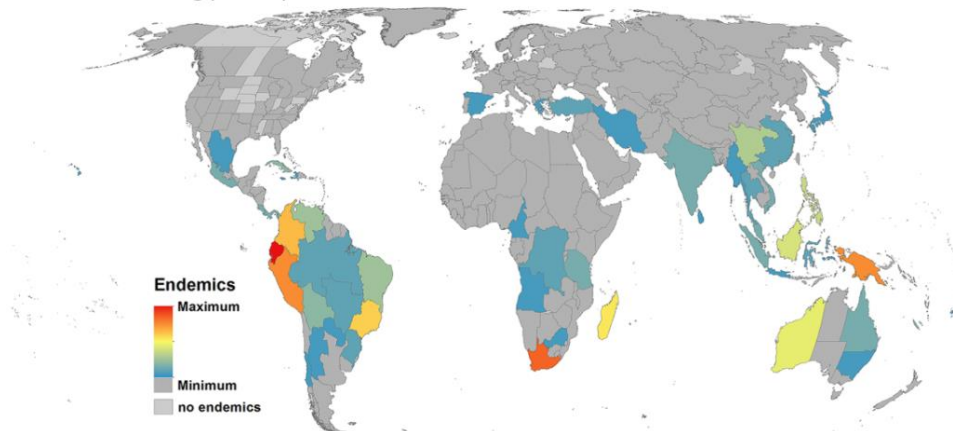
Box 1: Plant Diversity

The World Checklist of Selected Plant Families is an international organization that peer reviews information on accepted scientific names and synonyms of selected plant families as well as studies the areas of the world and their distribution. Pimm et al (2014)¹¹ used this information (Figure 2) to incorporate species distribution to determine future extinction rates taking into account land use change, habitat fragmentation, human population growth, and increased per capita consumption. The effects of climate change remain unclear but many species are going to be committed to extinction if no action is taken. There are few Countries containing the majority of endemic plant species, where Global Strategy for Plant Conservation seeks >15 per cent of each ecological region or vegetation type to be adequately covered by protected areas.

All flowering plant species



Endemic flowering plant species



Source: World Checklist of Selected Plant Families



Figure 2 Relative numbers of flowering plant species in the different regions used by the World Checklist of Selected Plant Families¹²

¹² Ibid.

17. 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 four taxonomic groups (amphibian, mammal, bird, and gymnosperm species), amphibians are the most threatened species. Countries are in the process of assessing the conservation status of species as part of their priority actions. In each country, priority for conservation should be given to threatened endemic species.

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

18. Based upon information on status collected from regional workshops and identified priority actions the following projections are contemplated for the two elements of Target 12, following the symbols used in the *GBO-4*:

Element	Status as of 2016	What is needed for achievement?	What are the chances of reaching the target by 2020?
Extinction of known threatened species has been prevented	Further extinctions likely by 2020 for amphibians and fish. Bird and mammals have some evidence of prevention of extinctions	Threats to known threatened species are understood and mitigation measures are integrated into sectoral planning.	64 parties submitted 154 priority actions to help reduce the chance of extinction. With increased protection and management of threatened species, there is a higher chance to prevent extinction. 
The conservation status of those most in decline has been improved and sustained	Red list is still declining and no sign overall of reduced risk of extinction	Increase protected area coverage and number for threatened endemic species. Species specific conservation plans and expansion of protected areas	If expansion of protected areas covers a larger portion of endemic species range, the conservation status of species will improve. Furthermore, 267 species conservation plans have been reported by 35 parties with over 51 in operation. 

19. According to the IUCN Red List, agriculture and aquaculture, closely followed by biological resource use, are the two main threats to endangered native species¹⁴ (See Figure 3). For addressing both elements of Target 12 (preventing extinction of known threatened species and improving their conservation status) 64 Parties submitted 154 priority actions.

20. Habitat loss and degradation have been frequently cited as a threat that leads to a decline in conservation status¹⁵ of species. Effective management and protection of a species habitat has

¹³ Pimm, S.L., et al. (2014).

¹⁴ IUCN (2016).

