

**Explanatory Guide on Target 11  
Of the Strategic Plan for  
Biodiversity**

## **A guide to Target 11 of the Strategic Plan for Biodiversity 2011-2020**

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## **A guide to Target 11 of the Strategic Plan for Biodiversity 2011-2020**

*Target 11: By 2020, at least 17 per cent of terrestrial and inland-water areas 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 landscape and seascape.*

### **1. Introduction**

This guide focuses on Target 11 on protected areas of the Strategic Plan for Biodiversity. It is part of a series of guides which is meant to help Parties and other stakeholders take action in support of the Strategic Plan for Biodiversity during the United Nations Decade on Biodiversity.

Establishment of comprehensive, ecologically representative, effectively managed and financially secured protected area networks is a critical strategy not only for biodiversity conservation, but for securing ecosystem goods and services, enabling climate change adaptation and mitigation, and helping countries achieve the Millennium Development Goals. Recognizing these critical roles of protected areas, the Parties to the Convention on Biological Diversity (CBD) in February 2004 committed to a comprehensive and specific set of actions known as the Programme of Work on Protected Areas (PoWPA). By emphasizing the equitable sharing of costs and benefits, recognizing various governance types and by giving prominence to ecological representation, management effectiveness and multiple benefits, the PoWPA is the most comprehensive global plan of action for effective implementation of protected areas and is considered as a defining framework or “blueprint” for protected areas for the next decades. CBD Parties hailed PoWPA as the most implemented of CBD programmes and a successful initiative. Successive decisions of the CBD Conference of Parties (COP) from its seventh to tenth meetings established the policy environment fostering the implementation of the PoWPA.

As the elements of Target 11 incorporate the tenets of the PoWPA, its further effective implementation holds the key for achieving Target 11. PoWPA implementation also helps toward achieving other Targets 1, 2, 5, 10, 12, 14, 15 and 18. As countries begin to chart a course towards achieving the Strategic Plan for Biodiversity, they will be looking for ways to find the most efficient and innovative solutions to meet both their social development needs and biodiversity conservation goals. This guide explains each of the terms incorporated in the Target, provides some available information to help countries in setting realistic and achievable national targets and describes ways and means for achieving those targets including tools and resources and linkages to capacity building activities.

### **2. Why is a target needed?**

Habitat loss, including degradation and fragmentation, continues to be the main driver of biodiversity loss globally. For the Strategic Plan for Biodiversity to be fulfilled there must ultimately be a reduction in habitat loss and critical ecosystems must be protected. Well-governed and effectively managed protected areas are a proven method for accomplishing this.

Target 11 is a contribution towards ensuring that ecosystems, species and genetic diversity are safeguarded in both the land and seascape by ensuring that key habitats are protected and that species migration and movement can occur. Protected areas are a cornerstone of

conservation actions and as such are one of the main tools at a country's disposal to reduce habitat loss.

### **3. Explanation of Key Terms**

Key terms of Target 11 include “**at least 17 per cent of terrestrial and inland water**”; “**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**”; “**well connected systems of protected areas**”; “**other effective area-based conservation measures**”; “**integrated into the wider landscapes and seascapes**”.

#### **3.1 “At least 17 per cent of terrestrial and inland water areas”:**

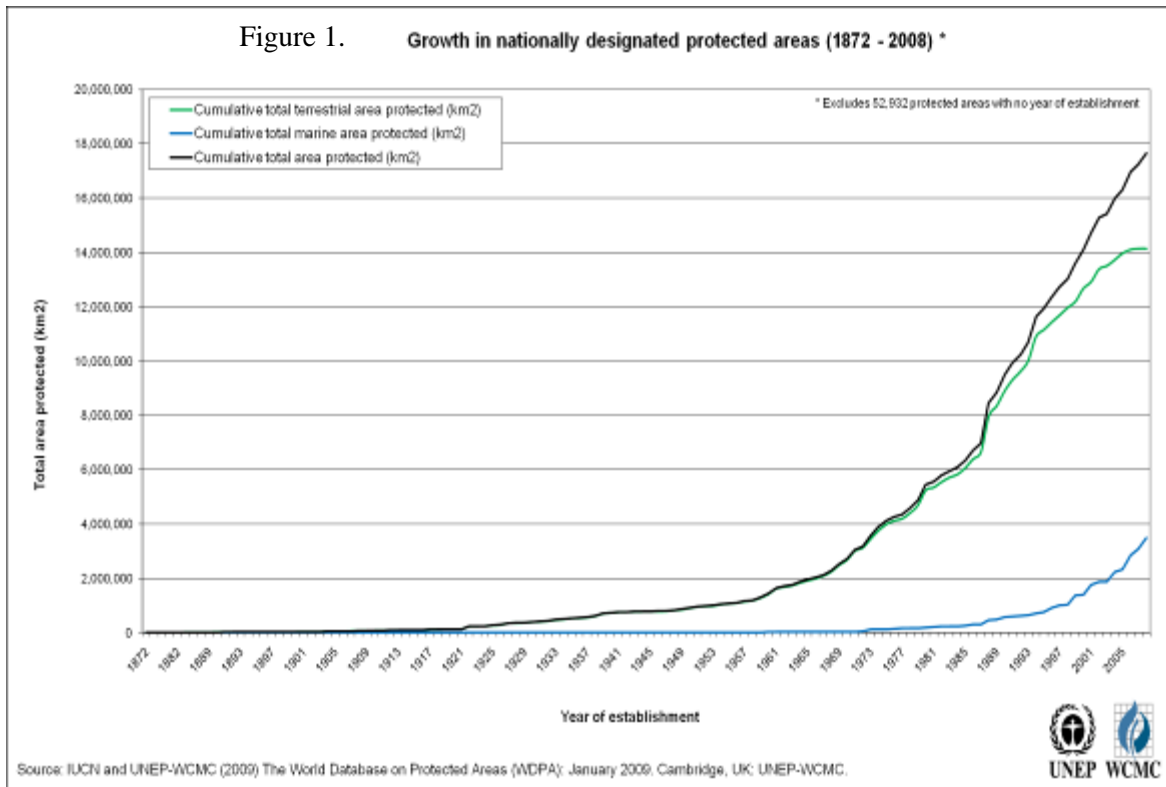
*What are terrestrial and inland water areas:* IUCN 2008<sup>1</sup> defined a protected area as – “a clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long term conservation of nature with associated ecosystem services and cultural values”. Such areas occur throughout the land (terrestrial area) of nations as different ecosystem types such as forests, dry and sub-humid lands, etc. Inland waters (such as rivers, lakes, other wetlands) are part of the landscape – land depends on them and they depend on land. The CBD COP in 2004 while adopting the programme of work on protected areas considered that “terrestrial” includes “inland water ecosystems”. However, inland water ecosystems are one of the most poorly protected of the terrestrial habitats. For this reason terrestrial and inland water areas are specifically mentioned separately in Target 11 to make it clear that inland waters are important and not to be forgotten. The 17 % area-based target includes them together.

*What is the current status of terrestrial protected areas:* Statistics for the 2010 Millennium Development Goals (MDG) report<sup>2</sup>, compiled in 2009 by the UNEP-World Conservation Monitoring Centre from the World Database on Protected Areas, indicate more than 100,000 nationally designated protected areas covering 12.9% of the planet's surface area (Figure 1, nearly 18 million km<sup>2</sup>), excluding Antarctica.

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<sup>1</sup> Dudley, N. (Editor). 2008. *Guidelines for Applying Protected Area Management Categories*. Gland, Switzerland. IUCN. x + 86pp.

<sup>2</sup> <http://mdgs.un.org/unsd/mdg/Data.aspx> ; [www.unep-wcmc.org/wdpa](http://www.unep-wcmc.org/wdpa); [www.wdpa.org](http://www.wdpa.org)



Taking into account the MDG world and regional groupings, 20.9% of Latin America and more than 15% of Eastern & Western Asia’s terrestrial area is protected. Sub-Saharan Africa, Caribbean and South –Eastern Asia recorded accounted 11-13.6% of their terrestrial area under protection. Of Least Developed Countries (LDCs) and Small Island Developing States (SIDS), LDCs had greater terrestrial surface under protection (10.2%) whereas SIDS recorded 6.2%. Over 11% of land-locked developing countries is protected. Considering the grouping of ‘developing’ and ‘developed countries’ *per se*, developing countries included slightly more terrestrial area under protection (13.9%) than developed country counterparts (13.6%). As approximately 13% of the terrestrial surface of the planet is under formally designated protected areas and as the 17% terrestrial and inland water area target also encompasses “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**”, Parties may consider the 17% global target as practicable and achievable at national level.

### 3.2 “10 per cent of coastal and marine areas”

*What are coastal and marine areas?* Coastal and marine areas are areas usually covered by or containing sea water, including seas and oceans, river estuaries, coasts and include diverse habitats such as mangrove forests; coral reefs; sea grass beds; estuaries, etc. in territorial waters (up to 12 nautical miles from the coast). A marine and coastal protected area is a defined area within or adjacent to the marine environment, together with its overlying water and associated flora, fauna, historical and cultural features, which has been reserved by legislation or other

effective means, including custom, with the effect that its marine and/or coastal biodiversity enjoys a higher level of protection than its surroundings<sup>3</sup>.

*What is the current status of marine protected areas?* As of 2009 6.3% of the world's territorial waters are protected. Latin America tops the regional listing with 11.6% of its territorial waters under protection. Unlike the terrestrial protected areas, the difference between 'developed' and 'developing countries' is more significantly pronounced in case of marine protected areas. While 11% of the developed countries territorial waters are under protection, developing countries as a whole recorded 3.5%. Sub-Saharan Africa, Eastern Asia, Southern Asia and SIDS as a whole recorded less than 2.0% of their territorial waters under protection. Out of the 232 marine ecoregions, 39% of them have 10% of their area under protection, whereas 50% have less than 1% of their area under protection.

### 3.3 “Areas of particular importance for biodiversity and ecosystem services”

*What are areas of particular importance for biodiversity?* Simply stated, these are areas that are locally, nationally and globally important for the manifestation of biodiversity (at genetic, species and ecosystem level) or **Key Biodiversity Areas (KBAs)**<sup>4</sup>. These areas cover different taxa and realms such as:

- **Important Bird Areas:** key sites for the conservation of bird species, identified through BirdLife International;
- **Important Plant Areas:** natural or semi-natural sites exhibiting exceptional botanical richness and/or supporting an outstanding assemblage of rare, threatened and/or endemic plant species and/or vegetation of high botanic value;
- **Important sites for freshwater biological diversity:** areas of freshwater habitats;
- **Alliance for Zero Extinction sites:** identified as critical for the survival of one or more globally identified endangered and critically endangered species;
- **High Conservation Value Areas:** natural habitats, which are of outstanding significance or critical importance due to their high environmental, socioeconomic, biodiversity, cultural, religious or landscape values;
- **High Biodiversity Wilderness Areas (HBWA):** large areas of unmodified or slightly modified land and/or sea, retaining their natural character and influence, which are protected and managed so as to preserve their natural condition”. The HBWA approach is an adopted priority setting template developed by Conservation International (CI) which refers to 5 of the 24 identified major tropical wilderness areas that hold globally significant levels of biodiversity; and
- **Areas rich in wild relatives of crops.**

KBAs are mapped by national conservation organizations using consistent global criteria of vulnerability and irreplaceability and present an important approach for national gap analyses and prioritization to increase effectiveness and establishment of protected areas. **KBA** identification is focused on land, in freshwater, and in marine environments under national jurisdiction; beyond the Exclusive Economic Zone (EEZ), the identification of Ecologically and Biologically Significant Areas (EBSA) serve the purpose of KBAs.

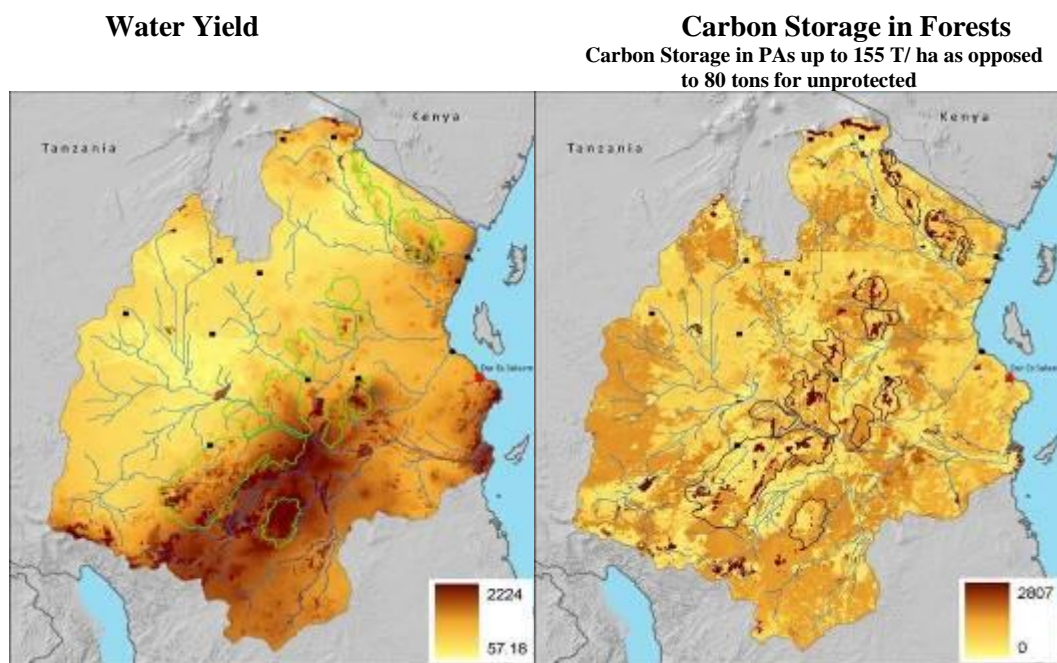
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<sup>3</sup> CBD, COP 7, Decision VII/5 (note 11). This definition has not been formally accepted by the CBD as a whole, but is used by the Ad Hoc Technical Expert Group on Marine and Coastal Protected Areas

<sup>4</sup> <http://www.biodiversitya-z.org/areas/22>

*Ecosystem services<sup>5</sup> of Protected Areas:* Although most people mainly associate protected areas with nature conservation and tourism, well-managed protected areas can provide **vital ecosystem services**, such as water purification and retention leading to water security, erosion control and reduction of both flooding and unnatural wild fires (e.g. Fig.2). These services buffer human communities against different environmental risks and hazards and support food and health security by maintaining crop diversity and species with economic and/or subsistence value. They also play an important role in ecosystem-based approaches to climate change adaptation and contribute to mitigation by storing and sequestering carbon. Protected areas are often an important part of **local cultural heritage and identity**. As many rural communities depend on protected forests, pastures, wetlands and marine areas for **subsistence and livelihoods**, protected areas contribute directly to the global agenda for sustainable development, poverty reduction and maintaining cultures.

