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### CONFERENCE OF THE PARTIES TO THE CONVENTION ON BIOLOGICAL DIVERSITY

Thirteenth meeting

Cancun, Mexico, 4-17 December 2016

Item 10 of the provisional agenda\*

### **CONTRIBUTION OF AICHI BIODIVERSITY TARGET 11 NATIONAL PRIORITY ACTIONS IDENTIFIED IN REGIONAL CAPACITY-BUILDING WORKSHOPS TO OTHER AICHI BIODIVERSITY TARGETS**

*To provide evidence-based cases of how enhanced implementation of identified priority actions for  
Aichi Biodiversity Target 11 can also be valuable to other Aichi Biodiversity Targets*

*Note by the Executive Secretary*

#### I. INTRODUCTION

1. At its tenth meeting, held in Nagoya, Japan, in October 2010, the Conference of the Parties (COP) to the Convention on Biological Diversity (CBD) adopted the Strategic Plan for Biodiversity 2011-2020, including 20 Aichi Biodiversity Targets under five strategic goals. Strategic goal C, on improving the status of biodiversity by safeguarding ecosystems, species and genetic diversity, includes, among others, Aichi Biodiversity Target 11<sup>1</sup> on protected areas. At its eleventh meeting, held in Hyderabad, India, in October 2012, the Conference of the Parties further invited Parties to undertake major efforts, with appropriate support and consistent with national circumstances, to achieve all elements of Aichi Biodiversity Target 11 (para. 1 of decision XI/24 on protected areas).

2. In the midterm evaluation of the status of progress towards the achievement of Aichi Biodiversity Targets, assessed in the fourth edition of the *Global Biodiversity Outlook* (GBO-4, 2014), Aichi Biodiversity Target 11 showed a promising picture, suggesting that with more focus and systematic efforts, many elements of the target could be achieved by 2020. In order to facilitate the achievement of Aichi Biodiversity Target 11, the CBD Secretariat developed a two-phase strategy, which includes renewing partnerships and commitments from partner organizations; developing baseline data for countries in the form of information dossiers; providing capacity development to Parties; and securing the submission of questionnaires, status matrices, and national actions (identified priority actions to be undertaken in the next four years in the form of road maps) through regional workshops, as a country-driven process. Details of the Secretariat's approach, including results from three workshops (covering mainland Asia and Latin America and the Caribbean) were presented to the twentieth meeting of the Subsidiary Body on Scientific, Technical and Technological Advice and the first meeting of the

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\* UNEP/CBD/COP/13/1.

<sup>1</sup> Aichi Biodiversity Target 11: By 2020, at least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.

Subsidiary Body on Implementation, as an information note (UNEP/CBD/SBSTTA/20/INF/43 / UNEP/CBD/SBI/1/INF/41).

3. Subsequently, three more workshops were organized, covering Africa, Central and Eastern Europe and the Pacific, thus covering all United Nations regions except the Western Europe and Others Group (WEOG). The Governments of Japan, Germany and the Republic of Korea provided financial support, and the Governments of host countries (Belarus, Brazil, China, Fiji, India and Uganda) provided logistical and other support for the organization of these workshops.

4. A total of 124 countries attended one of the six workshops, where 107 countries submitted status information, and 99 countries submitted their priority actions to be undertaken in the next four years. Through this series of workshops, covering all regions except WEOG, over 1,400 priority actions addressing elements of Aichi Biodiversity Target 11 have been identified by countries. The updated status of Aichi Biodiversity Target 11 per element, the number of priority actions identified by the countries from the regional workshops, and projections for the status of each element by 2020 when identified priority actions are implemented, are presented in information note UNEP/CBD/COP/13/INF/17.

5. The analysis of the priority actions submitted by countries reveals that when implemented, they will not only contribute to achieving elements of Aichi Biodiversity Target 11, but will also contribute to other Aichi Biodiversity Targets and to relevant targets of the Sustainable Development Goals. The present document provides evidence-based cases of how enhanced implementation of identified priority actions for Aichi Biodiversity Target 11 can also be directly and/or indirectly valuable to other Aichi Biodiversity Targets (see table in section III below). Information note UNEP/CBD/COP/13/INF/19 provides relationships between actions identified in the Aichi Biodiversity Target 11 road maps and relevant targets of Sustainable Development Goals (for instance 14.5, 15.1, 15.2, 15.5, 15.8 directly, and 1.2, 12.2, 15.7, 15.8 indirectly), through the goods and services provided by protected areas.

## II. METHODOLOGY

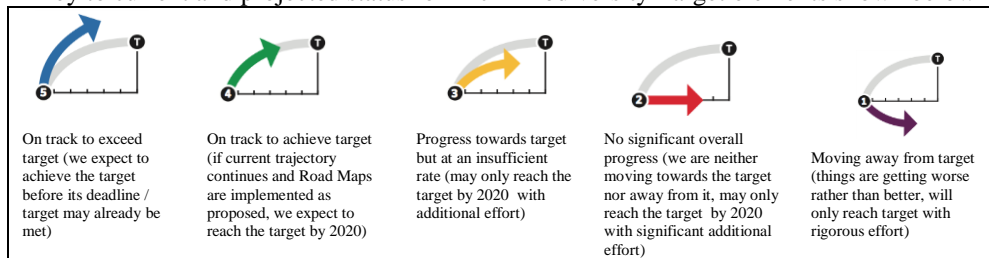
6. The aim of this document is to illustrate the contribution of Aichi Biodiversity Target 11 to other Aichi Biodiversity Targets, through examples from public information sources. The general conceptual framework uses supporting evidence to identify linkages between Aichi Biodiversity Target 11 national priority actions and elements of other Aichi Biodiversity Targets.

7. The national priority actions in support of Aichi Biodiversity Target 11 were identified by each country in the form of road maps in six regional capacity-building workshops, a summary of which is provided in Table 6 of UNEP/CBD/COP/13/INF/17. Supporting evidence include cases from specific countries, areas, projects and examples from other publications. A theoretical basis from academic literature is identified so as to consolidate the linkages. To decide whether there is a direct or indirect linkage, the initial objective and final results of both the priority actions identified to help achieve elements of Aichi Biodiversity Target 11 and elements of other Aichi Biodiversity Targets were considered simultaneously.

8. The current status of each target element is based on the “target dashboard” in GBO-4. The projected status of target elements is intended to indicate the likelihood of potential improvement of progress toward other Aichi Biodiversity Targets if the priority actions identified for Aichi Biodiversity Target 11 are implemented.