¹⁵ Butchart, S. H., Stattersfield, A. J., & Collar, N. J. (2006). How many bird extinctions have we prevented? *Oryx*, 40(03), 266-278.

successfully been carried out to prevent extinction and improve conservation status, as is the case (Box 2) for the Snow Leopard (*Panthera uncia*)¹⁶. The second section will focus on the success stories submitted from the implementation of species conservation action plans. Species specific conservation plans have multiple benefits and serve as the foundations for protecting species habitats.

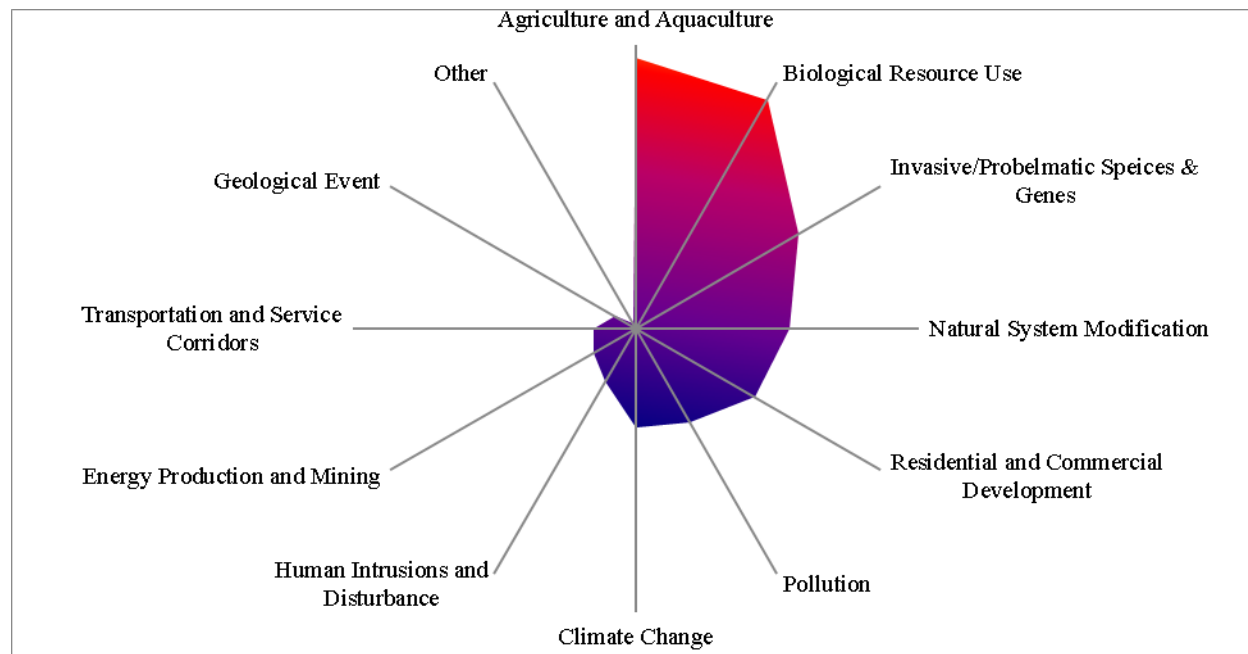


Figure 2 The main threats to critically endangered native species, with information compiled from the IUCN Red list. There is some overlap in threats, as one species can come under threat from multiple causes.

Box 2: Global Environment Facility allocations towards the Snow Leopard (*Panthera uncia*)

The Global Snow Leopard & Ecosystem Protection Program consists of 12 member countries focusing on high-mountain development using the snow leopard as an indicator for conservation success given its sensitivity to habitat disturbances. More than \$80 million USD in GEF allocation and co-financing has focused on reinforcing protected areas. 120 protected areas exist in the snow leopard's possible range in which only 6 per cent of its habitat is under formal protection. 276,123 km², reflecting 31 per cent of the protected areas in the snow leopards range is transboundary between multiple countries. For more information, visit their website at www.globalsnowleopard.org.