**Figure 2. Protected areas overlay with forest carbon storage and water yield in Tanzania<sup>6</sup>**



### 3.4 “Ecologically representative”

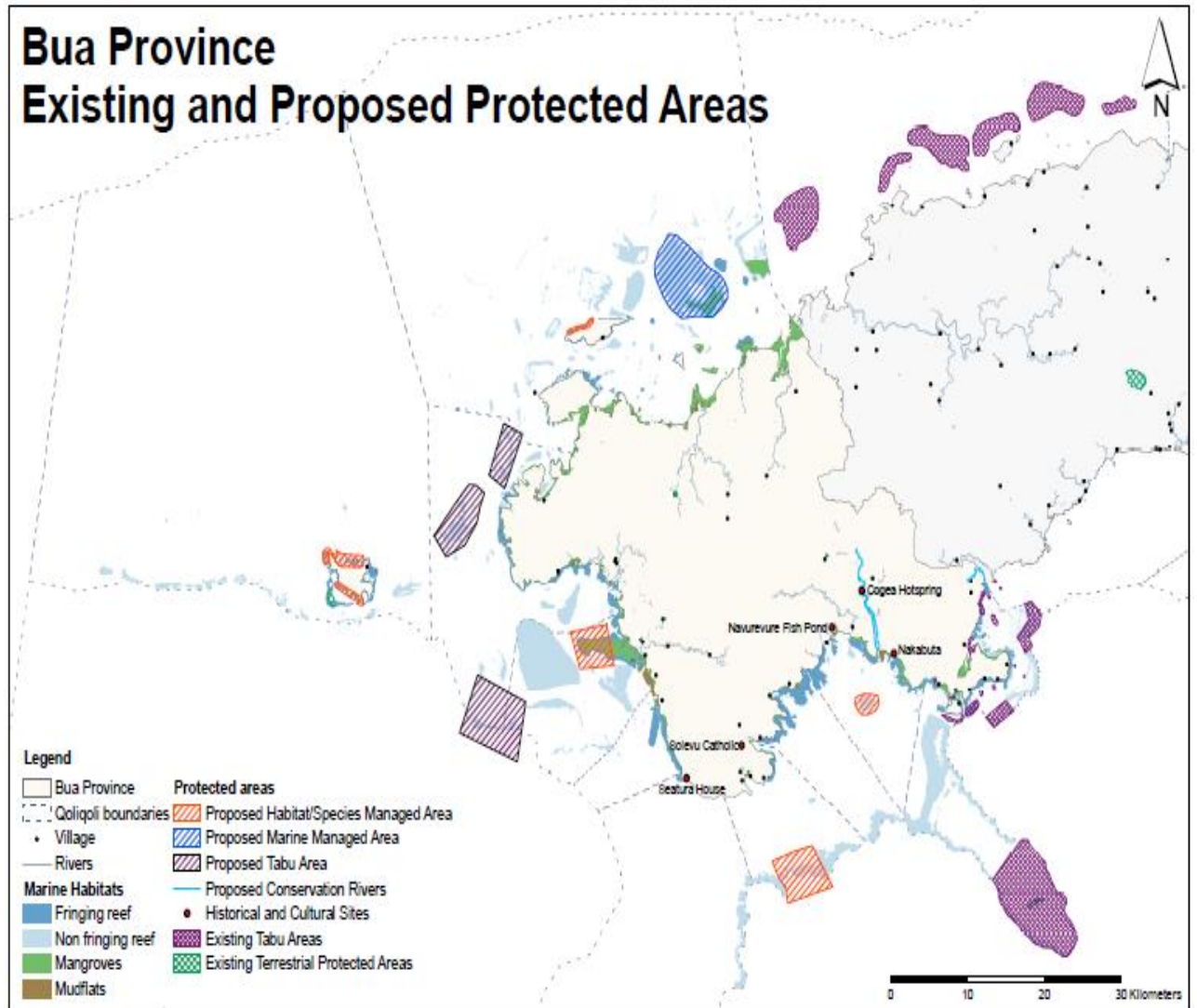
*What is ecologically representative?* Although the growth in number and area of global protected areas is spectacular, it does not yet come near to fulfilling the objectives of the PoWPA or the needs of species and ecosystems, given that a large number of these species, ecosystems and ecological processes are not adequately covered in existing protected areas. Broadly these **gaps** are **representation and ecological gaps** - either no representation of a particular species and/or

<sup>5</sup> Details of ecosystem services are dealt with in Target 14.

<sup>6</sup> Burgess, N., S. Mwakalila, S. Madoffe, T. Ricketts, N. Olwero, R. Swetnam, B. Mbilini, R. Marchant, F. Matalo, S. White, P. Munishi, A. Marshall and R. Malimbwi (2009); *Valuing the arc – A programme to map and value ecosystem services in Tanzania*, Mountain Research Initiative Newsletter No 3., and Swetnam, R.D., Marshall, A.D. and Burgess, N.D. (2010); *Valuing ecosystem services in the Eastern Arc Mountains of Tanzania*. Bulletin of the British Ecological Society, 41(1):7-8. In Ervin, J., N. Sekhran, A. Dinu, S. Gidda, M. Vergeichik and J. Mee. 2010. *Protected Areas for the 21st Century: Lessons from UNDP/GEF’s Portfolio*. New York: UNDP and Montreal: CBD.



ecosystem or inadequate number of species and ecosystems represented to ensure long-term survival of species and ecosystem functioning. To address these problems in a systematic way the PoWPA calls for **ecological representation**. This refers to the need for protected areas to represent, or sample the full variety of biodiversity of different biological realms (freshwater, marine, terrestrial etc in all ecoregions), and biological scales (ecosystems, species and within species variations). This means that protected area systems should contain adequate samples of the full range of existing ecosystems and ecological processes, configured so that populations of all their species persist in the wild over very long periods. Conservation planning must therefore address not only the content and location of individual protected areas and sets of protected areas, but also their design, which includes variables such as size, connectivity and alignment of boundaries. An ecologically representative network of protected areas is the cornerstone of a national biodiversity strategy and action plan (NBSAP). A representative network is also a key investment in environmental sustainability and therefore financial sustainability and should provide many associated benefits such as ecosystem services. Ecological representation provides a unifying methodology to address gaps in a protected area system. **An ecological gap assessment** (e.g. for Fiji in Fig. 3, Mexico in Fig. 6) analyzes the extent to which key biodiversity features (species, natural communities and ecological systems and the ecological processes that sustain them), are sufficiently represented within a protected area network. The aim is to identify those key biodiversity features that are not well represented within a protected area network, such as inland waters, for example.



**Figure 3. Gap analysis map of existing and proposed conservation and management areas for Bua Province, Fiji.**

The government of Papua New Guinea has recently completed an ecological gap assessment for their protected area system. In addition to issues of representativeness, the government also incorporated issues related to climate change into the gap assessment. By overlaying existing protected areas (Fig. 4), key biodiversity features, and projected climate impacts, the gap assessment team was able to identify areas that would increase the protection of under-represented species and ecosystems, while at the same time addressing features that were most vulnerable to climate change and features most likely to be resilient to climate change (Fig. 5).

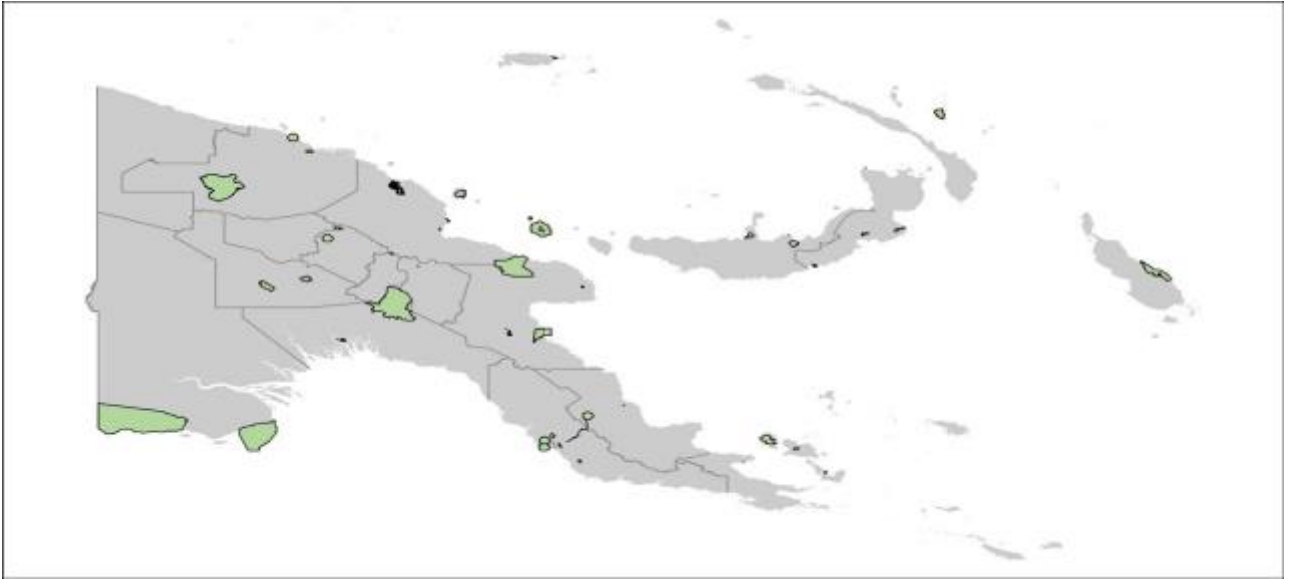


Figure 4. Existing protected areas in Papua New Guinea.

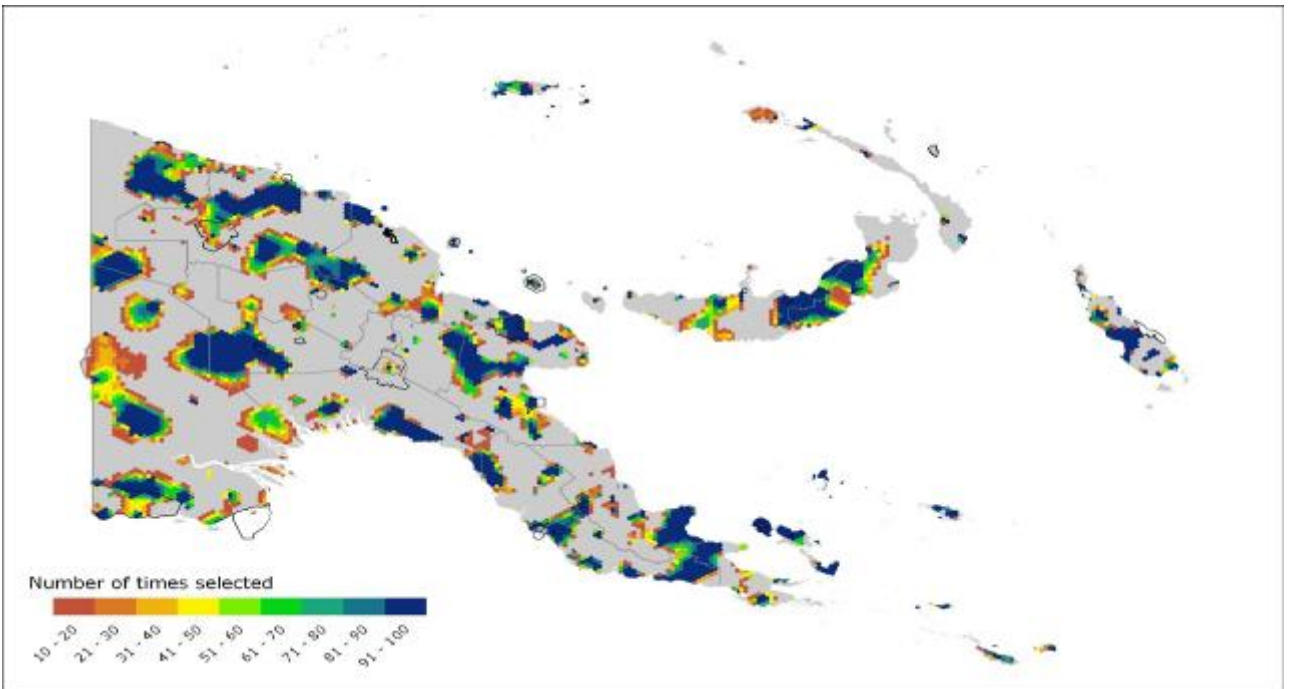


Figure 5. Papua New Guinea – climate ready gap analysis.