### III. RESULTS

Key to current and projected status for Aichi Biodiversity Target elements shown below



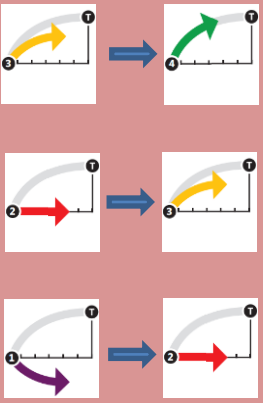
Target	Key elements	Linkage with Aichi Biodiversity Target 11 priority actions	Supporting evidence and theoretical basis of the contribution	Current and projected status of elements of the Aichi Biodiversity Target <sup>2</sup>
Aichi Biodiversity Target 1	<p>People are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably</p>	<p><i>Indirect</i></p> <ul style="list-style-type: none"> <li>- 78 countries submitted 159 priority actions to make protected areas more equitably managed</li> </ul> <p>E.g.: Colombia has decided to analyze other forms of governance specially co-management and indigenous or community management following the establishment of the development plan 2014-2018</p>	<p><b><u>Case 1- Belair National Park in South Australia</u></b></p> <p>Since the government passed the first National Parks Act, in 1997, the Voluntary Board of Commissioners who had run Belair National Park for 8 years was officially abolished. Local communities were left with no access for their voices. In the following years the park became what had been expressed as “alien lands that paid no council rate and were fire and vermin hazard”. To deal with such issue, the Government established Consultative Committees in 1980 and introduced Friends of the Parks in a way of co-management. With the participation of multi-stakeholders, the disastrous situation was soon turned around. Now there are more than 7000 local residents were involved in a “local ownership” project. The anti-park groups became main passionate supporters.<sup>3</sup></p> <p><b><u>Case 2- Protected Areas in Bangladesh</u></b></p> <p>Located in Habiganj District of Bangladesh, Satchari National Park covers 243 hectares of land. Local residents living inside the park used to depend on forest resources for a living. In 2004, the Government launched the Nishorgo Support Project, aiming at involving indigenous people in the park management work as a way to provide alternative incomes for them. Villagers were trained to work as eco-tour guides, rotation guards or members of the Forest Department patrolling team. People can also participate in the decision-making procedure through a Co-management Committee (CMC). Results show that this Project has positively changed local people’s perception of nature and their means of livelihood. People have learned to sustainably use and conserve the nature resources.<sup>4</sup></p> <p><b><u>Theoretical basis of the contribution</u></b></p> <p><b>Equitably-managed protected areas address the importance of diverse governance and public participation.<sup>5</sup> Involving multi-stakeholders and local residents can contribute to raising public awareness of the value of biodiversity.</b></p>	<p><b>GBO-4</b>      <b>Projected status as per actions</b></p>

<sup>2</sup> Current status of target elements from GBO-4 (left) and projected status if Aichi Biodiversity Target 11 priority actions are implemented (right).

<sup>3</sup> Parks and Wildlife Commission of the Northern Territory (2002) *Public Participation in Protected Area Management*. Case study 1.

<sup>4</sup> Mukul, S.A., Rashid, A.Z.M.M., Quazi, S.A., Uddin, M.B. and Fox, J. (2012) ‘Local peoples’ responses to co-management regime in protected areas: A case study from Satchari national park, Bangladesh’, *Forests, Trees and Livelihoods*, 21(1), pp. 16–29. doi: 10.1080/14728028.2012.669132.

<sup>5</sup> Worboys, G.L., Lockwood, M., Kothari, A., Feary, S. and Pulsford, I. (2015) *Protected area governance and management*, P187.

Target	Key elements	Linkage with Aichi Biodiversity Target 11 priority actions	Supporting evidence and theoretical basis of the contribution	Current and projected status of elements of the Aichi Biodiversity Target <sup>2</sup>
Aichi Biodiversity Target 5	<p>The rate of loss of all natural habitats, including forests, is at least halved, and degradation and fragmentation is significantly reduced.</p>	<p><i>Direct</i></p> <ul style="list-style-type: none"> <li>- 88 countries submitted 184 priority actions to improve terrestrial and inland water areas coverage by protected areas</li> <li>- 92 countries submitted 234 priority actions to make protected areas more effectively managed</li> </ul> <p>E.g.: Malawi has decided that six national protected areas that along the Shire River Basin will be strengthened in management in next five years.</p>	<p><b>Example:</b></p> <p>Scharlemann et al (2010) reviewed 76 publications that examined the effectiveness of protected areas (PAs) in retaining habitat cover. 62 out of 72 the regional-scale studies together with 3 out of 4 global-scale studies showed positive results of PAs. Generally there are significantly less habitat loss and lower carbon loss inside PAs. 20 studies examined the efficiency of PA management interventions which include management plans, tree planting, funding and NGO commitment. Measurement was delivered in a simple positive-or-negative manner. 7 out of 8 studies found satisfying results of specific PA management plan in reducing deforestation. 2 studies found an increase in forest cover after the implementation of tree planting projects. Increased funding and staffs are also found efficient in preventing deforestation.<sup>6</sup></p> <p><b><u>Theoretical basis of the contribution</u></b></p> <p><b>Various habitats including forests are included and well-conserved within protected areas. Effectively-managed protected areas can largely contribute to reducing the risks of habitat loss, degradation and fragmentation.<sup>7</sup></b></p>	 <p>GBO-4 Projected status as per actions</p>
		<ul style="list-style-type: none"> <li>- 88 countries submitted 198 priority actions to improve the coverage by protected areas of areas of particular importance for biodiversity and ecosystem services</li> </ul> <p>E.g.: DPR Korea has decided to assess the contribution of Reservoir Forest Reserves to biodiversity conservation with a focus on disaster risk reduction and food security</p>	<p><b><u>Case 1- The Nebo Property in Canada</u></b></p> <p>The Nature Conservancy of Canada (NCC) bought the 178-hectare land of Nebo Property, which is a biologically diverse place west of Prince Albert. The mixed wood forest, wetlands and prairie grasslands come together as prime habitat for species at risk, including the little Brown Bat, Northern Long-Eared Bat, Olive-Sided Flycatcher, Canada warbler and more. NCC announced that the acquisition of Nebo will help protect habitat for more than 10 species at risk.<sup>8</sup></p> <p><b><u>Theoretical basis of the contribution</u></b></p> <p><b>Identifying areas of particular importance for biodiversity and ecosystem services can draw special attention to habitats lacking necessary protection, which will contribute to the achievement of Aichi Biodiversity Target 5.</b></p>	

<sup>6</sup> Geldmann, J., Barnes, M., Coad, L., Craigie, I.D., Hockings, M. and Burgess, N.D. (2013a) ‘Effectiveness of terrestrial protected areas in reducing biodiversity and habitat loss’, *CEE 10-007, Collaboration for Environmental Evidence*.

<sup>7</sup> Joppa, L.N. and Pfaff, A. (2010) ‘Global protected area impacts’, *Proceedings of the Royal Society B: Biological Sciences*, 278(1712), pp. 1633-1638.

<sup>8</sup> Charlton, J. 2016. Habitat for 10 species at risk near Prince Albert gets new protection. Available at <http://thestarphoenix.com/news/saskatchewan/habitat-for-10-species-at-risk-near-prince-albert-gets-new-protection>.