Improvement of the conservation of species' habitats

21. Current extinction rates are at their highest, with an estimated 468 vertebrate species going extinct since 1900, including 69 mammal species, 80 bird species, 24 reptiles, 146 amphibians, and 158 fish.¹⁷ It would have taken between 800-10,000 years for these species to go extinct according to the previous background extinction rate depending on the species¹⁸. The number of estimated extinct species summarized by the IUCN Red List can be found with Table 2. Table 3 presents the proportion of extinct species for those vertebrate groups with the highest proportion of assessed species.

¹⁶ Global Snow Leopard & Ecosystem Protection Program (2016). <http://www.globalsnowleopard.org/>

¹⁷ 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.

¹⁸ Ibid.

Table 2 Extinct species per taxonomic group based on IUCN Red List data for all taxonomic groups¹⁹.

	Common Name	# of Extinct Species
INVERTEBRATES		
ARACHNIDA	Arachnids	9
BIVALVIA	Molluscs	29
CLITELLATA	Annelid	1
DIPLOPODA	Millipede	3
ENOPLA	Ribbon Worms	1
GASTROPODA	Snails	281
INSECTA	Insects	58
JUNGERMANNIOPSIDA	Liverworts	1
MALACOSTRACA	Crustaceans	7
MAXILLOPODA	Crustaceans	2
OSTRACODA	Crustaceans	2
TURBELLARIA	Flatworms	1
Sub Total		395
PLANTS		
BRYOPSIDA	Mosses	2
FLORIDEOPHYCEAE	Red Algae	1
LILIOPSIDA	Vascular Plants	3
MAGNOLIOPSIDA	Flowering Plant	96
POLYPODIOPSIDA	Vascular Plants (Ferns)	2
Sub Total		104
VERTEBRATES		
REPTILIA	Reptiles	24
ACTINOPTERYGII	Ray-finned Fishes	64
AMPHIBIA	Amphibians	33
AVES	Birds	140
CEPHALASPIDOMORPHI	Cephalaspids	1
MAMMALIA	Mammals	81
Sub Total		343
Total		842

Table 3 Proportion of Extinct Species from the most assessed taxonomic groups²⁰.

Latin Name	# of extinct species	Estimated # of species	% of extinct species
ACTINOPTERYGII	64	33200	0.19
AMPHIBIA	33	7448	0.44
AVES	140	10424	1.34
MAMMALIA	81	5515	1.47
REPTILIA	24	10272	0.23
Grand Total	342	66859	0.51

22. For the regions covered by the workshops, Figure 4 shows 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 Areas²¹. The information presented includes species that have their mapped range overlapping to some extent (>0 per cent to 100 per cent) with protected area boundaries in the country, but this does not necessarily mean that this overlap provides adequate protection to the species.

23. During the preparation of its Fifth National Report, Eritrea has conducted an assessment threatened species and identified those in which a gap in trend analysis is needed to track changes in

¹⁹ *The IUCN Red List of Threatened Species*. Available at: <http://www.iucnredlist.org>. Accessed September, 2016.

²⁰ Ibid.

²¹ Dubois, G., et al. (2015). The Digital Observatory for Protected Areas (DOPA) Explorer 1.0. Available at: http://dopaexplorer.jrc.ec.europa.eu/dopa_explorer/.

biodiversity. Their revised NBSAP includes an action plan for all species, including the establishment of a national database. Proclamations will be made by the government for wildlife, forestry and marine species as well as enforcing a Proclamation to establish an Integrated Coastal Area Management plan. Integration into the wider landscape and seascape, an element of Target 11, includes both geographical and sectoral mainstreaming of protected areas conservation goals. Proclamations from the government will have multiple benefits as they meet conservation goals.