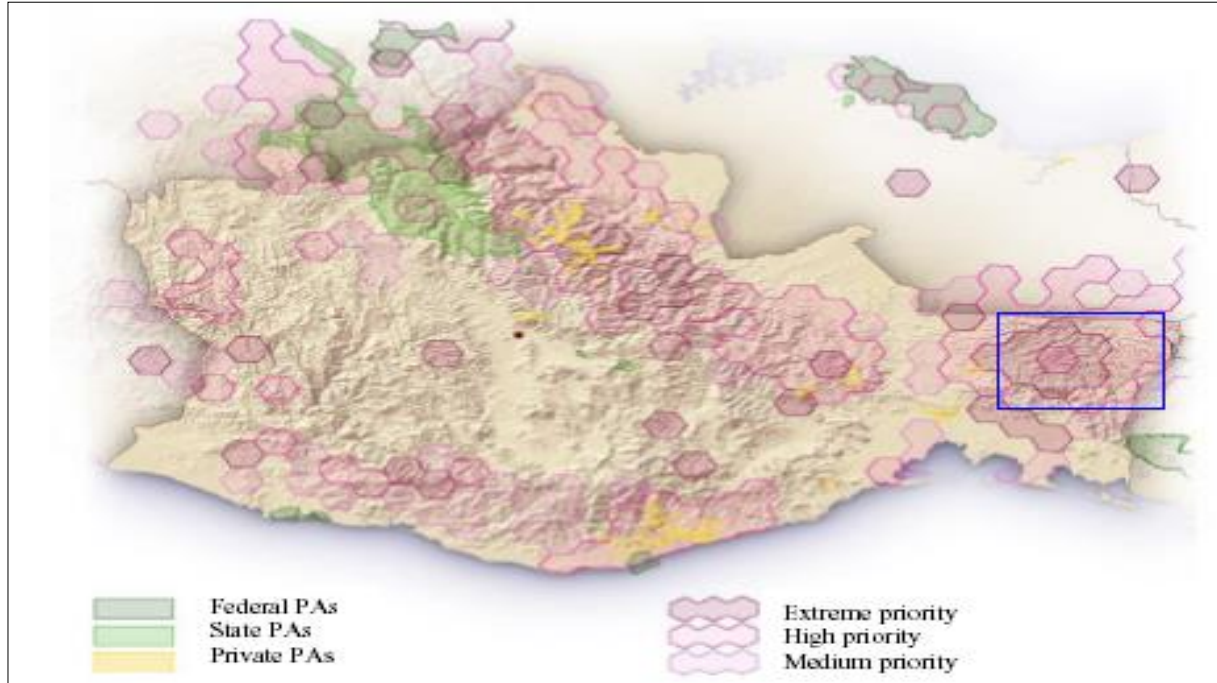


Figure 6. Gap analysis map of Oaxaca region, Mexico

### 3.5 “Effectively and equitably managed”

*What is effectively managed?* It is the degree to which protected area management protects biological and cultural resources, and achieves the goals and objectives for which the protected area was established. Protected areas only work as conservation tools and provide ecosystem services if they are managed effectively to maintain their values in perpetuity.

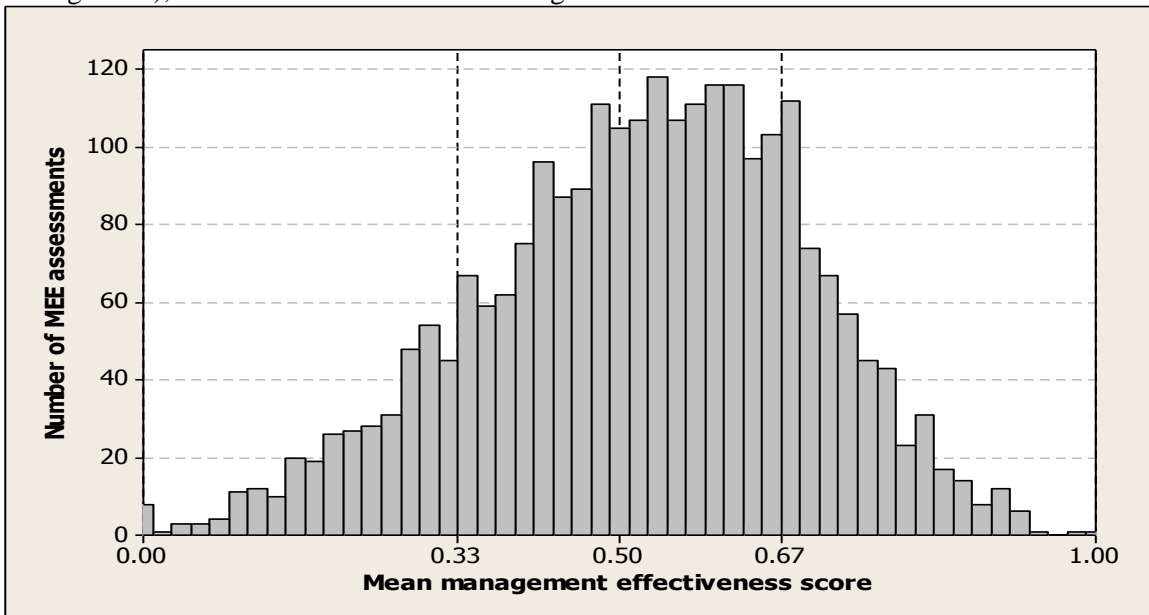
*What is an assessment of protected area management effectiveness?* Protected area management effectiveness assessments are a process that reveals management strengths and weaknesses in a protected area, and across a protected area system. Such assessments guide protected area strategy and capacity development, enable adaptive management, guide effective resource allocation, promote accountability and transparency among key stakeholders, and build support for protected area management.

*What aspects of management effectiveness are usually included in an assessment?* An assessment of management effectiveness needs to be conducted in the **context** of the protected area, so assessments need first to gather data on issues relating to the values, threats, opportunities, stakeholders, and the management and political context of the area. Management begins with **planning** of strategies needed to fulfil the vision, goals and objectives of protection and to reduce threats. To put these plans in place and meet management objectives, managers need **inputs** (resources) of staff, money and equipment. Management activities are implemented according to accepted **processes** (i.e. best practices); which produce **outputs** by completing activities outlined in work plans. The end result of management is the achievement of **outcomes**, i.e. reaching the goals and objectives set for the biological conservation, economic development, social sustainability or cultural heritage of the protected area.

### Global Study on Management Effectiveness Evaluation in Protected areas

The University of Queensland has undertaken a global study on evaluation of management effectiveness in protected areas, covering over 6,800 assessments across 100 countries by obtaining original data, analyzing about 50% of the total assessments and reviewing 50 evaluation reports. The majority of these assessments are from Latin America and the Caribbean region (over 2,500), followed by Oceania largely due to three extensive ‘State of Parks’ studies in Australia, Asia, Europe and Africa. Only a few studies have been included from North America.

The Global Study developed a ‘common reporting format’, defining headline indicators which represent the major themes and elements of the thousands of indicators used in the various assessment systems. Data was then ‘translated’ into the common reporting format, combined into one database and analyzed. The average score of 2,488 ‘most recent’ assessments with available data was calculated at 0.53 on a zero to one scale. It was considered that overall scores of less than 0.33 indicate *clearly inadequate* management, while average scores above 0.66 represent *sound* management. Only 14% were in the clearly inadequate range while 22% were in the *sound* management range. Most protected areas were therefore clustered in the middle third (*basic* management), with 27% of the total in this range but below 0.5.



Mean scores for 2,488 ‘most recent’ assessments

The thousands of different indicators used to evaluate management effectiveness have been combined into 14 summary indicators. These indicators on the basis of the WCPA framework include: **Context** – 1 values and significance; 2 threats and constraints; **Planning** - 3 site design and establishment; 4 management planning; **Inputs** - 5 management resources; 6 information base; **Processes** – 7 internal management systems and processes; 8 law enforcement; 9 stakeholder relations; 10 visitor management; 11 natural and cultural resource management systems ; **Outputs** – 12 achievement of work program; **Outcomes**- 13 conservation outcomes; 14 community outcomes. Highest scoring headline indicators overall were park gazettal, marking of boundaries, resolution of tenure issues, effectiveness of governance and leadership and the skill level of staff and other management partners. Weakest areas related to programs of community benefit, funding reliability and adequacy, management effectiveness evaluation, maintenance, communication, and community involvement. Many protected areas lack basic requirements to operate effectively, and do not have an effective management presence. Outcome

indicators, relating to achievement of objectives, values conservation and effect on the community, also scored relatively well, indicating that even where 'inputs' and many 'processes' are weak, protected areas were still performing a valuable function for conservation and in the community.

The most commonly nominated threats in most regions were hunting, killing and collecting animals; logging and wood harvesting; gathering non-timber forest products; recreational activities; and the management of adjacent lands.



*What is equitably managed?* Equity is the concept or idea of fairness and sharing of the benefits and costs of protected areas – who benefits and who bears the costs? The costs of establishing and maintaining protected areas include both direct and indirect costs, such as the purchase of land, displacement and relocation of communities, human wildlife conflicts, loss of access to natural resources, opportunity costs and the loss of potential tax revenue. Protected area benefits include the material and non-material benefits, goods, values and services at local, national and global levels. Equitable distribution is the dispersal of these benefits to a variety of stakeholders based on principles of fairness, justice, social equity and ethical considerations. If the costs and benefits are not equitably distributed, then protected areas are not equitably managed. The relationship between people and protected areas is one of the most challenging and encapsulates

the problems inherent in trade offs between common good and the rights and needs of the individual. Programme Element 2 of the PoWPA set some standards to avoid such conflicts and provides for equitable distribution of costs and benefits by emphasizing diverse protected area governance types, participatory decision making and management process that incorporate and respond to the interests of a broad range of stakeholders particularly indigenous and local communities.

*What is protected area governance?* Governance is about power, relationships, responsibility and accountability. Some define it as the interactions among structures, processes and traditions that determine how power is exercised, how decisions are taken on issues of public concern, and how citizens or other stakeholders have their say. In a protected area context, a basic understanding of governance refers to who holds management authority and responsibility and can be held accountable according to legal, customary or otherwise legitimate rights. In this sense, governance is crucial for the achievement of protected area objectives (management effectiveness), determines the sharing of relevant cost and benefits (management equity), is key to preventing or solving social conflicts, and affects the generation and sustenance of community, political and financial support. The IUCN typology of protected area management types and governance approaches distinguishes six categories of management objectives and four governance types as shown below:

**Matrix of IUCN protected area management types and governance approaches**

IUCN category (primary management objective)	IUCN Governance type										
	A. Governance by governments		B. Shared governance		C. Private governance		D. Governance by indigenous peoples and local communities				
	Federal or national ministry or agency in charge	Local ministry or agency in charge	Management delegated by the government (e.g. To an agency)	Transboundary protected area	Collaborative management (various pluralist influences)	Collaborative management (pluralist management board)	Declared and run by private individual	Declared and run by non-profit organisations	Declared and run by for-profit individuals	Declared and run by indigenous peoples	Declared and run by local communities
I – Strict nature or wilderness protection											
II – Ecosystem protection and recreation		<b>A</b>									
III – Protection of natural monument or feature											
IV – Protection of habitats and species					<b>B</b>			<b>C</b>			
V – Protection of landscapes or seascapes											<b>D</b>
VI – Protection and sustainable resource use											

Examples are:

Case A: Girraween National Park, Queensland Australia. Owned and managed by the state government of Queensland to protect species unique to the area;

Case B: Dana Nature Reserve and biosphere reserve, Jordan. Managed by the state in cooperation with local communities to reduce grazing and restore desert ecosystems;

Case C: Alto Fragua Indiwasi National Park, Colombia. Proposed by the Ingano people on their traditional forest lands and managed according to shamanic rules;

Case D: Sečovlje Salina Natural Park, Slovenia. Important area of salt works and wetland, funded as a private reserve by Slovenia's largest mobile phone company.

### **3.6 “Well-connected systems of protected areas” and “Integrated into the wider landscape and seascape”**

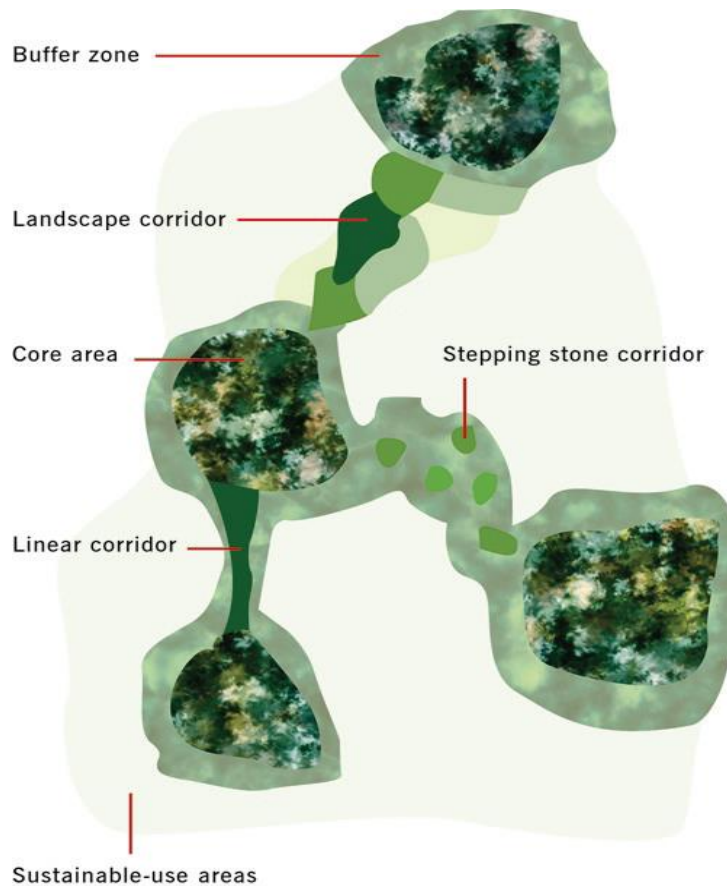
*Why protected areas need to be connected:* The unprecedented increase in the human use of natural resources has adversely affected ecosystems, leading to their fragmentation and loss of biological diversity. Protected areas that remain as isolated units, surrounded by a radically altered habitat, almost always face serious viability problems over the long term. In addition to fragmentation of physical landscape, policies and programmes of economic sectors particularly those directly related to natural resource use and management such as agriculture, forestry, fisheries, wildlife utilization, mining and tourism will also impinge protected areas and biodiversity conservation, resulting in loss of ecosystem services. Creating or restoring functional linkages between protected areas and their surrounding regions is essential if we are to strengthen ecological coherence and resilience for both biodiversity conservation and sustainable development. The concept of an **ecological network** becomes important here.

*What is an ecological network?* An ecological network is a coherent system of natural and/or semi-natural landscape elements that are configured and managed with the objective of maintaining or restoring ecological functions as a means to conserve biodiversity, while also providing appropriate opportunities for the sustainable use of natural resources (Fig. 7). The concept of ecological networks has been strongly developed in Europe and the approach is being readily adapted to less developed regions. A number of different frameworks have evolved including: ecological networks, wildlands networks, ecoregion-based conservation, and bioregional planning and biodiversity conservation corridors. All are designed to contribute to a similar set of goals for the conservation and long-term survival of threatened species, habitats, ecosystems, ecological processes, as well as ecosystem services, environmental stability and sustainable development. The different frameworks share a common structure of core areas, connecting linkages, and buffer zones or areas of compatible land/resource use. Common elements of these approaches include:

- A focus on conserving biodiversity at the ecosystem, landscape or regional scale;
- An emphasis on maintaining or strengthening ecological coherence, primarily through providing for ecological interconnectivity;
- Ensuring that critical areas are buffered from the efforts of potentially damaging external activities;
- Restoring degraded ecosystems where appropriate; and
- Promoting complementarity between land uses and biodiversity conservation objectives, particularly by exploiting the potential biodiversity value of associated semi-natural landscapes.