Target	Key elements	Linkage with Aichi Biodiversity Target 11 priority actions	Supporting evidence and theoretical basis of the contribution	Current and projected status of elements of the Aichi Biodiversity Target <sup>2</sup>
Target 5, cont'd		<p>- 87 countries submitted 166 priority actions to create well connected systems of protected areas</p> <p>E.g.: Bangladesh has decided to establish more corridors of movement of flagship wildlife and restore degraded forests through assisted natural regeneration and improvement plantation</p>	<p><b><u>Case 2- The Bozeman Pass Wildlife Corridor in the North Rockies, United States of America</u></b></p> <p>American Wildlands and their partners built the Bozeman Pass Wildlife Corridor located about 40 miles north of Yellowstone National Park between two towns. They compiled various remote sensing data in order to monitor wildlife activities within the corridor. Different management approaches, including conservation easement and county zoning restrictions were applied to the land to stop further negative intervention. With these approaches, wildlife habitats in or between PAs are protected from further fragmentation.<sup>9</sup></p> <p><b><u>Theoretical basis of the contribution</u></b></p> <p><b>A well connected PA system emphasize the importance of landscape connectivity, which, once protected and enhanced, can prevent and offset the impact of habitat loss and fragmentation on biodiversity conservation.<sup>10</sup></b></p>	
		<p>- 81 countries submitted 152 priority actions to improve the contribution of other effective area-based conservation measures</p> <p>E.g.: Indonesia has decided to establish new Forest City and Biodiversity Garden in the remaining province</p>	<p><b><u>Case 3- Other Effective Area-based Conservation Measures in Canada</u></b></p> <p>There are many private land protection programmes in Canada, including the Ontario Eastern Habitat Joint Venture and Nature Conservancy of Canada Nature Preserves. With conservation as their initial objective, these area-based programmes contribute significantly in enhancing PA connectivity, increasing ecosystems resilience and preventing habitat loss.<sup>11</sup></p> <p><b><u>Case 4- Hutan Harapan, Sumatra in Indonesia</u></b></p> <p>Located in the central-south Sumatra of Indonesia, Hutan Harapan is biodiversity-rich tropical forest formerly logged for commercial use. To prevent further degradation and deforestation, in 2004, Hutan Harapan was included in the first Ecosystem Restoration Concession (ECC) of Indonesia, aiming at identifying legal status, enhancing forest production and maintaining ecosystem services. This action represented a milestone in conservation work and has achieved significant progress, up till now, in preventing the conversion of natural production forests.<sup>12</sup></p> <p><b><u>Theoretical basis of the contribution</u></b></p> <p><b>Many area-based conservation measures have showed an excellent effectiveness in habitat protection. Actions stress the importance of such measures will positively support Aichi Biodiversity Target 5.<sup>13</sup></b></p>	

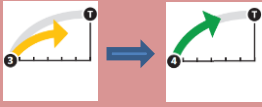
<sup>9</sup> Ament, R., Callahan, R., McClure, M., Reuling, M. and Tabor, G. (2014) *Wildlife Connectivity: Fundamentals for conservation action*. Bozeman, Montana: Center for Large Landscape Conservation.

<sup>10</sup> Rudnick, D.A., Ryan, S.J., Beier, P., Cushman, S.A., Dieffenbach, F., Epps, C.W., Gerber, L.R., Hartter, J., Jenness, J.S. and Kintsch, J. (2012) *The role of landscape Connectivity in planning and implementing conservation and restoration priorities issues in ecology*. Available at: <http://www.esa.org/esa/wp-content/uploads/2013/03/issuesinecology16.pdf>.

<sup>11</sup> MacKinnon, D., Lemieux, C.J., Beazley, K., Woodley, S., Helie, R., Perron, J., Elliott, J., Haas, C., Langlois, J., Lazaruk, H., Beechey, T. and Gray, P. (2015) 'Canada and Aichi Biodiversity target 11: Understanding "other effective area-based conservation measures" in the context of the broader target', *Biodiversity and Conservation*, 24(14), pp. 3559–3581.

<sup>12</sup> Jonas, H. and MacKinnon, K. (2016) *Advancing Guidance on Other Effective Area-based Conservation Measures: Report of the Second Meeting of the IUCN-WCPA Task Force on Other Effective Area-based Conservation Measures*. Bundesamt für Naturschutz: Bonn.

<sup>13</sup> UNEP/CBD/SBSTTA/20/L.3.

Target	Key elements	Linkage with Aichi Biodiversity Target 11 priority actions	Supporting evidence and theoretical basis of the contribution	Current and projected status of elements of the Aichi Biodiversity Target <sup>2</sup>
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Aichi Biodiversity Target 6</p>	<p>All fish and invertebrate stocks and aquatic plants are managed and harvested sustainably, legally and applying ecosystem based approaches</p>	<p><i>Direct</i></p> <ul style="list-style-type: none"> <li>- 49 countries submitted 64 priority actions to improve coastal and marine areas coverage by protected areas</li> <li>- 92 countries submitted 234 priority actions to make protected areas more effectively managed</li> </ul> <p>E.g.: Eritrea has decided to establish operationalized protected area system on three selected areas that cover a total of 10,098.6km<sup>2</sup> - including two Marine PAs with 3,605.94 km<sup>2</sup></p>	<p><b><u>Case 1- Apo Island, Philippines</u></b></p> <p>Apo Island in Philippines is a biodiversity-rich place where resources from the sea provide major incomes for local people. Since a marine protected area was established, fish population has increased 200% which led to a huge increase in local fish catch.<sup>14</sup></p> <p><b><u>Case 2- Mafamede island in Mozambique</u></b></p> <p>In Mafamede island of Mozambique, over 40% of local people live alongside the coast depending on marine resources for a living. With the establishment of Quirimbas National Park, fish sanctuaries were applied to protect and restore the fish population. Although these no-take zones only covered less than 0.05% of the national park, they achieved a significant push for local fish species.<sup>15</sup></p> <p><b><u>Theoretical basis of the contribution</u></b></p> <p><b>Well-managed marine protected areas are widely recognized as efficient approaches in reducing anthropogenic impact, maintaining marine system functions and sustainably benefiting local fisheries.</b><sup>16</sup></p>	<div style="text-align: center;">  </div> <p><b>GBO-4</b>      <b>Projected status as per actions</b></p>
		<ul style="list-style-type: none"> <li>- 49 countries submitted 83 priority actions to integrate protected areas into wider landscape and seascape</li> </ul> <p>E.g.: The Belize Government is focusing on incorporating 10% of all marine and coastal habitats within Belize’s territorial waters as functional and legally protected non-extractive replenishment zones.</p>	<p><b><u>Case 3- Integrated Management Plan for Santa Maria Bay in Mexico</u></b></p> <p>United States Agency for International Development (USAID) and various partners have helped the resource users of Santa Maria Bay in the state of Sinaloa, Mexico, to prepare and implement a conservation development plan with a coherent vision and integrative structure for decision-making to both conserve wetland ecosystems and safeguard fisheries, aquaculture and agricultural economic activity over the next 15 years. The plan attempts to weave together the sectoral policies and highly fragmented administration of bay uses in to a coherent vision for integrated decision-making by small villages and two municipalities in a 285,000-hectare bay and watershed area. Development and implementation of the plan have been successfully achieved using processes of good governance.<sup>17</sup></p> <p><b><u>Theoretical basis of the contribution</u></b></p> <p><b>“Given the historical divisions in science, conservation and management across the coastal zone, efforts to integrate across terrestrial, freshwater, and marine environments could improve the ecological accuracy and the spatial and economic efficiency of biodiversity conservation plans.”<sup>18</sup></b></p>	

<sup>14</sup> <https://wwf.exposure.co/the-philippines-1>.

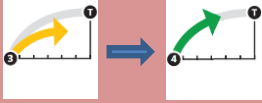
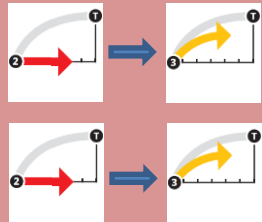
<sup>15</sup> <https://wwf.exposure.co/mozambique>.

<sup>16</sup> UNEP-WCMC and IUCN (2016), Protected Planet Report 2016, UNEP-WCMC and IUCN: Cambridge UK and Gland, Switzerland.