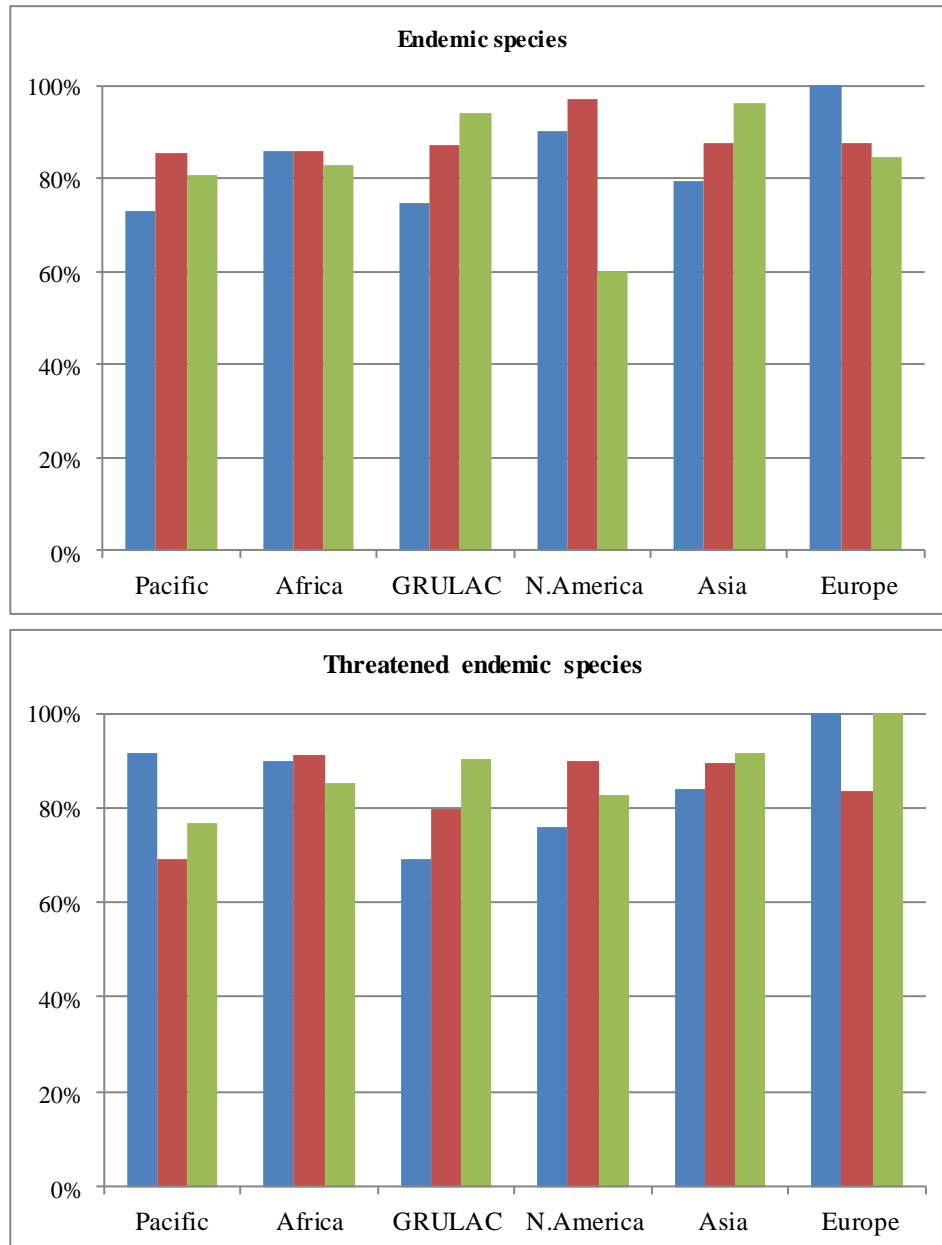


Figure 4 Per cent of endemic and threatened endemic species with some part of their range (>0% to 100%) overlapping with protected areas for three taxonomic (amphibians in blue, mammals in red, and birds in green) in different regions.

24. In Zambia the South Luangwa, North Luangwa, and Lower Zambezi national parks have had successful conservation efforts. The country recognized an opportunity to identify 3 more protected areas with declining species, and implement intervention measures to improve their conservation status. As part

of Zambia's priority actions, the country aims to develop management plans for all protected areas and other important biodiversity areas with identified endemic, rare, and threatened species.

25. The Solomon Islands are seeking to conduct a BIORAP survey to aid in developing or enhancing Species Regulations and Management Plans or Policies. New sites will be integrated with existing provincial and national protected areas for species or habitat management. Using existing support mechanisms, Solomon Islands plans to use Critical Ecosystem Partnership Fund (CEPF) to encourage community species management plans, set up national species monitoring and reporting mechanisms and guidelines and create a national database.