Figure 7. **Diagram of the possible spatial configuration of an ecological network**



A large number of ecological networks have been developed around the world. A list of ecological networks in each of the five UN regions is given in annex 1.

*What is protected area integration?* Protected area integration is the process of ensuring that the design and management of protected areas, corridors and the surrounding matrix fosters a connected, functional ecological network; and the process of ensuring that the policies and practices of natural resource sectors foster a connected, functional ecological network.

*What are broader landscapes and seascapes and what are related sectors?* Wider landscapes and seascapes include the array of land and water uses, management practices, policies and contexts that have an impact within and beyond protected areas, and that limit or enhance protected area connectivity and the maintenance of biodiversity. Related sectors include any field that contributes to the economy of a community or country, and that has an actual or potential bearing on the creation, integrity, and/or management of protected areas. Examples include forestry, fisheries, agriculture, energy, transportation and development.

*What are the benefits of integrating protected areas into wider landscapes and seascapes?* If protected areas are solely the concern of the environment sector, then their benefits are not as great as when other sectors such as mining, tourism and energy, participate in protected area planning and management within a balance that benefits all. By integrating protected areas into wider landscape and seascape, and by incorporating protected areas into sectoral plans and strategies, governments can be certain that their investments in protected areas will pay biodiversity and social dividends well into the future. For example, a recent report that

summarized over 1,000 studies worldwide estimated that investments in creating and managing protected area networks would yield a return in societal benefits on the order of between 25:1 and 100:1. The need to integrate protected areas into the wider landscape, seascape and sectors is all the more imperative, in order to address the adverse impacts of climate change. Fragmentation impairs the ability of a species to adapt to rapidly shifting habitat patterns and ecological processes that result from climate change, further weakening their resilience, and increasing the likelihood of local and widespread extinctions. Because the severity and distribution of the impacts of climate change are so uncertain, the maintenance of landscape connectivity across biophysical gradients is essential to safeguarding biodiversity.

### 3.7 *Other effective area-based conservation measures*<sup>7</sup>,

*What are other area-based conservation measures?* Indigenous peoples and local communities have played a critical role in conserving a variety of natural environments and species for ages, for a variety of purposes, economic as well as cultural, spiritual and aesthetic. There are today many thousands of Indigenous and Community Conserved Areas (ICCAs) across the world, including forests, wetlands, and landscapes, village lakes, water catchment, rivers and coastal stretches and marine areas.

Fortunately, there is also a growing recognition of ICCAs and acknowledgement of their role in the conservation of biodiversity. The PoWPA accepted them as legitimate conservation sites that deserve support and, as appropriate, inclusion in national and international systems. Some governments have followed suit. Others had already included them within their official Protected Area Systems.

*What are Indigenous and Community Conserved Areas?* ICCAs are natural and/or modified ecosystems containing significant biodiversity values, ecological services and cultural values, voluntarily conserved by indigenous peoples and local communities, both sedentary and mobile, through customary laws or other effective means. ICCAs can include ecosystems with minimum to substantial human influence as well as cases of continuation, revival or modification of traditional practices or new initiatives taken up by communities in the face of new threats or opportunities. Several of them are inviolate zones ranging from very small to large stretches of land and waterscapes.

*What is the coverage of ICCAs?* Globally, 400-800 million hectares forest are owned/administered by communities. In 18 developing countries with the largest forest cover, over 22% of forests are owned by or reserved for communities. In some of these countries (e.g. Mexico and Papua New Guinea) the community forests cover 80% of the total<sup>8</sup> forested area. More land and resources are under community control in other ecosystems. According to the Indigenous and Community Conserved Areas consortium about 12% of terrestrial areas of the world are under ICCAs. This is a **guess estimate** but there are some factual figures in some regions (Australia, Asia, Africa and LAC) given in annex 2 providing evidence to gauge the total area under ICCAS in different ecosystems in different regions of the world.

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<sup>7</sup> Information presented in this section is more or less taken from the ICCA forum website [http://www.iccaforum.org/index.php?option=com\\_content&view=frontpage&Itemid=97](http://www.iccaforum.org/index.php?option=com_content&view=frontpage&Itemid=97)

<sup>8</sup> Molnar, A., Scherr, S. and Khare, A. 2004. *Who conserves the world's forests: community driven strategies to protect forests and respect rights*. Forest Trends and Ecoagriculture Partners, Washington D.C.; White, A., Khare, A. and Molnar, A. 2004. *Who Owns, Who Conserves, and Why it Matters*. Forest Trends, Washington

### *What is the significance of ICCAs?*

- They help conserve critical ecosystems and threatened species, maintain essential ecosystem functions (e.g., water security), and provide corridors and linkages for animal and gene movement, including between two or more officially protected areas;
- They are the basis of cultural and economic livelihoods for millions of people, securing resources (energy, food, water, fodder) and income;
- They help synergize the links between agricultural biodiversity and wildlife, providing larger land/waterscape level integration;
- They offer crucial lessons for participatory governance of official PAs, useful to resolve conflicts between PAs and local people;
- They are based on rules and institutions “tailored to the context”, (bio-cultural diversity), skilled at adaptive management and capable of flexible, culture-related responses;
- They are built on sophisticated collective ecological knowledge and capacities, including sustainable use of wild resources and maintenance of agro-biodiversity, which have stood the test of time; and
- They are typically designed to maintain crucial livelihood resources for times of stress and need, such as during war, severe weather events and other natural disasters.

#### **4. How to set a national target?**

If we carefully read Target 11, while stipulating the **17% terrestrial and inland waters and 10% marine area**-based global objective, this target also encompasses some qualitative parameters. Firstly, it specifies that the quantitative areas should cover especially **areas of particular importance for biodiversity and ecosystem services**. Secondly, such areas are **conserved through:**

- **effectively and equitably managed;**
- **ecologically representative;**
- **well connected systems of protected areas;**
- **other effective area-based conservation measures,**
- **integrated into wider land and seascapes**

Whether the above five parameters qualify conservation or means of achieving the quantitative area-based targets through adding the area under their respective domain is a matter of interpretation. If we consider that 17% terrestrial and 10% marine global protected area estate includes only officially designated protected areas and all these five parameters should qualify as conservation then what is the status of other effective area-based conservation measures which cover substantial areas of regions such as Latin America, Pacific etc. If one considers 17% and 10% area-based targets also apply to all these five components then the per cent area is much lower than the already agreed amount for some of the parameters. For example in the PoWPA Parties agreed to implement management effectiveness evaluations of 30% of each Party's protected area by 2010. In decision X/31 on protected areas the COP agreed that management effectiveness assessments be institutionalized towards assessing 60% of the total areas by 2015 and ensure that the results of the assessments are implemented. Similarly in the PoWPA the Parties have agreed to integrate all protected areas into wider land and seascapes by 2015 taking into account ecological connectivity. This was again reiterated in para 14 of COP decision X/31. Furthermore the ecologically representative parameter is a qualitative one and no area-based target could be decided. In the PoWPA Parties agreed to complete ecological gap analysis by 2006 for establishing ecologically representative networks of protected areas. In decision IX/18,

para3 the COP urged Parties to finalize ecological gap analysis by 2009. Regarding other effective area-based conservation measures, the PoWPA accorded recognition to indigenous and local community conserved areas and a broad set of protected area governance types. In decision IX/18 para 6 (a) and (b) the COP invited Parties to diversify protected area governance types and recognize co-managed protected areas, private protected areas and indigenous and local community conserved areas within the national protected area system through acknowledgement in national legislation or other effective means.

In order to help countries to establish national targets, based on the information available in the MDG indicator data set provided by the WDPA, country-wise terrestrial protected areas (including inland waters) as a percentage of terrestrial area and marine protected areas as a percentage of territorial waters is compiled and given in annex 3. Information on ICCAs from published sources is given in annex 2. The following observations can be inferred from annex 3:

- 14 Countries have achieved 17% terrestrial and 10% marine PAs - Belize; Brazil; Costa Rica; Dominican Republic; Ecuador; Estonia; Germany; Guatemala; Guinea Bissau; Kiribati; Nicaragua; Senegal; United Republic of Tanzania and Venezuela;
- 13 Land-locked countries have achieved the 17% terrestrial protected area target - Benin; Bhutan, Bolivia; Ethiopia; Liechtenstein; Luxembourg; Nepal, Slovakia; Switzerland; Zambia and Zimbabwe;
- 28 Countries non land-locked countries have achieved the 17% terrestrial protected area target - Brunei Darussalam; Cambodia; Chile, China, Colombia; Dominica , Equatorial Guinea; Honduras, Israel, Jamaica, Japan; Lao PDR; Latvia; Liberia; Malaysia; Malta; Monaco; New Zealand; Niue, Panama; Poland; Saudi Arabia; Schycheles; Spain, Sri Lanka; Thailand; Trinidad and Tobago and UK.
- 6 Countries have achieved the 10% marine PA target - Australia, Italy; Jordan; Kenya; Mauritania and Mexico.

**Therefore without including areas under ICCAs, ecological networks etc 27 countries have already achieved the area-based terrestrial and marine target. 28 countries have achieved the terrestrial target and six countries the marine target.** The above information is put forward for Parties to take cognizance and arrive upon a realistic national area-based target. **Where feasible** the 17% and 10% national target is not an insurmountable task and it could be achieved before 2020, **with focused efforts.**

But as the target also encompasses other qualifying parameters quantitative area-based targets have to be supplemented with qualitative targets in terms of **completing the ecological gap analysis, management effectiveness, diversification of governance, both spatial and sectoral integration of protected areas within wider land and seascapes showcasing how mainstreaming of biodiversity could be achieved and how climate change could actually be tackled by 2020.**

Hence the following sub-targets which have already been agreed in decisions XI/18 and X/31 are suggested for achieving Target 11:

- (1) Institutionalize management effectiveness assessment towards assessing 60% of the total areas by 2015 and ensure that the results of the assessments are implemented;
- (2) Completion of ecological gap analysis for identifying "ecologically representative areas" (including unprotected IBAs, KBAs etc) and implement the results;

(3) Integration of protected areas into wider land and seascapes to showcase mainstreaming of biodiversity with other sectors and ecosystem based approaches for climate change adaptation and leading to mitigation through carbon sequestration;

(4) Recognition of ICCAs including through acknowledgement in national legislation or other effective means, formal inclusion in the national systems, and practicing of various governance types;

(5) Development and implementation of sustainable finance plans for protected area systems.

### 5. How to achieve the global and national targets and sub targets?

While there has been remarkable progress in the implementation of the PoWPA in some nations, many countries are lagging behind, and some activities show very little progress at all. Figure 8 shows progress in each of the major elements of the Programme of Work. For example, there are large gaps in assessing protected area values, integrating protected areas into the wider landscape, seascape and sectoral plans, and assessing the costs and benefits of protected areas. In addition, many of those elements that show modest progress are unevenly distributed across sub-regions. For example, in Latin America, most countries have made significant and substantial progress in assessing ecological gaps, whereas in Northern Africa, few countries have. The figure below shows progress in each of the major elements of the Programme of Work.

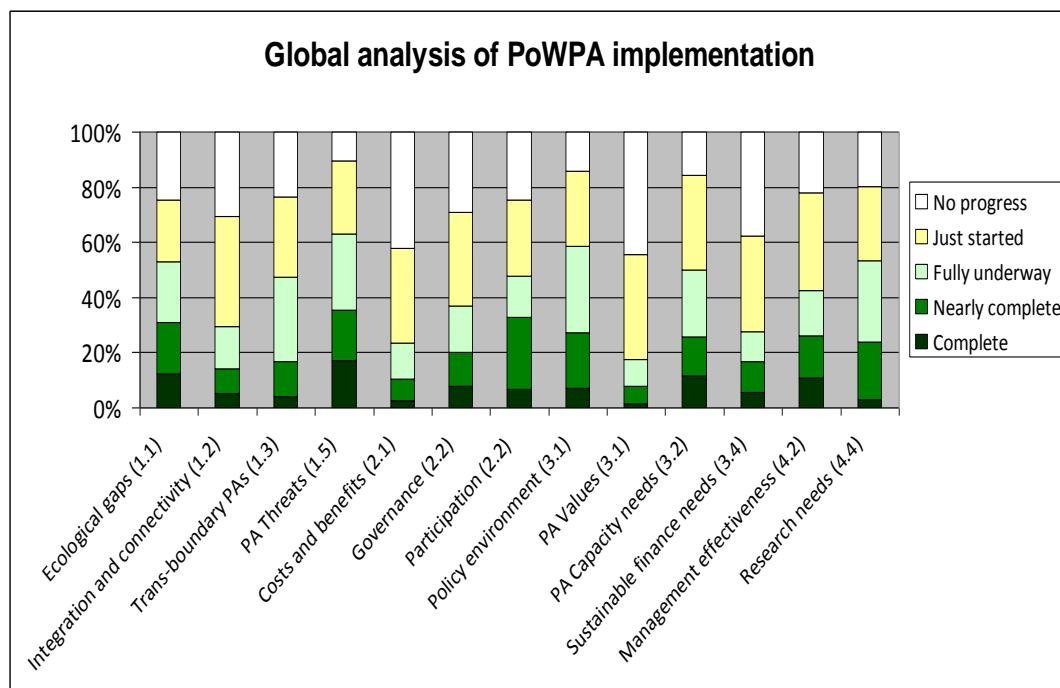


Figure 8. Global analysis of PoWPA implementation from over 100 countries participating in the 2009 series of review and capacity building CBD workshops.