<sup>17</sup> <https://www.cbd.int/database/record.shtml?documentid=6106>.

<sup>18</sup> Marine Planning: [http://www.marineplanning.org/Case\\_Studies/USA\\_PacificNWLandSea.html](http://www.marineplanning.org/Case_Studies/USA_PacificNWLandSea.html).



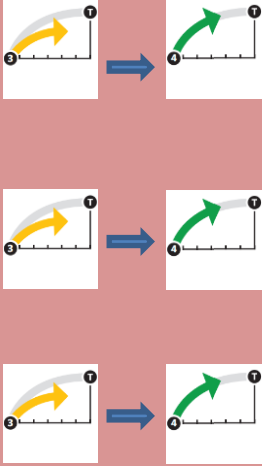
Target	Key elements	Linkage with Aichi Biodiversity Target 11 priority actions	Supporting evidence and theoretical basis of the contribution	Current and projected status of elements of the Aichi Biodiversity Target <sup>2</sup>
Target 6, cont'd	<p>Recovery plans and measures are in place for all depleted species</p>	<p><i>Indirect</i></p> <ul style="list-style-type: none"> <li>- 90 countries submitted 169 priority actions to make more protected areas ecological representative</li> <li>- 92 countries submitted 234 priority actions to make protected areas more effectively managed</li> </ul> <p>E.g.: Botswana has decided to complete, by 2018, ecoregion-based threatened species lists and maps of their habitats, and initiate systematic monitoring and reporting to the CHM.</p>	<p><b><u>Case 4- Multi-species and Ecosystem-based Recovery Plan in the U.S.</u></b></p> <p>In 2000, The U.S. federal government announced the “Conservation of Columbia Basin Fish: Final Basin-wide Salmon Recovery Strategy” project aiming at conserving local fish species. Two anadromous fishes were targeted: salmon and steelhead. This is a representative case which applied an ecosystem-based multi-species recovery plan to maintain the well-being of endangered species and protected areas.<sup>19</sup></p> <p><b><u>Theoretical basis of the contribution</u></b></p> <p><b>Maintaining ecological representation within protected area address the importance of specie-focused approaches, including recovery plans, which will contribute to protecting endangered species and preventing habitat degradation.<sup>20</sup></b></p>	 <p><b>GBO-4</b>      <b>Projected status as per actions</b></p>
	<p>Fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems;</p> <p>The impact of fisheries on stocks, species and ecosystems are within safe ecological limits</p>	<p><i>Indirect</i></p> <ul style="list-style-type: none"> <li>- 78 countries submitted 159 priority actions to make protected areas more equitably managed</li> </ul> <p>E.g.: Tuvalu’s R2R project with the assistance from the Fisheries Dept to help communities and Kaupules by working with their existing governance structures to strengthen and formalize them, which could include reclassification of certain areas and redevelopment of the agreements previously made</p>	<p><b><u>Case 5- Co-management in Torre Guaceto Marine Protected Area &amp; Nature Reserve in Italy</u></b></p> <p>Established in 1991, the Torre Guaceto Marine Protected area covers 2227 hectares of lands and ocean. In 2011 it was closed for a while to provide marine species time to restock, which had led to a war between fishermen and local government. Later on the WWF joined in the MPA work. To win back the faith from indigenous fishermen, WWF invited them to participate in multiple management procedures. Local people’s knowledge, like allowable gear and allotted fishing days, were perfectly respected and included in the law. Catches inside the MPA were significantly increased, so was the fishermen’s awareness. Fisheries began to develop toward a healthy and sustainable way. WWF came to the conclusion that ‘Fishermen hold the key to a healthy sea’.<sup>21</sup></p> <p><b><u>Theoretical basis of the contribution</u></b></p> <p><b>“The most appropriate tools to manage fish and invertebrate stocks must be identified through effective stakeholder engagement and a strong understanding of local conditions. Directly involving stakeholders, including fishers, in the allocation, design and enforcement of an MPA can increase the likelihood of success”<sup>22</sup></b></p>	 <p><b>GBO-4</b>      <b>Projected status as per actions</b></p>

<sup>19</sup> U.S. Federal Caucus (2000), Conservation of Columbia Basin fish: final basinwide Salmon recovery strategy, Vol. 1. (www.salmonrecovery.gov).

<sup>20</sup> Staton, S.K., A. Dextrase, J.L. Metcalfe-Smith, J. Di Maio, M. Nelson, J. Parish, B. Kilgour and E. Holm (2003), *Status and trends of Ontario’s Sydenham River ecosystem in relation to aquatic species at risk*, Environmental Monitoring and Assessment, 88: 283-310.

<sup>21</sup> https://wwf.exposure.co/the-mediterranean.

<sup>22</sup> Oyanedel R, Marín A, Castilla JC, Gelcich S. *Establishing marine protected areas through bottom-up processes: Insights from two contrasting initiatives in Chile*. Aquat Conserv Mar Freshw Ecosyst. 2016; 26: 184–195.

Target	Key elements	Linkage with Aichi Biodiversity Target 11 priority actions	Supporting evidence and theoretical basis of the contribution	Current and projected status of elements of the Aichi Biodiversity Target <sup>2</sup>
Aichi Biodiversity Target 7	<p>Areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity</p>	<p><i>Direct &amp; Indirect</i></p> <ul style="list-style-type: none"> <li>- 92 countries submitted 234 priority actions to make protected areas more effectively managed</li> </ul> <p>E.g.: Papua New Guinea has decided to create clear capacity development strategies and action plans for increasing management effectiveness of the PA system (National Parks, Wildlife Sanctuaries and Conservation Areas)</p>	<p><b><u>Case1- Puerto-Princesa Subterranean River National Park in Philippines</u></b></p> <p>The Puerto-Princesa National Park covers a rich variety of forests where local people used to depend on the resources for a living. Under the stipulation of Ancestral Domain Claim, the park authority permit a limited non-timber product harvest, wild fruit collection and hunting. To minimize pressure on the forest from resource extraction, an agro-forestry project was developed within the Kayasan Ancestral Domain. Later on, the Kayasan Ancestral Domain developed an agro-forestry project to minimize anthropogenic pressure on the forest. Strategies applied include planting endemic plant species, installing irrigation pipelines and promoting sustainable harvest for indigenous residents.<sup>23</sup></p> <p><b><u>Theoretical basis of the contribution</u></b></p> <p><b>Well-managed protected areas will provide a great balancing point for conservation, resource use and human well-being, for which agriculture, aquaculture and forestry are all valuable places to develop the practice.<sup>24</sup></b></p>	 <p>GBO-4</p> <p>Projected status as per actions</p>
		<ul style="list-style-type: none"> <li>- 78 countries submitted 159 priority actions to make protected areas more equitably managed</li> </ul> <p>E.g.: Fiji has decided to organize National workshop for Govt. Department (Lands, Minerals, Agriculture, Town &amp; Country Planning, Health, Education etc.) to acknowledge and Approval priority sites of PA for both terrestrial and marine</p>	<p><b><u>Case 2- The Potato Park in Peru</u></b></p> <p>Located in PISAQ in the Sacred Valley of Peru, the Potato Park is a community-based Biocultural Territory. Following the Indigenous Biocultural Heritage Area model, this park has put remarkable efforts in involving local people’s knowledge of conservation and management. It took local knowledge into account by all means, including skills, philosophies, skills and culture. The parks is based on the Ayllu approach, which is described as a “community of individuals with the same interests and objectives linked through shared norm and principles with respect to humans, animals, rocks, spirits, pastures, food crops, wildlife, etc.”<sup>25</sup></p> <p><b><u>Theoretical basis of the contribution</u></b></p> <p><b>As the trend of protected area management has been turning from traditional top-down approaches toward multi-participation approaches, the value of indigenous knowledge is increasingly stressed, which provides great opportunities for maximizing positive conservation effects both for human well-being and wildlife protection.<sup>26</sup></b></p>	

<sup>23</sup> Brown, J., Hay-Edie T. *Engaging Local Communities in Stewardship of World Heritage A methodology based on the COMPACT experience*. United Nations Educ Sci Cult Organ Paris Fr. 2014.