Implementation of conservation action plans targeting species

26. Benin, Botswana, The Democratic Republic of Congo, Senegal, Kenya, Gabon, and Malawi all listed the African elephant (*Loxodonta africana*) as a success story for improving the conservation status of a threatened species. The African elephant was listed as Vulnerable in 2007 and had its status change to Near Threatened in 2008. The five countries attributed this success to the sustainable management of elephant populations; the creation of a favourable legislative and institutional context for elephant conservation; ensuring that the species has a large enough habitat; putting into effect an efficient management system for the surveillance of vital habitat and migration corridors; the promotion of management systems that ensure population growth; strengthening regional and international cooperation in the management of the species; developing the capacity of stakeholder; improved management of the species habitat; the reduction of threats; and the implementation of conservation/restoration action plans targeting the species.

27. The Republic of Moldova has improved the conservation status of 25 species of animals and plants in the last 14 years. The Red Book of Republic of Moldova now includes an additional 82 species of plants and 103 species of animals. By 2018, the Minister of Environment approved action plans to develop and implement four conservation plans for plants, and six for animals.

28. Madagascar reported that it has nine plans and strategies for the improvement of conservation status of species. As part of the country's priority actions, Madagascar aims to: Promote and integrate priority conservation zones and critical conservation zones in the nature conservation and natural resource management institutional framework; Improve the management of terrestrial, marine and coastal ecosystems and integrate the conservation of vulnerable migratory species threatened by anthropogenic pressures, natural disasters and climate change; promote and improve the implementation of community management of cave and inselbergs ecosystems and integrate the management of target vulnerable species threatened by natural disasters in sensitive biodiversity zones; Implement an in-situ and ex-situ conservation programmes, and programmes for the recovery of target species population; elaborate and implement a programme or project for the management of endemic, vulnerable and threatened species; elaborate and implement threatened species management programmes or projects in partnership with local communities.

IV. CONCLUSIONS, LESSONS LEARNED, AND NEXT STEPS

29. To facilitate the achievement of Aichi Biodiversity Target 12, the Secretariat in collaboration with partner organizations has reached out to parties to support their progress and achieve this target, including developing baseline data for countries in the form of information dossiers, building capacity to better understand and fulfil the achievement of this target.

30. The conservation status of many taxa remains unknown and assessment is needed to identify those most in decline. Only 5 per cent of the world's described species have been assessed by the IUCN Red List of Threatened Species. Given sufficient information for only four taxonomic groups (amphibian, mammal, bird, and gymnosperm species), amphibians are the most threatened, with 41 per cent 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.

31. GBO-4 concluded that further extinctions will be likely by 2020 and that the conservation status of species in decline is showing no overall improvement. With successful implementation of the submitted priority action roadmaps in the next four years, the number of instances of extinction can be significantly reduced. Existing protected areas and targeted conservation measures have already reduced extinctions by at least one fifth.²² The assessment of species conservation status should parallel spatial planning to identify areas important for biodiversity. This will enable Parties to use crucial information to target or increase the number and size of protected areas that will improve the conservation status of species most in decline. When priority actions are implemented, the status of each element of Target 12 can shift towards progress rather than moving away from the target.

32. There are several actions to be taken to lead to progress towards Target 12. Most actions to be undertaken in the next four years parallel with Target 19 and GSPC Target 2 by filling in knowledge gaps for identifying and prioritizing species for conservation. Developing more representative protected area systems as noted in Target 11 and prioritizing sites important for biodiversity will enhance progress towards receding extinction and improving conservation status of most species. Reducing pressure and degradation on habitat (Targets 5 and 15) and promoting the sustainable use of biological resources (Strategic Goal B and Target 4) will all contribute to achieving Target 12.

33. The Subsidiary Body on Scientific, Technical and Technological Advice in recommendation XX/1 on progress towards the achievement of Aichi Biodiversity Targets 11 and 12 recommends that the Conference of the Parties at its thirteenth meeting adopt a decision to address the above to some extent, taking into account also any updated information on progress that is available at that time:

²² Hoffman, M. et al. (2010). The Impact of Conservation on the Status of the World's Vertebrates. *Science*, 330(6010): 1503-1509.