While considering the ways and means to strengthen implementation of the PoWPA, the COP was confronted with the reality of several disconnects: (i) disconnect between

implementation and a plan of action; (ii) disconnect between a plan of action, available funding and implementation; (iii) disconnect between technical support, projects funded, and implementation; (iv) disconnect between people who actually implement funded projects and people who participate in capacity building workshops and initiatives. In a nutshell the causative factors affecting national level implementation are **lack of a focused plan of action at national level linked to available funding and gearing the technical support towards implementation of funded projects and capacity building of those people who actually undertake their implementation.**

To address this disconnect the COP in para 1 of decision X/31 invited Parties to develop a long-term plan of action for the implementation of the PoWPA as a part of their revised NBSAPs. In para 10b, it further invited Parties to timely and appropriately use their GEF 5 protected area allocations and other financial support using their action plan for PoWPA implementation as the basis for accessing funds. In para 13 of the same decision, the COP urged the GEF and its implementing agencies to streamline their delivery for expeditious and proportionate disbursement and to align the projects to the PoWPA national action plans for appropriate, focused, sufficient and harmonious interventions and continuity of projects. In para 7a the COP requested the Executive Secretary to continue to hold sub-regional capacity building workshops and make available technical support through toolkits, best practices etc.

## **5.1 Preparation of an Action Plan for implementing PoWPA**

The foremost requirement for effectively implementing the PoWPA is development and implementation of an action plan. An action plan for PoWPA implementation typically includes three core components – a plan for improving the protected area network, a plan for improving protected area management, and a plan for strengthening the enabling environment. The plan should also include some background, a vision statement, and a summary of strategies and actions. Finally, the plan is likely to include an appendix of a range of assessment results that informed the plan. Detailed step by step guidance on how to develop an action plan is described in the e-learning module on implementation including guidance on forming a multi-stakeholder advisory committee, and developing a strategic master plan <https://www.conservationtraining.org/course/view.php?id=66&page=129>.

The elements of the action plan are described in the schematic diagram and explained below and the appropriate PoWPA e-learning module is indicated where appropriate:

### *Background Information*

- Introduction to the action plan, including the broader context within which it was developed.
- Linkages to other national and regional plans, including land use and development plans.
- Process for developing and approving the action plan.
- Mechanisms for reporting status and trends over time.

### *Vision and Goals*

- The overall vision of the protected area network, including the desired future condition.
- Short and long-term goals and objectives of the protected area network.
- A description of the full range of benefits of a comprehensive protected area system.

#### *Plan for Improving the Protected Area Network*

- A plan for improving the representativeness of the protected area network (PoWPA e-learning module 1).
- A plan for improving connectivity and ecological processes across the protected area network (PoWPA e-learning module 2).
- A plan for restoring degraded protected areas and establishing ecological corridors (PoWPA e-learning module 2).
- A plan for periodically monitoring and recording progress toward protected area network goals (PoWPA e-learning module 15).

#### *Plan for Improving Protected Area Management*

- A plan for abating the most severe threats to biodiversity within the protected area network (PoWPA e-learning module 4).
- A plan for improving protected area management effectiveness (PoWPA e-learning module 14).
- A plan for strengthening protected area capacity (PoWPA e-learning module 9).
- A plan for improving the equitable distribution of protected area benefits to key stakeholders (PoWPA e-learning modules 6 and 7).
- A plan for monitoring and reporting on progress toward management effectiveness goals (PoWPA e-learning modules 13, 14, and 15).

#### *Plan for Improving the Protected Area Enabling Environment*

- A plan for improving protected area policies (PoWPA e-learning module 8).
- A plan for improving sectoral laws and policies (PoWPA e-learning modules 2 and 8).
- A plan for improving protected area governance (PoWPA e-learning modules 6 and 7).
- A plan for financing existing and future costs of a comprehensive protected area system (PoWPA e-learning module 11).
- A plan for monitoring and reporting progress on the protected area enabling environment (PoWPA e-learning module 8).

#### *Plan for Implementing Strategies and Actions*

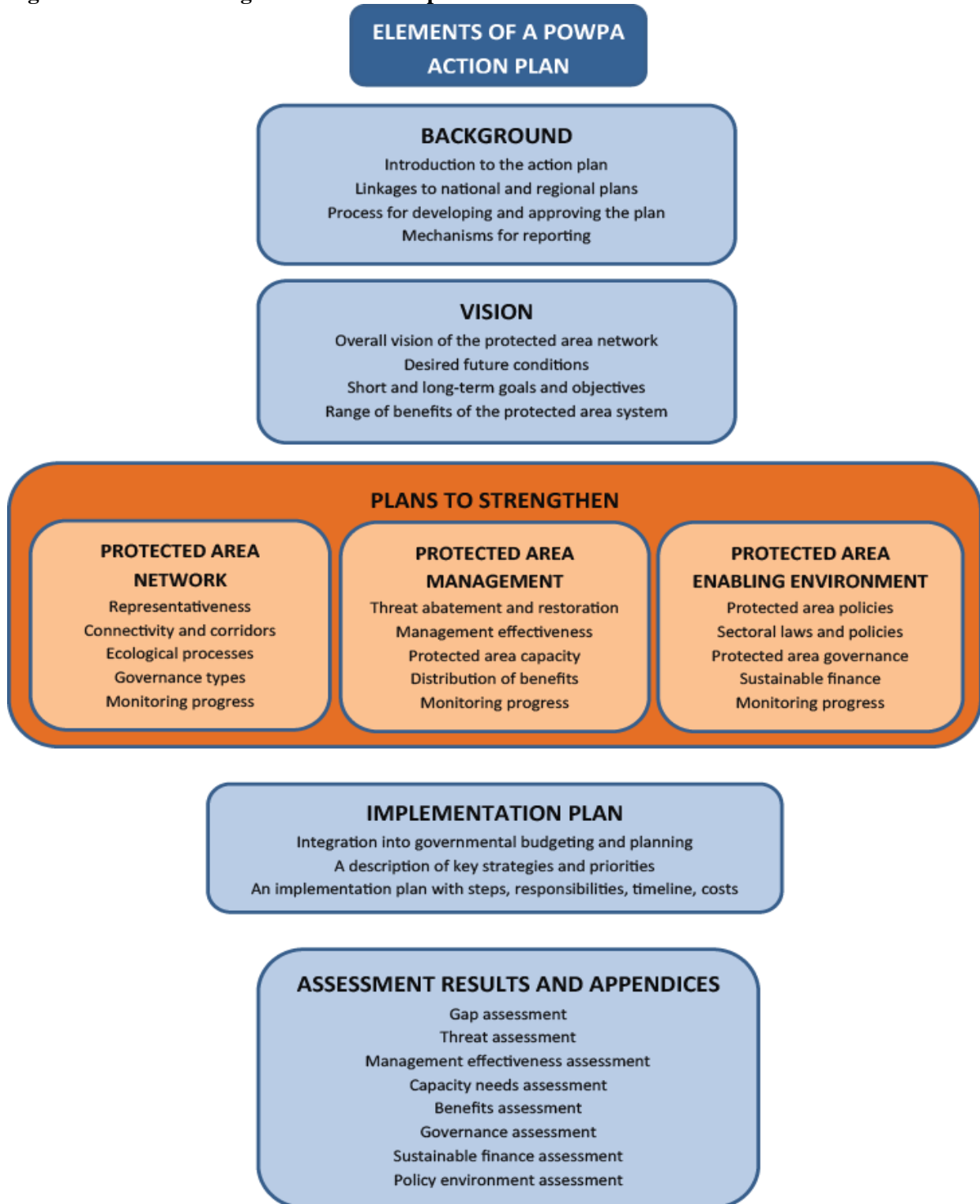
- A plan that integrates the plan into broader governmental budgeting and planning processes.
- A prioritized description of the key strategies, focusing on the most critical actions first.
- An action plan with key steps, timelines, responsibilities and indicators of success (PoWPA e-learning module on implementation).

#### *Assessment Results and Appendices*

- Ecological gap assessment results
- Threat assessment results
- Management effectiveness assessment results
- Capacity assessment results
- Equity and benefits assessment results
- Governance assessment results
- Policy environment assessment results

- Sustainable financing assessment results
- Other national and regional plans that link to the master plan

**Figure 9. Schematic diagram of the action plan for PoWPA.**

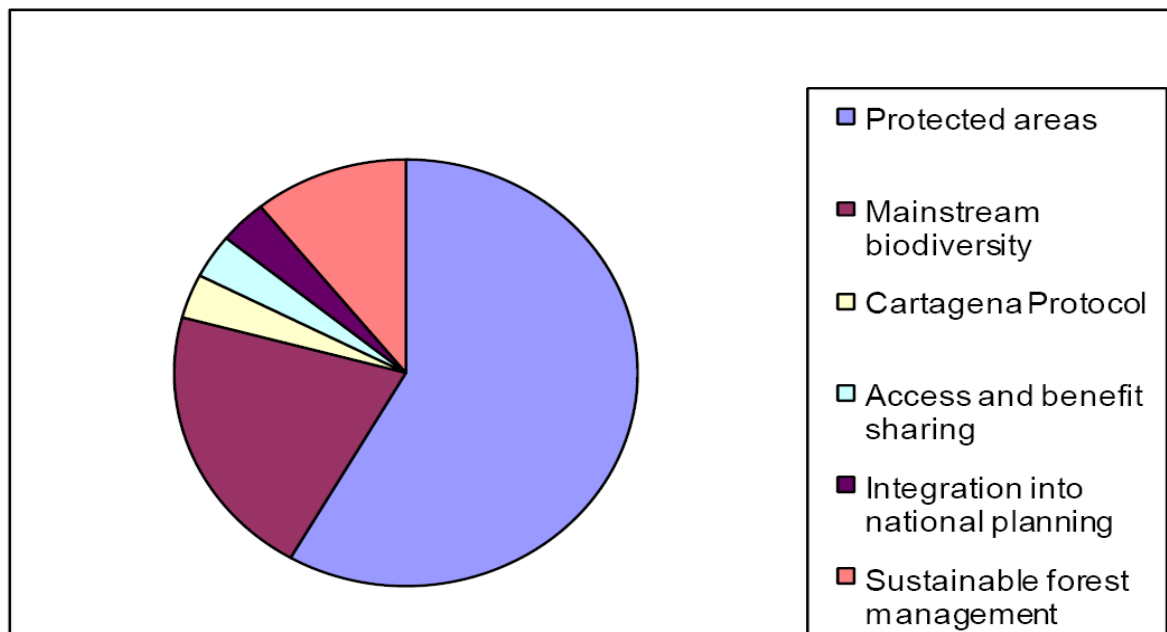




## 5.2 GEF 5 allocations

The Global Environment Facility (GEF), the operating entity of the financial mechanism of the Convention on Biological Diversity, is widely recognized as the world's most important facility for catalyzing countries to implement their obligations under the CBD PoWPA. One of the key strategic objectives of the GEF biodiversity portfolio includes improving the sustainability of protected area systems by a) improving financial sustainability; b) improving protected area coverage, representativeness and connectivity; and c) improving protected area capacity and management effectiveness. In the GEF 5 funding cycle (2010-2014) \$700 million USD is programmed specifically for protected areas with the aim to enhance the sustainability of protected area systems such that they continue to deliver the global benefits of conserving biodiversity, providing a range of ecosystem goods and services, and enabling climate change mitigation and adaptation. Therefore about 54% of the GEF 5 Biodiversity portfolio is programmed for continuing the GEF's prioritization in helping countries implement their obligations under the CBD Programme of Work on Protected Areas.

**Figure 10. Pie chart of the GEF 5 Biodiversity Allocation 1.2 Billion USD**



Taking this into account and in pursuance of para 10 (b) of decision X/31, countries may consider timely and appropriate access of available GEF 5 funds for undertaking activities related to sub-targets of Target 11 using the action plan for implementing the PoWPA.

## **6. Capacity Building Initiatives**

### **6.1 New PoWPA Website [www.cbd.int/protected](http://www.cbd.int/protected)**

In pursuance of paragraph 16 of decision IX/18, the CBD Secretariat with the help of PoWPA FRIENDS (an informal consortium of international NGOs, IUCN-WCPA and others) launched a user friendly, comprehensive central website facilitating national implementation of the PoWPA. The website provides information on protected area values and benefits, global and

national implementation of the PoWPA, over 1,000 tools and resources sorted by PoWPA goal and other criteria, a consultant database and discussion forums on various PoWPA themes. The website also features online reporting of PoWPA implementation by national PoWPA focal points using the reporting framework adopted by the COP in decision X/31.

## 6.2 PoWPA e-learning modules <https://www.cbd.int/protected/e-learning/>

There is no shortage of guides, case studies, methodologies and other materials to help implement the PoWPA. In fact, there is so much material that it can be overwhelming to read everything. The CBD Secretariat has developed concise learning modules for each goal of the PoWPA in English, French, Spanish, Russian and Arabic languages. These self-paced tutorial modules are freely and publicly available on the web, and aimed to cater to protected area policy makers and officials, including CBD PoWPA Focal Points. These modules will also be supplemented with a series of interactive exercises aimed at protected area practitioners who are responsible for implementing specific PoWPA actions within their countries. These supplementary modules can serve as the basis for in-person regional and sub-regional trainings and “training of trainers” courses.

**Module 1: Protected area network design:** This module covers aspects related to the design of a national protected area network (PoWPA Goal 1.1), including instructions on how to conduct an ecological gap assessment.

<https://www.conservationtraining.org/course/view.php?id=53&page=103>

**Module 2: Protected area integration:** This module covers aspects related to integrating protected areas into the wider landscape, seascape and strategies (PoWPA Goal 1.2), including the development of conservation corridors, and mainstreaming protected areas into other sectors.

<https://www.conservationtraining.org/course/view.php?id=47&page=96>

**Module 3: Transboundary protected areas and regional networks:** This module covers aspects related to transboundary protected areas and regional networks (PoWPA Goal 1.3), including the establishment, planning, management and assessment of transboundary areas.

<https://www.conservationtraining.org/course/view.php?id=54&page=105>

**Module 4: Management planning:** This module covers aspects related to management planning (PoWPA Goal 1.4), including instructions on how to integrate climate change adaptation into management plans.

<https://www.conservationtraining.org/course/view.php?id=55&page=107>

**Module 5: Protected area threats:** This module covers aspects related to protected area threats (PoWPA Goal 1.5), including the prevention and mitigation of invasive species and conducting threat assessments.

<https://www.conservationtraining.org/course/view.php?id=56&page=109>

**Module 6: Protected area governance, equity and benefit sharing:** This module covers aspects related to governance, equity and benefit sharing (PoWPA Goal 2.1), including best practices for promoting innovative forms of governance. **Coming soon**

**Module 7: Protected area participation:** This module covers aspects related to protected area participation (PoWPA Goal 2.2), including participation of indigenous and local communities.