<sup>24</sup> UNEP-WCMC and IUCN (2016), *Protected Planet Report 2016*, UNEP-WCMC and IUCN: Cambridge UK and Gland, Switzerland.

<sup>25</sup> Bélair C., Ichikawa K., Wong B.Y. L. and MKJ, *Sustainable use of biological diversity in socioecological production landscapes*, Background to the ‘Satoyama Initiative for the benefit of biodiversity and human well-being 2010’.

<sup>26</sup> UNEP-WCMC and IUCN (2016), *Protected Planet Report 2016*, UNEP-WCMC and IUCN: Cambridge UK and Gland, Switzerland.

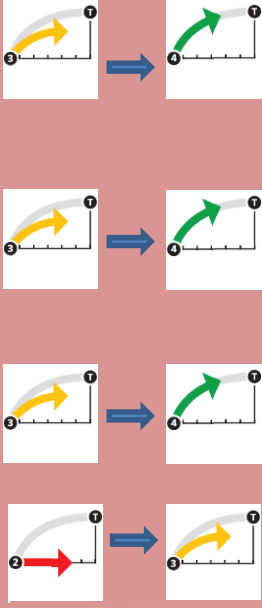
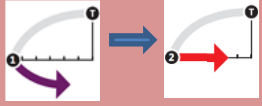


Target	Key elements	Linkage with Aichi Biodiversity Target 11 priority actions	Supporting evidence and theoretical basis of the contribution	Current and projected status of elements of the Aichi Biodiversity Target <sup>2</sup>
Target 7, cont'd		<p>- 49 countries submitted 83 priority actions to integrate protected areas into wider landscape and seascape</p> <p>E.g.: United Republic of Tanzania has decided to expand the Wildlife Management Areas and Forest Nature Reserve to improve wildlife corridors connecting PAs and reduce threats to endemic species in the regions.</p>	<p><b><u>Case 3- Organic Cacao Agro-forestry in the Talamanca-Caribbean Biological Corridor in Costa Rica</u></b></p> <p>Founded in 1992, the Talamanca-Caribbean Biological Corridor covers 2800 km<sup>2</sup> of southeastern Costa Rica, and is part of the greater Meso-American Biological Corridor. It covers three national parks, a wildlife reserve and five indigenous reserves throughout its range. In order to improve conservation status and livelihoods, in 1998, the GEF funded a project named “biodiversity conservation in Cocoa Agroforestry” which was later carried in the buffer zones surrounding several protected areas. Conservation strategies include changes in the design, management and the use of cacao agroforestry farms. Studies evaluating the cropping patterns and soil fertility management strategies concluded that the use of complex poly-cultural cropping patterns has resulted in reduced rates of soil erosion, nutrient and pesticides leaching and incidence of pest and diseases.<sup>27</sup></p> <p><b><u>Theoretical basis of the contribution</u></b></p> <p><b>Improved management of structurally complex agroforestry systems can greatly enhance biodiversity in the Corridor, and organic management has the potential to meet economic needs while preserving forest remnants.</b></p>	
		<p>- 81 countries submitted 152 priority actions to improve the contribution of other effective area-based conservation measures</p> <p>E.g.: Mozambique has decided to establish conservancies around the Gorongosa PA complex, bringing sustainable land and forest management benefits, restoring degraded ecosystems and generating livelihoods.</p>	<p><b><u>Case 4- Budongo Forest Reserve in Uganda</u></b></p> <p>Located at the top of the Albertine Rift, the Budongo Forest is a tropical rain forest covering 435 km<sup>2</sup> lands. Local government has identified it as a Central Forest Reserve. A.J. Plumptre has studied 60-years record of the Forest Department to measure how logging had been managed within the reserve. Results showed that nearly all compartments of the forests had been selectively logged during the period 1903-1990. The logging, done primarily by the British, combined with selective use of arboricide on Cynometra trees, was designed to prevent the forest from moving from mixed forest to climax forest.<sup>28</sup></p> <p><b><u>Theoretical basis of the contribution</u></b></p> <p><b>“Other effective area-based conservation measures, like retention patches, woodland key habitats and nature reserves all fill important and complementary functions for wood-living species in boreal forest and should be part of forest conservation strategies.”<sup>29</sup></b></p>	

<sup>27</sup> Reitsma, R., Parrish J.D., McLarney, W. (2001), The role of Cacao Plantations in Maintaining Forest Avian Diversity in Southeastern Costa Rica, In: Agroforestry Systems 53:185-193. Kluwer Academic Publishers, Netherlands.

<sup>28</sup> <http://www.budongo.org/explore/the-budongo-forest>.

<sup>29</sup> Sverdrup-Thygeson, A., Bendiksen, E., Birkemoe, T. and Larsson, K.H. (2014), ‘Do conservation measures in forest work? A comparison of three area-based conservation tools for wood-living species in boreal forests’, Forest Ecology and Management, 330, pp. 8–16.

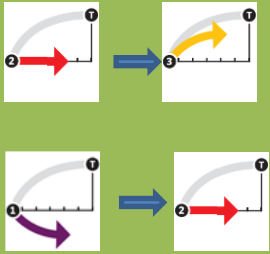
Target	Key elements	Linkage with Aichi Biodiversity Target 11 priority actions	Supporting evidence and theoretical basis of the contribution	Current and projected status of elements of the Aichi Biodiversity Target <sup>2</sup>
Aichi Biodiversity Target 9	<p>Invasive alien species (IAS) and pathways are identified and prioritized, priority species are controlled or eradicated and measures are in place to manage pathways to prevent their introduction and establishment</p>	<p><i>Indirect</i></p> <ul style="list-style-type: none"> <li>- 92 countries submitted 234 priority actions to make protected areas more effectively managed</li> </ul> <p>E.g.: Afghanistan has decided to draft regulations and rules to implement existing laws, and identify and draft new environmental legislation including both wildlife conservation and hunting regulations.</p>	<p><b><u>Case 1- IAS control in Kruger National Park (KNP) in South Africa</u></b></p> <p>In the KNP invasive alien species management plan, it has been clearly expressed that its objective is “to anticipate, prevent entry and where feasible and/or necessary control invasive alien species in an effort to minimize the impact on, and maintain the integrity of, indigenous biodiversity”. Components of the plan include specie-targeted projects, conception building workshops and other related plan that are still in the very early of development. KNP applied the Cyber Tracker system to capture data of targeted species and monitor their contribution and activities. This enabled the park to develop an efficient and customized management approach to deal with invasive alien species and conserve local ecosystem.<sup>30</sup></p> <p><b><u>Theoretical basis of the contribution</u></b></p> <p><b>“Well-managed protected areas can raise awareness and develop capacity on IAS control at all levels, subsequently enforce coordinated strategies to address IAS that include prevention, eradication and management, as well as regulation and communication efforts.”<sup>31,32</sup></b></p>	 <p>GBO-4      Projected status as per actions</p>
Aichi Biodiversity Target 10	<p>The multiple anthropogenic pressures on coral reefs, and other vulnerable ecosystems impacted by climate change or ocean acidification are minimized, so as to maintain their integrity and functioning</p>	<p><i>Indirect</i></p> <ul style="list-style-type: none"> <li>- 88 countries submitted 184 priority actions to improve terrestrial and inland water areas coverage by protected areas</li> </ul> <p>49 countries submitted 64 priority actions to improve coastal and marine areas coverage by protected areas</p>	<p><b><u>Case 1- Adaptive management of the Great Barrier Reef in Australia</u></b></p> <p>McCook et al has conducted a study measuring the eco-condition in the large-scale marine protected area network in the Great Barrier Reef. Results showed that, the coral coverage was significantly higher while the coral-eating starfish outbreak frequency was significantly lower within the no-take zone, comparing to that of the open zones. This suggests that marine protected areas has provided a critical and cost-effective contribution to enhancing the resilience of the Great Barrier Reef ecosystem.<sup>33</sup></p> <p><b><u>Theoretical basis of the contribution</u></b></p> <p><b>Protected areas can provide important opportunities for helping to mitigate both direct anthropogenic impacts and indirect impacts resulting from climate change. If designed and managed effectively, protected areas can increase the resilience of vulnerable ecosystems to global stressors. Management strategies include a suite of planning tools, zone management schemes, models and techniques that can contribute to maintenance or recovery of natural resilience.</b></p>	 <p>GBO-4      Projected status as per actions</p>

<sup>30</sup> UNEP-WCMC and IUCN (2016), *Protected Planet Report 2016*, UNEP-WCMC and IUCN: Cambridge UK and Gland, Switzerland.

<sup>31</sup> Genovesi P, Monaco A. Plant Invasions in Protected Areas. In: Foxcroft LC, Pyšek P, Richardson DM, Genovesi P, editors. *Plant Invasions in Protected Areas: Patterns, Problems and Challenges*. Invading N. Dordrecht: Springer; 2013, pp. 487–507.

<sup>32</sup> Tu M, Robinson MA, *Overcoming barriers to the prevention and management of alien plant invasions in protected areas: a practical approach*, In : Foxcroft LC, Pyšek P, Richardson DM, Genovesi P, editors. *Plant invasions in protected areas: patterns, problems and challenges*. Dordrecht: Springer; 2013. pp. 529–547.

<sup>33</sup> McCook LJ, Ayling T, Cappo M, Choat JH, Evans RD, De Freitas DM, et al. *Adaptive management of the Great Barrier Reef: a globally significant demonstration of the benefits of networks of marine reserves*. Proc Natl Acad Sci U S A. 2010; 107: 18278–85.

Target	Key elements	Linkage with Aichi Biodiversity Target 11 priority actions	Supporting evidence and theoretical basis of the contribution	Current and projected status of elements of the Aichi Biodiversity Target <sup>2</sup>
Target 10, cont'd		<p>- 88 countries submitted 198 priority actions to improve the coverage by protected areas of areas of particular importance for biodiversity and ecosystem services</p> <p>E.g.: Palau has decided to work with Environmental Quality Protection Board to adopt the measure of zero-loss as part of the mitigation measures of development in mangrove areas.</p>	<p><b><u>Case 2- Assessing ecosystem services for Lauru, Choiseul, Solomon Islands</u></b></p> <p>Located in the Solomon Islands, the Choiseul Island has a reputation for its rich in biodiversity and vulnerability in climate change impacts. Since 1992, TNC had been collaborated with the Laura Land Conference of Tribal Communities (LLCTC) to support the conservation work of biodiversity and ecosystem services. To monitor biodiversity relatives and ecosystem services, TNC conducted a stakeholder assessment based in eco-region scale. Both natural and anthropogenic threats, like sea level rise, climate change, logging and mining were discussed during the assessment. In 2009, more than 100 chiefs of all the customary clans of Lauru achieved an official agreement that: “1. Formally establish the “Lauru Reefs to Ridges Protected Area Network”; 2. Establish at least one marine protected area and one terrestrial protected area in each of the existing 12 wards within the next two years”.<sup>34</sup></p> <p><b><u>Theoretical basis of the contribution</u></b></p> <p>“Increasing the number or size of areas with the capacity to generate ecosystem services that maintain human well-being will contribute to avoiding critical tipping points, caused by anthropogenic changes, which would lead to hostile states of the Earth system.”<sup>35</sup></p>	
Aichi Biodiversity Target 12	<p>The extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained.</p>	<p>- 88 countries submitted 184 priority actions to improve terrestrial and inland water areas coverage by protected areas</p> <p>- 49 countries submitted 64 priority actions to improve coastal and marine areas coverage by protected areas</p> <p>E.g.: Zambia has identified 3 more protected areas with declining species and plan to implement intervention measures to improve their conservation status.</p>	<p><b><u>Example</u></b></p> <p>Results from The Living Planet Index shows that, from 1970 to 2010, terrestrial species had faced a decline of 39% in global scale, though population within terrestrial protected areas only had declined by 18%.<sup>36</sup></p> <p><b><u>Case 1- Giant Panda Protection Network in China</u></b></p> <p>With the help of WWF, Chinese government has setup their first protected area network in the Upper Reaches of the Yangtze to protect giant pandas. This network covered 62 nature reserves together with many forests and farms. This project has an unparalleled contribution in conserving one of the most unique but threatened panda specie. Moreover, the project has also helped in safeguarding other endangered species like Golden monkey.<sup>37</sup></p> <p><b><u>Theoretical basis of the contribution</u></b></p> <p>“Increasing the coverage of protected area can substantially contribute to reversing negative trends and avoiding extinction of threatened species”.<sup>38</sup></p>	 <p><b>GBO-4</b>      <b>Projected status as per actions</b></p>

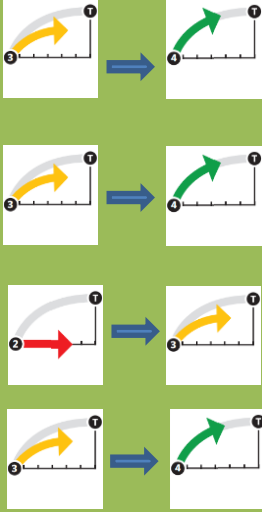
<sup>34</sup> Susi Menazza and Tasneem Balasinorwala (2011). TEEB case: Assessing ecosystem services for a protected area network, Solomon Islands.

<sup>35</sup> Steffen W, et al. 2011. The Anthropocene: From global change to planetary stewardship. *AMBIO* 40: 739–761.

<sup>36</sup> WWF. Protecting the Amazon can protect the Climate. 2014.

<sup>37</sup> [http://en.wwfchina.org/en/what\\_we\\_do/species/](http://en.wwfchina.org/en/what_we_do/species/).