<https://www.conservationtraining.org/course/view.php?id=58&page=113>

**Module 8: Protected area policy environment:** This module covers aspects related to the protected area policy environment (PoWPA Goal 3.1), including protected area policies, incentives, and legal frameworks. **Coming soon**

**Module 9: Protected area capacity:** This module covers aspects related to protected area capacity (PoWPA Goal 3.2), including how to assess capacity needs and develop a capacity-strengthening program. **Coming soon**

**Module 10: Appropriate technology:** This module covers aspects related to appropriate technology (PoWPA Goal 3.3), including the use of GIS and remote sensing.  
<https://www.conservationtraining.org/course/view.php?id=61&page=119>

**Module 11: Sustainable finance:** This module covers aspects related to sustainable finance (PoWPA Goal 3.4), including business planning, assessing finance needs, and developing a sustainable finance plan.  
<https://www.conservationtraining.org/course/view.php?id=62&page=121>

**Module 12: Education and awareness:** This module covers aspects related to education and awareness (PoWPA Goal 3.5), including how to design an effective awareness campaign.  
<https://www.conservationtraining.org/course/view.php?id=63&page=123>

**Module 13: Minimum standard:** This module covers aspects related to minimum standards for protected areas (PoWPA Goal 4.1). **Coming soon**

**Module 14: Management effectiveness assessments:** This module covers aspects related to management effectiveness (PoWPA Goal 4.2), including how to conduct site and system-level assessment of management effectiveness. **Coming soon**

**Module 15: Monitoring:** This module covers aspects related to monitoring (PoWPA Goal 4.3), including how to monitor biodiversity status and strategy effectiveness. **Coming soon**

**Module 16: Research:** This module covers aspects related to research (PoWPA Goal 4.4), including how to design an effective research program. **Coming soon**

**Module 17: Climate change:** This module covers aspects related to how protected areas contribute to ecosystem based adaptation of climate change, how to incorporate climate change considerations in gap analysis, management and integration. **Coming soon**

**Module 18: Marine Protected Areas:** This module covers MPA network design, marine gap assessment, management plans and management effectiveness. **Coming soon**

### **6.3. Sub-regional Capacity Building Workshops**

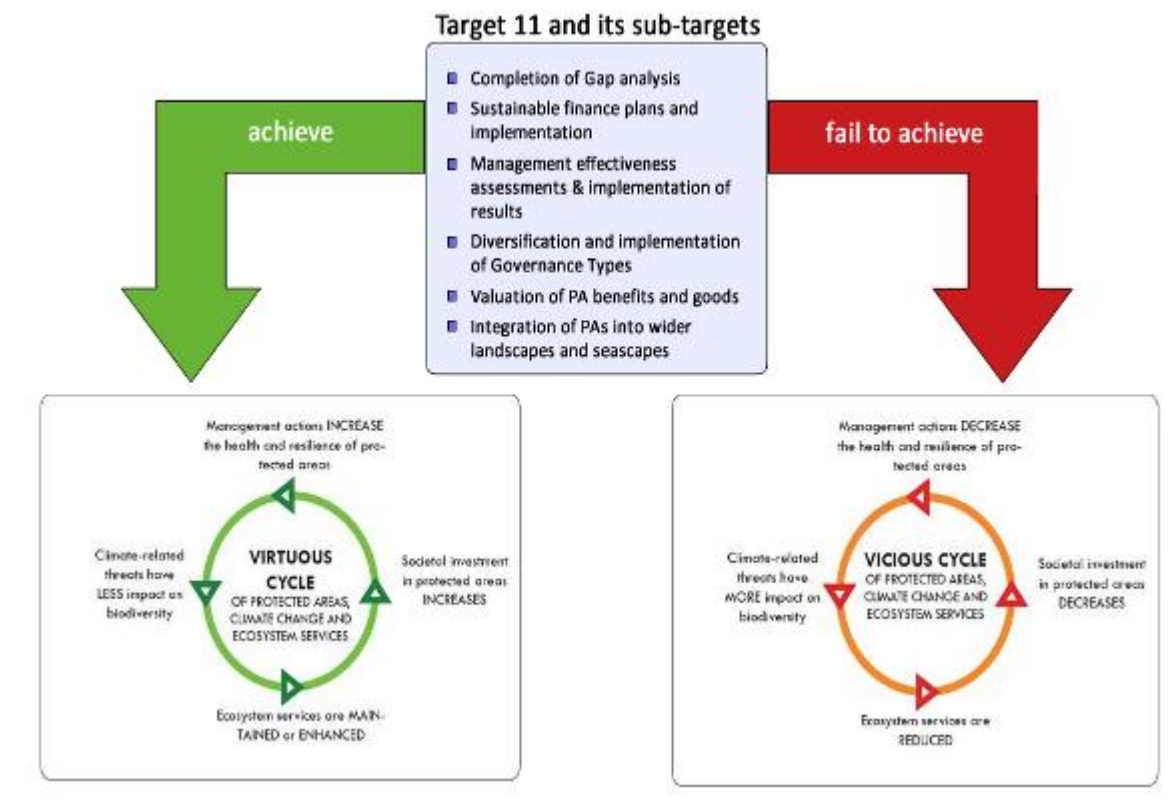
In pursuance of para 7 of decision X/31, with funding made available by the European Union and other donor countries, the Secretariat is planning to organize sub-regional capacity building workshops in Meso-America; Caribbean; South America; Southern & Eastern Africa; Central and West Africa; North Africa; West & Central Asia; Central Eastern Europe; South Asia; South East Asia; and Pacific sub-regions. These workshops focus on themes related to sub-targets mentioned above using the e-learning modules and interactive exercises in small break-out groups for more in-depth exchange and learning. In addition, in collaboration with PoWPA

FRIENDS efforts will be made to enable a technical support network in the sub-regions, where feasible, to provide technical support to countries on a regular basis.

## 7. Monitoring

By taking bold steps and by demonstrating firm commitment countries can ensure that the sub-targets and Target 11 can be achieved. With Parties securing funding from their GEF 5 allocations for activities that achieve the sub targets, and with the enabling of sub-regional technical support networks, and with capacity building efforts geared to help on the ground implementation of the funded GEF projects, the results could lead to achieving the target as well as creating a virtuous cycle of supporting protected areas, addressing climate change and providing ecosystem services. The results could be tangible and discernible on the ground. Failing this, it is likely that we would have to report a vicious cycle in 2020 (Fig. 11):

**Figure 11. Outcomes of achieving or failing to achieve Target 11 and its sub-targets**



Indicators for monitoring actions toward achieving Target 11 *inter alia* include:

- Number of countries with action plans for PoWPA implementation that are integrated into revised NBSAPs for achieving Target 11 of the Strategic Plan for Biodiversity.
- Increase in terrestrial protected areas from 12.9% in 2009 to the area in 2015/2020 at national, regional and global levels.
- Increase in marine protected areas from 5.4% in 2009 to the area in 2015/ 2020 at national, regional and global levels.

- Increase in the number of ecological networks and their effective management for integrating protected areas into wider landscapes and seascapes and for incorporating climate change adaptation and mitigation.
- Increase in the area in the protected area management effectiveness assessment over the data of 2009 and number of countries which implemented results of protected area management effectiveness (PAME) evaluations.
- Number of countries that developed and implemented sustainable finance plans.
- Number of countries with innovative governance practices recognized, promoted and implemented.
- Number of ICCAs at national, regional and global levels.
- Number of reporting frameworks uploaded on the PoWPA website

### Annex 1. Ecological networks in the five UN regions <sup>9</sup>

Region	Ecological Networks (National, Regional, NGO and UN lead)
<b>Central and Eastern Europe</b>	<ul style="list-style-type: none"> <li>• The Pan-European Ecological Network</li> <li>• Czech Republic: Territorial System of Ecological Stability</li> <li>• Belarus: National Ecological Network</li> <li>• Estonia: Green Network</li> <li>• Hungary: National Ecological Network</li> <li>• Latvia: Ecological Network</li> <li>• Lithuania: Ecological Network</li> <li>• Moldova: National Ecological Network</li> <li>• Romania: National Network</li> <li>• Russian Federation: Ruseconet</li> <li>• Slovakia: Territorial System of Ecological Stability</li> <li>• Ukraine: National Ecological Network Heart of Russia — Central Russian Plain (Ministry of Natural Resources of the Russian Federation, Biodiversity Conservation Center, WWF Russia)</li> <li>• Natural Ecological Frame of Moscow Oblast (Biodiversity Conservation Center)</li> <li>• Natural Complex of Moscow City (Department of Nature Use and Environmental Protection of Moscow City Government, Institute of the General Plan of the Moscow City)</li> <li>• System of Reserved Natural Lands of Ryazan Oblast (Biodiversity Conservation Center, Esenin Ryazan State Pedagogical University)</li> <li>• Natural Ecological Frame of Ryazan City (Biodiversity Conservation Center, Esenin Ryazan State Pedagogical University)</li> <li>• System of Protected Natural Areas of Bryansk, Kaluga and Orel Oblasts (WWF Russia, Orel State University, Kovyl Centre)</li> <li>• Ecological Network of Orel Oblast (Orel Oblast Branch of the Federal Supervisory Natural Resources Management Service, Orel State University, Kovyl Centre, WWF Russia)</li> <li>• Ecological Network of the Volga-Viatka Region (Biodiversity Conservation Center)</li> <li>• Ecological Network of the Nizhniy Novgorod Oblast (Federal Supervisory Natural Resources Management Service, Inspection in Povolzhie Federal District, Nizhniy Novgorod Branch of the Russian Bird Conservation Union)</li> <li>• Ecological Network of Chuvash Republic (Ministry of Nature Use of Chuvash Republic, Prisursky State Nature Reserve, the Institute of Urbanistic)</li> </ul>

<sup>9</sup> Compiled directly without updates from Graham Bennett and Kalemani Jo Mulongoy (2006). Review of Experience with Ecological Networks, Corridors and Buffer Zones. Secretariat of the Convention on Biological Diversity, Montreal, Technical Series No. 23, 100 pages.

	<ul style="list-style-type: none"> <li>• Volga-Ural Econet (the Volga-Ural ECONET Assistance Centre)</li> <li>• Ecological Network of the Southern Ural (WWF Russia, the Volga-Ural ECONET Assistance Centre)</li> <li>• System of Protected Natural Areas of the Republic of Bashkortostan (Ministry of Natural Resources of the Republic of Bashkortostan, the Volga-Ural ECONET Assistance Centre, WWF Russia)</li> <li>• Landscape and Ecological Network of Orenbourg Oblast (the Steppe Institute of the Ural Branch of the Russian Academy of Sciences)</li> <li>• Ecological Network of the Lower Volga Region (Biodiversity Conservation Center)</li> <li>• Caucasus Econet (WWF Russia)</li> <li>• Ecological Network of Altai-Sayan Ecoregion (WWF Russia)</li> <li>• Ecological Network of Baikal Lake Basin (Institute of Geography of the Siberian Branch of the Russian Academy of Sciences)</li> <li>• Ecological Network of Goloustnaya River Basin (Administration of Irkutsk Oblast, Baikalo-Lensky State Natural Reserve)</li> <li>• Ecological Network of Khilok River Basin (Institute of Natural Resources of the Siberian Branch of the Russian Academy of Sciences)</li> <li>• Sacred Earth Network — the Republican System of Specially Protected Natural Areas (Ministry of Nature Conservation of the Republic of Sakha-Yakutia, WWF Russia)</li> <li>• Ecological Network of the Russian Far East (WWF Russia)</li> </ul> <p>WWF ecoregions initiatives:</p> <ul style="list-style-type: none"> <li>• European-Mediterranean montane mixed forests (the Alps, the Carpathians and the Dinaric Alps)</li> <li>• Caucasus-Anatolian Hyrcanian temperate forests</li> <li>• Mediterranean forests, woodlands and scrub (southwest Iberia and the northwest Morocco lowlands, the Baetic-Atlas mountains and the Italian Peninsula)</li> <li>• East-European broadleaf forest and forest-steppe</li> <li>• the Russian Far East (temperate forests and rivers and streams)</li> <li>• Altai Sayan montane forests</li> <li>• two largescale non-ecoregion programmes: <ul style="list-style-type: none"> <li>• woodlands and the Danube River delta</li> <li>• the middle-Asian montane steppe</li> </ul> </li> </ul> <p>UNESCO's Man and Biosphere Programme includes 88 biosphere reserves in Central and Eastern Europe, including four transboundary reserves.</p>
<p><b>Western Europe and other Groups</b></p>	<ul style="list-style-type: none"> <li>• Denmark: through county-level plans, and through an initiative for a national Nature Network by the Danish Society for Nature Conservation</li> <li>• Switzerland: the National Ecological Network</li> <li>• Germany: state-level ecological networks under the Federal Nature Conservation Act 2002, and expert recommendations for the implementation of ecological networks (Burkhardt <i>et al.</i> 2003; 2004)</li> <li>• Italy: the National Ecological Network</li> </ul> <p>Regional:</p> <ul style="list-style-type: none"> <li>• Natura 2000</li> <li>• United Kingdom: the Forest Habitat Network in Scotland and the Cheshire EConetwork</li> <li>• Belgium: the Flemish and Walloon Ecological Networks</li> <li>• Germany: ecological networks in Schleswig-Holstein, Rhineland-Palatinate and Bavaria Italy: the planeco Project in the Central Appenines</li> <li>• France/Spain: the Cantabric-Pyrenees-Alps Great Mountain Corridor, an initiative of the Spanish Territory and Landscape Foundation</li> <li>• Spain: RENPA, the Andalusian ecological network</li> <li>• Pan-European Ecological Network (also in CEE)</li> <li>• the Transnational Ecological Network (TEN - regional governments in the United Kingdom, the Netherlands, Germany and Denmark)</li> <li>• The Green Belt (along the border region of the former Iron Curtain)</li> <li>• Baja California to Bering (B2B) Sea Marine Conservation Initiative</li> </ul>

WWF ecoregion initiatives Europe:

- the Alps
- the Dinaric Alps (Croatia/Bosnia- Herzegovina/Serbia)
- Mediterranean forests, woodlands and scrub (southwest Iberia and the northwestern Morocco Lowlands, the Baetic-Atlas Mountains, the Italian Peninsula and the South Thyrrhenian Sea)
- A large-scale non-ecoregion project in the Fenno-Scandian Alpine tundra and taiga of northern Europe

North America: Wildlands Projects such as:

- Heart of the West Wildlands Network Design, located in the Rocky Mountains and in collaboration with NGOs, including the Wild Utah Project and the Biodiversity Conservation Alliance;
- Southern Rockies Wildlands Network Design, in cooperation with the Southern Rockies Ecosystem Project and the Denver Zoo;
- New Mexico Highlands Wildlands Network Design, at the juncture of the Rocky Mountains, the Great Plains, the Chihuahuan Desert and the Great Basin;
- Sky Islands Wildlands Network Design, covering parts of Arizona and New Mexico (in collaboration with Naturalia, a Mexican NGO, may extend into Sonora and Chihuahua as the Northern Sierra Madre Wildlands Network Design);
- Southern Appalachian Conservation Plan;
- Oregon Coast Range Conservation Plan, completed in the early 1990s and covering a relatively small area

Other Wildlands initiatives:

- Yellowstone to Yukon Conservation Initiative (Y2Y), extending along 3,200 kilometres of the northern Rocky Mountains from Wyoming to the Arctic Circle and initiated in collaboration with the Canadian Parks and Wilderness Society (now an independent entity)
- Northern Sierra Madre Wildlands Network Design, in collaboration with the Mexican NGO Naturalia
- Grand Canyon initiative
- Colorado Plateau initiative
- Northern Appalachians Wildlands Network Design (a coalition of US and Canadian partners covering the New England states, the Adirondack Mountains of New York, Nova Scotia, parts of Newfoundland, Ontario and Quebec)
- Oceans of Grass Wildlands Network, focusing on the plains of Alberta, Saskatchewan, Montana, Wyoming and North and South Dakota

- Florida Conservation 2000, revised by the Florida Nature Conservancy and the state of Florida
- Conception Coast Project (California)
- Southern California Coastal Sage Scrub Natural Community Conservation Plan
- Klamath-Siskiyou Bioregional Conservation Plan (California and Oregon)
- Ecosystem Recovery Project (Minnesota)
- Corridors of Life (Montana) by American Wildlands - connectivity planning and implementation within the Y2Y region
- Southeastern Wildlands Project (Florida)
- Bioserve Network (Southern Appalachians) (is also the South Appalachian Biosphere Reserve, SAMAB)
- Regional Reserve Network (British Columbia) - Round River Conservation Studies for the Great Bear Rainforest and the coastal forest and mountains (with the Transboundary Watershed Alliance, The Nature Conservancy of Alaska and The Nature Conservancy of Canada)

Australia:

- WildCountry (Wilderness Society Australia in partnership with government, NGOs, business and private landowners)
- Australian Alps and the Great Escarpment of Eastern Australia corridor system

	<ul style="list-style-type: none"> <li>• bioregional-planning project in the Fitzgerald River National Park in Western Australia</li> <li>• WWF - ecoregion project in the southwestern forests and scrub region of Australia</li> </ul> <p>WWF ecoregion initiatives North America:</p> <ul style="list-style-type: none"> <li>• the Northern High Plains</li> <li>• the South Florida ecosystem</li> <li>• the Klamath-Siskiyou coniferous forests</li> <li>• southeastern rivers and streams</li> </ul> <p>UNESCO's Man and Biosphere programme has designated 155 sites in Western and other countries as biosphere reserves, including one transboundary reserve</p>
<p><b>Asia and the Pacific</b></p>	<p>South Korea - Countryside Green Network Plan  Japan - The Arakawa River Ecological Network (Ecosystem Conservation Society – Japan)  China - Forest Conservation and Community Development Project focusing on six nature reserves: Caiyanghe, Nuozhadu, Wuliangshan, Tongbiguan, Gaoligongshan and Xiaoheishan</p> <p>WWF Projects</p> <ul style="list-style-type: none"> <li>• Annamites range moist forests</li> <li>• Eastern Himalayas</li> <li>• Lower Mekong dry forests</li> <li>• Borneo lowland and montane forests</li> <li>• New Caledonian dry forests</li> <li>• Western Ghats</li> <li>• Yangtze basin</li> <li>• southwestern Australian forests and scrub</li> <li>• Indus delta</li> </ul> <p>Transfly savannas (Forest of New Guinea)</p> <ul style="list-style-type: none"> <li>• Mekong River</li> <li>• Terai Arc Landscape in Nepal and India the peninsular Malaysia lowland and montane forests</li> <li>• the Kayah Karen/Tenasserim moist forests (Malaysia and Thailand)</li> <li>• the Sumatran Islands lowland and montane forests</li> <li>• Nansei Shoto (Japan)</li> <li>• the Sunderbans mangroves (India)</li> <li>• the Tibetan plateau steppe</li> </ul> <ul style="list-style-type: none"> <li>• Sierra Madre Biodiversity Corridor - Conservation International</li> </ul> <ul style="list-style-type: none"> <li>• Eastern Mindanao Corridor (by the Philippine Eagle Conservation Program Foundation in association with other partners in the southern Philippines)</li> </ul> <p>Northern Sumatra Conservation Corridor (CI with local organizations, communities and governments with support from the Critical Ecosystem Partnership Fund)</p> <ul style="list-style-type: none"> <li>• Sumatra - Fauna and Flora International projects in the forests of northern Aceh and maintain linkages between the well protected Gunung Leuser ecosystem and the northern Aceh forests</li> <li>• Asian Elephant Action Plan - by IUCN Species Survival Commission</li> <li>• WildAid - South West Elephant Corridor in Cambodia's Southern Cardamom mountain range</li> <li>• WWF, UNDP and Bhutan agreed to protect and manage a "Green Corridor" through the Himalayan country</li> </ul> <ul style="list-style-type: none"> <li>• Vietnam - government-supported Central Truong Son Biodiversity Conservation Initiative</li> </ul> <ul style="list-style-type: none"> <li>• The East Asian–Australasian Shorebird Site Network coordinated by Wetlands International–Oceania</li> </ul> <p>UNESCO's Man and Biosphere Programme includes 94 Biosphere Reserves in 21 countries in the Asia and Pacific region</p>



<p><b>Latin America and the Caribbean</b> (82 ecological-network initiatives are in South America, not all are named here)</p>	<ul style="list-style-type: none"> <li>• Mesoamerican Biological Corridor – 8 countries</li> <li>• Vilcabamba–Amboró Conservation Corridor</li> <li>• Bremen–Barbas biological corridor in Colombia</li> <li>• Llanganates–Sangay ecological corridor in Ecuador</li> <li>• Central da Mata Atlántica Biodiversity corridor – in Brazil</li> <li>• Patagonia conservation corridor - in Argentina and Chile</li> <li>• Madidi– Pílon Lajas–Manuripi–Tambopata–Candamo– Bahuaja Sonene biogeographical corridor in Bolivia and Peru</li> <li>• Guadeloupe: Archipel de la Guadeloupe Biosphere Reserve</li> </ul> <p>WWF initiatives:</p> <ul style="list-style-type: none"> <li>• Chihuahuan deserts and springs (Mexico)</li> <li>• Galapagos Islands</li> <li>• Northern Andean montane forests (Colombia)</li> <li>• southwestern Amazonian moist forest (Brazil/Bolivia/Peru)</li> <li>• Atlantic forests (Argentina/Paraguay/Brazil)</li> <li>• Valdivian temperate forests (Chile)</li> <li>• Amazon River and floodplain (Brazil/Peru)</li> <li>• Choco-Darien (Colombia)</li> <li>• Llanos (Venezuela/Colombia)</li> <li>• Pantanal (Brazil/Bolivia)</li> </ul> <p><b>ARGENTINA</b></p> <p>Iniciativa Corredor de Humedales del Litoral Fluvial de la Argentina  Proyecto de Biodiversidad Costera Patagónica  Corredor de conservación del Cóndor Andino  Corredor de Interconexión entre los Parques Nacionales, Parques Provinciales y Áreas Protegidas en la Región Triprovincial  Corredor Biológico de Humedales del Centro-Oeste Argentino  Corredor Ecorregional Norandino Patagónico  Diseño de una Estrategia Regional de Corredores de Conservación en el Gran Chaco Argentino</p> <p><b>BOLIVIA</b></p> <p>Corredor Amboró–Madidi  Corredor Amboró–Tariquía  Corredor Chiquitano–Iténez–Mamoré</p> <p><b>BRAZIL</b></p> <p>Corredor da Biodiversidade do Amapá  Corredor de Biodiversidad Central da Mata Atlántica  Corredor Centro-Amazónico o Central da Amazonía (CCA)  Corredor do Descobrimento  Corredor Norte-Amazónico  Corredor Oeste-Amazónico  Corredor Sul-Amazónico  Corredor Ecológico Cerrado–Pantanal  Corredor da Serra do Mar o Corredor Sul da Mata Atlántica  Corredor do Ecótono Sul-Amazónico (Amazonía Cerrado)  Corredor Ecológico Araguaia–Bananal  Corredor Ecológico do Cerrado  Corredor Ecológico Jalapão–Mangabeiras  Corredor JICA  Burarama–Pacotuba–Cafundó corridor within the Atlantic Forest Corridor</p> <p><b>CHILE</b></p> <p>Corredor Nevados de Chillán–Laguna de la Laja  Corredor entre la cordillera de los Andes y la Cordillera de la Costa Colombia  Corredor Biológico Guácharos–Puracé  Corredor Biológico Bremen–Barbas</p>
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<p> Corredor Guantiva–La Rusia–Iguaque de Bosques Altoandinos de Roble o Iguaque–Guanentá o Guantiva–Iguaque  Corredor Transandino–Amazónico  Corredor Páramo de Bordoncillo–Cerro Patascoy– Laguna de la Cocha  Corredor Biológico de la Cordillera Central  Corredor Dagua–Calima–Paraguas  Corredor de Naya  Corredor Costero del manglar Proyecto Biopacífico  Corredor Amazonía Colombiana  Corredor Ecológico Abierto  Corredor Costero Urabá–Alto Sinú  Corredor Laguna de Fuquene y Laguna Palacio  <b>ECUADOR</b>  Corredor Chocó–Andino  Corredor Ecológico Llanganates–Sangay  <b>PARAGUAY</b>  Corredores de conservación en la Reserva de Biósfera del Bosque Mbaracayú y áreas de influencia  Corredores ecológicos y culturales en el valle central de la cuenca del Plata y valles interconexos  <b>VENEZUELA</b>  Corredor en el Caribe entre Curaçao, Bonaire, Aves y Los Roques  Corredor Biológico de la Sierra de Portuguesa  Biocorredor Ramal de Calderas  Corredor Canaima–Alto Orinoco (part of the Guyana Shield)  Corredor Nacional Fulquena  Corredor Papero  Corredor Caparo  Corredor Pueblos del Sur  <b>TRANSBOUNDARY INITIATIVES</b>  Corredor Tariquía–Baritú o Corredor Regional de los Yungas (Argentina/Bolivia)  Corredores Guaporé–Itenez (Bolivia/Brazil)  Corredor Vilcabamba–Amboró (Perú/Bolivia)  Corredor Cóndor Kutukú (Perú/Ecuador)  Corredor Chocó–Manabí (Ecuador/Colombia)  Corredor verde de Misiones (Paraguay/Brazil/Argentina)  Corredor Trinacional del bosque Atlántico del Alto Paraná (Brazil/Argentina/Paraguay)  Propuesta de Corredor Biológico para el Huemul <i>Hippocamelus bisulcus</i> (Argentina/Chile)  Corredores de Conservación en la Patagonia (Argentina/Chile)  Corredor Chaqueño (Argentina/Bolivia/Paraguay)  Corredor Nor-Andino o Andes del Norte (Venezuela/Colombia)  Andean Bear Biological Corridor (Venezuela/Colombia/Peru)  Área de manejo coordinado o Corredor Altoandino o Humedales Altoandinos (Chile/Bolivia/Argentina)  Cielos de América (Argentina/Bolivia)  Proyecto Cooperación entre Reservas de Biosfera Costeras (Uruguay/Argentina/Brazil)  Corredor Biogeográfico Madidi–Pilón Lajas–Manuripi–Tambopata–Candamo–Bahuaja Sonene (Bolivia/Perú)  Corredor Ecológico (Perú/Brazil)  Corredor Marino de Conservación del Pacífico Este Tropical Oriental (Colombia/Ecuador/Panamá/Costa Rica)  Iniciativa de Conservación Escudo Caura–Guyana/theGuiana Shield (Venezuela/Guyana/Surinam/French Guiana/Brazil/Colombia)  Corredor Ecológico de las Américas: Ecoaméricas    UNESCO’s Man and Biosphere Programme includes 75 biosphere reserves in the region, </p>
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	including two in French overseas territories: Atoll de Taiaro (to become the Tuamotu Biosphere Reserve) and Archipel de la Guadeloupe
<b>Africa</b>	<ul style="list-style-type: none"> <li>• Kibale Forest Game Corridor in Uganda</li> <li>• Administrative Management Design for Game Management Areas in Zambia</li> <li>• Wildlife Management Areas in Botswana</li> <li>• Communal Areas Management Programme for Indigenous Resources in Zimbabwe</li> </ul> <p>Transnational parks:  Kgalagadi Transfontier Park between Botswana and South Africa  The Great Limpopo Transfrontier Park shared by Mozambique, South Africa and Zimbabwe  Kavango-Zambezi Transfrontier Conservation Area to span parts of Angola, Botswana, Namibia, Zambia and Zimbabwe</p> <ul style="list-style-type: none"> <li>• CapeFloristic region in South Africa</li> <li>• The Maloti-Drakensberg Transfrontier Conservation and Development Project in Lesotho and South Africa</li> <li>• The Albertine Rift Region in Uganda, Rwanda, Burundi, Tanzania, the Democratic Republic of Congo and Zambia</li> <li>• The Four Corners Transboundary Natural-Resources Management Area at the junction of Botswana, Namibia, Zambia and Zimbabwe</li> <li>• Wildlife Conservation Lease Programme in Kenya - covering an area of 2,500 sqkm from Nairobi National Park to the south</li> </ul> <p>WWF ecoregion programmes:</p> <ul style="list-style-type: none"> <li>• Cameroon–Gabon–Congo: The Tri-Dom Ecological Network</li> <li>• East African coastal forests</li> <li>• Madagascar dry/spiny forests</li> <li>• western Congo basin moist forests, (5 projects)</li> <li>• Guinean moist forests</li> <li>• Miombo (Central and Eastern Miombo woodlands and Zambezi woodlands and savannas)</li> </ul> <p>Large-scale non-ecoregion projects:</p> <ul style="list-style-type: none"> <li>• Fynbos (South Africa)</li> <li>• Rift Valley lakes</li> <li>• Niger river basin</li> <li>• northeast Congo basin moist forests/central Congo basin moist forests</li> <li>• Albertine Rift montane forests (Kenya)</li> </ul> <p>UNESCO’s Man and Biosphere Programme has applied this broader management approach to 87 Biosphere Reserves including two transboundary biosphere reserves (the “W” region of Benin, Burkina Faso and Niger, and the Senegal delta between Mauritania and Senegal) in 39 African countries</p>
<b>Convention on the Conservation of Migratory Species of Wild Animals (the Bonn Convention)</b>	<p><b>Agreements under the Convention on the Conservation of Migratory Species of Wild Animals (the Bonn Convention):</b></p> <ul style="list-style-type: none"> <li>• European bats (48 European range states)</li> <li>• seals in the Wadden Sea (three range states)</li> <li>• African-Eurasian migratory waterbirds (117 range states in Africa, Europe, Canada, Central Asia and the Middle East)</li> <li>• albatrosses and petrels (25 range states in the Southern Hemisphere, including European, African, Asian and South American countries)</li> </ul> <p>Memorandum of Understanding (MoU) concluded with respective range states with the aim of conserving the following species:</p> <ul style="list-style-type: none"> <li>• the Siberian crane (12 range states, primarily in Asia)</li> <li>• the slender-billed curlew (30 range states in Southern and Eastern Europe, Northern Africa and the Middle East)</li> <li>• marine turtles of the Atlantic coast of Africa (26 range states along the Atlantic coast of Africa)</li> </ul>