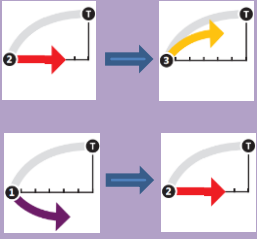
<sup>38</sup> Watson JEM, Dudley N, Segan DB, Hockings M. *The performance and potential of protected areas*, *Nature*, 2014; 515: 67–73.

Target	Key elements	Linkage with Aichi Biodiversity Target 11 priority actions	Supporting evidence and theoretical basis of the contribution	Current and projected status of elements of the Aichi Biodiversity Target <sup>2</sup>
Target 12, cont'd		<p>- 92 countries submitted 234 priority actions to make protected areas more effectively managed</p> <p>E.g.: Liberia decided to conduct regular research and assessment in all PAs and apply bio-monitoring approaches in all proclaimed and proposed PAs.</p>	<p><b><u>Case 2- Successful Stories of Conserving African Elephants in Five Countries</u></b></p> <p>Benin, Botswana, The Democratic Republic of Congo, Senegal, Kenya, Gabon, and Malawi all listed the African elephant (<i>Loxodonta africana</i>) 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.<sup>39</sup></p> <p><b><u>Theoretical basis of the contribution</u></b></p> <p>“Effective management of is the basis for the full delivery of protected area functions, especially for those generated by species-targeted conservation interventions”.<sup>40</sup></p>	
Aichi Biodiversity Target 13	<p>The genetic diversity of cultivated plants and farmed and domesticated animals and of wild relatives, including other socio-economically as well as culturally valuable species is maintained, and strategies have been developed and implemented for minimizing genetic erosion and safeguarding their genetic diversity</p>	<p><i>Direct &amp; Indirect</i></p> <p>- 88 countries submitted 198 priority actions to improve the coverage by protected areas of particular importance for biodiversity and ecosystem services</p> <p>E.g.: Republic of Moldova has elaborated documents and policies like the National Plan on Extending of Forest Vegetation Areas for 2013-2018 to extend and create areas with forest vegetation and ecological network</p>	<p><b><u>Case 1- SE Anatolia Biodiversity Research Project in Turkey</u></b></p> <p>Being less know for the public, the Anatolia region is a biodiversity-rich area with important ecosystem value in Turkey. In 2004, WWF Turkey announced a SE Anatolia Biodiversity Research Project aims at identifying the biodiversity hot spots within the area. After two-year’s work, WWF listed 30 recommended areas that worth priority investigation and conservation together with suggestions on specific actions. Through these actions, many species that are important for genetic diversity, like volcanic steppe plants and <i>Triticum boeoticum</i> (wild einkorn) were successfully protected.<sup>41</sup></p> <p><b><u>Theoretical basis of the contribution</u></b></p> <p><b>Enhancing protected areas with particular ecological functions- like safeguarding endangered species or providing food for human- can directly contribute to maintaining the genetic diversity of the area.</b></p>	 <p>GBO-4</p> <p>Projected status as per actions</p>

<sup>39</sup> Updated status of Aichi Biodiversity Target 12, UNEP/CBD/COP/13/INF/18.

<sup>40</sup> Ferraro PJ, Hanauer MM. Through what mechanisms do protected areas affect environmental and social outcomes? *Philos Trans R Soc B*. 2015; 370: 11 pp.

<sup>41</sup> Welch, H J (ed) (2004); op. cit.

Target	Key elements	Linkage with Aichi Biodiversity Target 11 priority actions	Supporting evidence and theoretical basis of the contribution	Current and projected status of elements of the Aichi Biodiversity Target <sup>2</sup>
Target 13, cont'd		<ul style="list-style-type: none"> <li>- 90 countries submitted 169 priority actions to make more protected areas ecological representative</li> <li>- 92 countries submitted 234 priority actions to make protected areas more effectively managed</li> <li>- 81 countries submitted 152 priority actions to improve the contribution of other effective area-based conservation measures</li> </ul>	<p><b><u>Case 2- The Sierra de Manantlan Biosphere Reserve in Mexico</u></b></p> <p>In the 1970s two endangered maize crop wild relative species - <i>Z. perennis</i> and <i>Z. diploperennis</i> - were discovered in the Mexico's Sierra Madre del Sur. To preserve the important species as well as traditional agricultural systems and cultivars, in 1988, the Sierra de Manantlan Biosphere Reserve was established by Presidential decree, under the auspices of the Jalisco government. It was also recognized by UNESCO's Man and the Biosphere Programme.<sup>42</sup></p> <p>The local communities have rich knowledge of the area's biodiversity condition. The existence of <i>Z. perennis</i> and <i>Z. diploperennis</i> is largely resulted from the rational traditional agricultural practices like slash-and-burn cultivation and cattle-ranching. Therefore, the management of the reserve stress largely depend on the understanding of local traditional agricultural system. It has been planned that the coamil system within the reserve will be fully remained so that the two important species can continue their surviving.<sup>43</sup></p> <p><b><u>Theoretical basis of the contribution</u></b></p> <p><b>The gene exchanges of species happen not only within protected areas, but also within other geographical scales like certain untitled conservation area or larger ecoregion. The effective management of other conservation scale is critical for safeguarding genetic diversity in general.</b></p>	
Aichi Biodiversity Target 14	<p>Ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded</p>	<p><i>Direct</i></p> <ul style="list-style-type: none"> <li>- 88 countries submitted 198 priority actions to improve the coverage by protected areas of areas of particular importance for biodiversity and ecosystem services</li> <li>- 92 countries submitted 234 priority actions to make protected areas more effectively managed</li> </ul>	<p><b><u>Case 1- Economic benefits of the Hoge Veluwe Forest in Netherlands</u></b></p> <p>The Hoge Veluwe is a national park located in the center of the Netherlands, which is made up of approximately 5500 ha of forest, heather and drift sand and is one of the largest nature reserves in the country. The area has been continuously protected since 1909. Major ecosystem services include wood production, supply of game, groundwater infiltration, carbon sequestration, air pollution removal, recreation, recreational hunting and biodiversity conservation. A conservative estimate of the economic benefits generated by the Hoge Veluwe forest is around € 10.8 million per year, which is over three times the value generated by nearby agricultural land. Over 90% of this value is generated by only three services: recreation, groundwater infiltration and air filtration.<sup>44</sup></p> <p><b><u>Theoretical basis of the contribution</u></b></p> <p><b>"Ecosystem services, including provisioning, regulating and cultural services, once effectively implemented, can directly affect people and support human well-beings including security, basic material for a good life, health and good social relations".<sup>45</sup></b></p>	 <p><b>GBO-4</b>      <b>Projected status as per actions</b></p>

<sup>42</sup> Iltis, H (1994); New Year's card leads to newly discovered species of enormous economic potential, *R&D Innovator*.

<sup>43</sup> Ibid.

<sup>44</sup> Hein, L. 2011. Economic benefits generated by protected areas: the case of the Hoge Veluwe forest, the Netherlands, *Ecology and Society* 16(2): 13

<sup>45</sup> UNEP (2004) 'Ecosystems and human well-being: A framework for assessment', 41(08), pp. 41-4645-41-4645



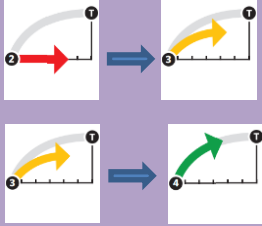
Target	Key elements	Linkage with Aichi Biodiversity Target 11 priority actions	Supporting evidence and theoretical basis of the contribution	Current and projected status of elements of the Aichi Biodiversity Target <sup>2</sup>
Target 14, cont'd		<p>- 49 countries submitted 83 priority actions to integrate protected areas into wider landscape and seascape</p>	<p><b>Example</b></p> <p>A study on water provision from protected areas to downstream communities concluded that nearly two-thirds of the global population is living downstream of the world's protected areas as potential users of freshwater provided by these areas.<sup>46</sup></p> <p><b>Theoretical basis of the contribution</b></p> <p><b>“Efforts to conserve, connect and potentially restore areas within both protected areas and adjacent lands can increase the availability and reliability of high-quality water sources and safeguard downstream water supplies”.</b><sup>47</sup></p>	
	<p>Taking into account the needs of women, indigenous and local communities, and the poor and vulnerable</p>	<p><i>Direct</i></p> <p>- 78 countries submitted 159 priority actions to make protected areas more equitably managed</p> <p>E.g.: Nepal has decided to develop mechanisms on payment for ecosystem services and interventions on gender and social inclusion</p>	<p><b>Case 2- The conservation and development of the Dadia Forest Reserve in Greece</b></p> <p>The Dadia forest reserve is one of the most important habitats in Europe. Since 1987, the Action Communautaire pour l'Environnement programme created the initial infrastructure for the protected area. Now the place has been a good example for successful management of ecotourism. It integrated rural development in the Mediterranean where human habitation has coexisted with natural landscapes. Local people acquired additional income by providing food, accommodation and interpretation services, and government and international agencies provided additional funds. Women were involved as tour guides, environmental educators or volunteer coordinators. This cooperative management provides women access to a wider social role, and the associated benefits in terms of exchange of ideas, further learning and the ability to influence the affairs of the community.<sup>48</sup></p> <p><b>Theoretical basis of the contribution</b></p> <p><b>Providing accesses to basic infrastructure and the management of protected areas can enhance indigenous, including women's contribution to household income and support their demand for and use of ecosystem services.</b></p>	

<sup>46</sup> Harrison IJ, Green PA, Farrell TA, Juffe-Bignoli D, Sáenz L, Vörösmarty CJ, Protected areas and freshwater provisioning: a global assessment of freshwater provision, threats and management strategies to support human water security, *Aquat Conserv Mar Freshw Ecosyst.* 2016;26: 103–120.

<sup>47</sup> Allan D, Esselman P, Abell R, McIntyre P, Tubbs N, Biggs H, Castello L, Jenkins A KR. Protected areas for freshwater ecosystems: essential but underrepresented. In: Mittermeier RA F, TA, Harrison IJ, Upgren AJ BT, editors. *Fresh Water: The Essence of Life.* CEMEX and ILCP: Arlington; 155–178.; 2010.

<sup>48</sup> Valaoras, G., Pistola, N.A. and Pistola, A.K. (1999) The role of women in the conservation and development of the Dadia Forest Reserve. *Dadia Women's Cooperative.*



Target	Key elements	Linkage with Aichi Biodiversity Target 11 priority actions	Supporting evidence and theoretical basis of the contribution	Current and projected status of elements of the Biodiversity Target
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Aichi Biodiversity Target 15</p>	<p>Ecosystem resilience and the contribution of biodiversity to carbon stocks have been enhanced through conservation and restoration, including restoration of at least 15 per cent of degraded ecosystems, contributing to climate change mitigation and adaptation and to combating desertification</p>	<p><i>Direct</i></p> <ul style="list-style-type: none"> <li>- 88 countries submitted 198 priority actions to improve the coverage by protected areas of areas of particular importance for biodiversity and ecosystem services</li> </ul> <p>E.g.: Tajikistan has decided to rehabilitate degraded forest and degraded high-altitude pastures within the framework of Snow Leopard conservation project</p>	<p><b><u>Case 1- The “Growing with the sea” project in Wadden Sea in Germany</u></b></p> <p>Located in the North coast of Germany, the Wadden Sea is a UNESCO recognized world natural heritage and an important habitat for a huge variety of species. With the global trend of climate change, this place has been continuously threatened by sea level rise. In order to deal with this issue, WWF joined the Federal state’s work in initiating a Wadden Sea Strategy 2100 which focuses on identifying opportunities and feasible actions in adaptation to climate change. They believe that with the successful implementation of the Strategy, ecosystem resilience of the Wadden Sea will be significantly enhanced.<sup>49</sup></p> <p><b><u>Theoretical basis of the contribution</u></b></p> <p>“Conserving ecosystems like forests, soils, freshwater and coastal wetlands can contribute to mitigation and adaptation of climate change, strategies of which include re-establishing habitats with the potential to store and sequester carbon that would otherwise be emitted or retained within the atmosphere”.<sup>50</sup></p>	 <p><b>GBO-4</b>      <b>Projected status as per actions</b></p>
		<ul style="list-style-type: none"> <li>- 92 countries submitted 234 priority actions to make protected areas more effectively managed</li> </ul> <p>E.g.: DR Congo has decided to pass the draft law on biosafety, develop the consolidation procedure guide the network of protected areas, implement legal institutional framework for regional planning and etc.</p>	<p><b><u>Case 2- Actions to restore native wildlife habitat and capture carbon in the U.S.</u></b></p> <p>“Go Zero™” is a project initiated by the U.S. Fish and Wildlife Services and the Conservation Fund aiming at “allowing carbon offsets for planting native trees in national wildlife refuges”. After ten-years’ application, more than 8 million trees within the protected area had been successfully restored, leading to a potential of absorbing 9 more million tons of carbon. This project will substantially contribute to reducing greenhouse gases and building resilience in face of climate change.<sup>51</sup></p> <p><b><u>Theoretical basis of the contribution</u></b></p> <p>“Well-managed protected areas can play a critical role in mitigation and adaptation strategies to reduce the ecological and social vulnerability of local communities to the impact of climate change”.<sup>52</sup></p>	

<sup>49</sup> <http://www.wwf.de/watt/klima>.

<sup>50</sup> Keenleyside K, Dudley N, Cairns S, Hall C, Stolton S. Ecological restoration for protected areas: Principles, guidelines and best practices. 2012

<sup>51</sup> North American Intergovernmental Committee on Cooperation for Wilderness and Protected Area Conservation, <http://nawpacommittee.org/wp-content/uploads/2012/08/NAWPA-CCWG-Brochure.pdf>.

<sup>52</sup> UNEP-WCMC and IUCN (2016), *Protected Planet Report 2016*, UNEP-WCMC and IUCN: Cambridge UK and Gland, Switzerland.

#### IV. CONCLUSION

9. To provide convincing inspiration for all Parties about how enhanced implementation of Aichi Biodiversity Target 11 can generate multiple values, this document provides information from collected existing cases that can illustrate the linkages between priority actions toward Aichi Biodiversity Target 11 in national road maps and other Aichi Biodiversity Targets. Although here only ten of the other Aichi Biodiversity Targets were selected to showcase contributions, others may also be relevant to some extent, as actions toward each Aichi Biodiversity Target will have influences on others, directly or indirectly.

10. With successful implementation of the submitted priority actions towards Aichi Biodiversity Target 11 in the road maps, it is highly possible that the current status of progress towards elements of other Aichi Biodiversity Targets can be enhanced, for instance changing from no significant progress to progress in some cases, or to higher rates of progress, to achieve the targets in the next four years.

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