- marine turtles of the Indian Ocean and Southeast Asia (41 range states around the Indian Ocean and Southeast Asia and adjacent seas)
- the middle-European population of the great bustard (17 range states in Central and Eastern Europe)
- the Bukhara deer (four range states in Central Asia)
- the aquatic warbler (14 range states in Europe and Africa)

International flyway agreements

- Asian-Pacific Waterbird Conservation Strategy
- Asia-Pacific Migratory Crane Action Plan and North-East Asian Crane Site Network
- Central Asian-Indian Flyway Programme
- East Asian-Australasian Shorebird Reserve Network
- China-Australia Migratory Birds Agreement
- Japan-Australia Migratory Birds Agreement
- Japan-Russia Migratory Birds Agreement
- Japan-USA Migratory Birds Agreement
- Republic of Korea-Russia Migratory Birds Agreement
- Democratic People's Republic of Korea-Russia Migratory Birds Agreement
- American-Pacific Flyway Programme
- Convention Between the Government of the United States of America and the Government of Japan for the Protection of Migratory Birds and Birds in Danger of Extinction, and Their Environment
- USA-Russia Migratory Birds Agreement
- Convention between the United States of America and Great Britain (acting for Canada) for the Protection of Migratory Species
- Convention between the United States of America and the Union of Soviet Socialist Republics Concerning the Conservation of Migratory Birds and Their Environment
- Convention Between the United States of America and the United Mexican States for the Protection of Migratory Birds and Game Animals
- Convention between Canada and the United States on the Conservation of Migratory Birds
- North American Waterfowl Management Plan
- Migratory Birds Convention
- Western Hemisphere Shorebird Reserve Network
- Bonn Convention: Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA)
- Bonn Convention: Agreement on the Conservation of Albatrosses and Petrels
- Bonn Convention: Memorandum of Understanding concerning Conservation Measures for the Slender-Billed Curlew (*Numenius tenuirostris*)
- Bonn Convention: MoU concerning Conservation Measures for the Siberian Crane (*Grus leucogeranus*)
- Bonn Convention: MoU concerning Conservation Measures for the Aquatic Warbler (*Acrocephalus paludicola*)
- Bonn Convention: MoU on the Conservation and Management of the Middle-European Population of the Great Bustard (*Otis tarda*)

**Annex 3. Country-wise terrestrial and marine protected areas as percentage of terrestrial surface and percentage of territorial waters (WDPA 2011).<sup>10</sup>**

Country	% Terrestrial area protected 2010	% Territorial sea protected 2010
Afghanistan	0.37	

<sup>10</sup> Countries having reached 17% terrestrial protection or 10% territorial water protection are highlighted.

Albania	9.85	1.62
Algeria	6.31	0.29
<b>American Samoa</b>	0.31	<b>17.04</b>
Andorra	6.12	
Angola	12.40	0.07
Anguilla	5.96	7.09
Antigua and Barbuda	6.99	0.70
Argentina	5.47	1.10
Armenia	7.99	
Aruba	0.11	0.00
<b>Australia</b>	10.55	<b>28.34</b>
<b>Austria</b>	<b>22.93</b>	
Azerbaijan	7.15	
Bahamas	13.66	0.41
Bahrain	1.35	0.65
Bangladesh	1.81	0.81
Barbados	0.12	0.07
Belarus	7.22	
Belgium	13.77	0.04
<b>Belize</b>	<b>27.95</b>	<b>11.86</b>
<b>Benin</b>	<b>23.81</b>	0.00
Bermuda	5.57	5.04
<b>Bhutan</b>	<b>28.35</b>	
<b>Bolivia, Plurinational State of</b>	<b>18.51</b>	
Bosnia and Herzegovina	0.58	0.71
<b>Botswana</b>	<b>30.93</b>	
<b>Bouvet Island</b>	<b>82.27</b>	0.74
<b>Brazil</b>	<b>26.28</b>	<b>16.48</b>
<b>British Indian Ocean Territory</b>	<b>100.00</b>	<b>100.00</b>
<b>Brunei Darussalam</b>	<b>43.99</b>	1.44
Bulgaria	9.19	3.18
Burkina Faso	14.24	
Burundi	4.85	
<b>Cambodia</b>	<b>25.77</b>	0.44
Cameroon	9.15	0.39
Canada	7.51	1.25
Cape Verde	2.47	0.00
Cayman Islands	8.71	1.24
<b>Central African Republic</b>	<b>17.74</b>	
Chad	9.39	
<i>Channel Islands: Guernsey</i>		0.00
<i>Channel Islands: Jersey</i>	9.33	0.02
Chile	16.55	3.69
China	16.64	1.28
<b>Christmas Island</b>	<b>61.12</b>	0.03
<b>Colombia</b>	<b>20.90</b>	<b>15.53</b>
Comoros		0.00
<b>Congo</b>	9.45	<b>32.82</b>

Congo, The Democratic Republic of the	9.99	4.40
Cook Islands	0.81	0.04
<b>Costa Rica</b>	<b>20.92</b>	<b>12.24</b>
<b>Cote d'Ivoire</b>	<b>22.59</b>	0.07
Croatia	12.95	3.36
Cuba	6.37	4.41
Cyprus	10.52	0.56
Czech Republic	15.05	
Denmark	4.86	3.22
Djibouti	0.00	0.24
<b>Dominica</b>	<b>21.69</b>	0.13
<b>Dominican Republic</b>	<b>22.21</b>	<b>30.37</b>
<b>Ecuador</b>	<b>25.10</b>	<b>75.36</b>
Egypt	5.89	9.32
El Salvador	0.83	3.11
<b>Equatorial Guinea</b>	<b>19.16</b>	2.57
Eritrea	4.96	0.00
<b>Estonia</b>	<b>20.44</b>	<b>26.47</b>
<b>Ethiopia</b>	<b>18.40</b>	
Faeroe Islands		0.00
Falkland Islands (Malvinas)	0.35	0.20
Fiji	1.34	0.06
Finland	9.03	4.96
<b>France</b>	<b>16.54</b>	<b>21.34</b>
<b>French Guiana</b>	<b>47.87</b>	4.98
French Polynesia	0.35	0.06
Gabon	15.14	7.28
Gambia	1.53	0.06
Georgia	3.65	0.45
<b>Germany</b>	<b>42.42</b>	<b>40.28</b>
Ghana	14.67	0.01
Gibraltar	4.70	0.00
Greece	16.22	2.61
<b>Greenland</b>	<b>40.55</b>	<b>36.32</b>
Grenada	1.67	0.02
<b>Guadeloupe</b>	<b>19.21</b>	0.75
<b>Guam</b>	<b>26.40</b>	0.77
<b>Guatemala</b>	<b>30.63</b>	<b>12.51</b>
Guinea	6.78	0.00
<b>Guinea-Bissau</b>	<b>16.06</b>	<b>45.82</b>
Guyana	5.00	0.00
Haiti	0.27	0.00
<b>Heard Island and McDonald Islands</b>	<b>100.00</b>	<b>99.73</b>
Holy See (Vatican City State)		
<b>Honduras</b>	<b>18.17</b>	1.89
<b>Hong Kong</b>	<b>41.78</b>	
Hungary	5.14	
<b>Iceland</b>	<b>19.70</b>	3.90

India	5.03	1.67
Indonesia	14.15	1.99
Iran, Islamic Republic of	7.08	1.71
Iraq	0.05	0.00
Ireland	1.78	0.18
<b>Israel</b>	<b>17.83</b>	0.45
<b>Italy</b>	15.06	<b>17.44</b>
<b>Jamaica</b>	<b>18.89</b>	4.16
Japan	16.48	5.55
<b>Jordan</b>	1.91	<b>29.97</b>
Kazakhstan	2.52	
<b>Kenya</b>	11.76	<b>10.47</b>
<b>Kiribati</b>	<b>23.23</b>	<b>22.62</b>
Korea, Democratic People's Republic of	5.90	0.11
Korea, Republic of	2.40	3.85
Kuwait	1.59	0.01
Kyrgyzstan	6.94	
Lao People's Democratic Republic	16.62	
<b>Latvia</b>	<b>17.96</b>	6.67
Lebanon	0.48	0.11
Lesotho	0.49	
Liberia	1.77	0.00
Libyan Arab Jamahiriya	0.11	0.05
<b>Liechtenstein</b>	<b>42.45</b>	
<b>Lithuania</b>	14.52	<b>10.75</b>
<b>Luxembourg</b>	<b>20.05</b>	
Macao		
Macedonia, The former Yugoslav Republic of	4.87	
Madagascar	3.06	0.12
Malawi	15.02	
<b>Malaysia</b>	<b>18.10</b>	2.03
Maldives		0.00
Mali	2.43	
<b>Malta</b>	<b>17.26</b>	0.40
Marshall Islands	3.08	0.61
<b>Martinique</b>	<b>56.09</b>	0.40
<b>Mauritania</b>	0.54	<b>32.13</b>
Mauritius	4.48	0.28
Mayotte	2.47	0.87
<b>Mexico</b>	11.13	<b>16.67</b>
Micronesia, Federated States of	4.03	0.06
Moldova, Republic of	1.38	
<b>Monaco</b>	<b>23.68</b>	<b>100.00</b>
Mongolia	13.39	
Montenegro	13.25	0.85
Montserrat	10.48	0.01
Morocco	1.55	1.32
Mozambique	15.83	3.25

Myanmar	6.33	0.31
Namibia	14.94	8.25
Nauru		0.00
<b>Nepal</b>	<b>17.00</b>	
<b>Netherlands</b>	12.42	<b>22.11</b>
Netherlands Antilles	15.12	0.48
<b>New Caledonia</b>	<b>60.20</b>	<b>17.66</b>
<b>New Zealand</b>	<b>26.20</b>	<b>10.78</b>
<b>Nicaragua</b>	<b>36.72</b>	<b>37.22</b>
Niger	7.07	
Nigeria	12.84	0.16
<b>Niue</b>	<b>22.22</b>	0.03
Norfolk Island	12.44	0.20
<b>Northern Mariana Islands</b>	12.79	<b>28.74</b>
Norway	14.56	2.35
Oman	10.68	1.30
Pakistan	10.13	1.83
Palau	1.97	5.27
Palestinian Territory, Occupied	0.64	
<b>Panama</b>	<b>18.70</b>	4.01
Papua New Guinea	3.07	0.32
Paraguay	5.44	
Peru	13.62	2.84
Philippines	10.86	2.47
Pitcairn		0.00
<b>Poland</b>	<b>22.42</b>	4.11
Portugal	8.30	3.06
Puerto Rico	10.08	1.59
Qatar	2.48	0.25
<b>Reunion</b>	<b>77.06</b>	0.54
<b>Romania</b>	7.13	<b>33.26</b>
<b>Russian Federation</b>	9.07	<b>10.81</b>
Rwanda	9.99	
Saint Helena, Ascension and Tristan da Cunha	9.66	0.10
Saint Kitts and Nevis	3.57	0.53
Saint Lucia	14.26	0.06
<b>Saint Pierre and Miquelon</b>	<b>23.50</b>	2.09
Saint Vincent and the Grenadines	10.88	0.61
Samoa	3.41	0.55
San Marino		
Sao Tome and Principe		0.00
<b>Saudi Arabia</b>	<b>31.26</b>	3.43
<b>Senegal</b>	<b>24.09</b>	<b>12.43</b>
Serbia	5.97	
<b>Seychelles</b>	<b>42.02</b>	0.51
Sierra Leone	4.95	0.00
Singapore	5.38	1.44
<b>Slovakia</b>	<b>23.18</b>	



Slovenia	13.17	0.68
Solomon Islands	0.09	0.12
Somalia	0.58	0.00
South Africa	6.90	6.49
South Georgia and the South Sandwich Islands	1.81	0.30
Spain	8.59	3.49
<b>Sri Lanka</b>	<b>21.46</b>	1.06
Sudan	4.22	0.05
<b>Suriname</b>	11.56	<b>22.87</b>
<b>Svalbard and Jan Mayen</b>	<b>65.19</b>	<b>40.30</b>
Swaziland	3.02	
Sweden	10.88	5.33
<b>Switzerland</b>	<b>24.85</b>	
Syrian Arab Republic	0.64	0.63
Taiwan, Province of China	11.52	0.27
Tajikistan	4.14	
<b>Tanzania, United Republic of</b>	<b>27.53</b>	<b>10.02</b>
<b>Thailand</b>	<b>20.09</b>	4.38
Timor-Leste	6.05	6.67
Togo	11.26	0.00
Tokelau	6.05	0.13
Tonga	14.54	9.37
<b>Trinidad and Tobago</b>	<b>31.24</b>	2.81
Tunisia	1.30	1.17
Turkey	1.89	2.43
Turkmenistan	2.99	
<b>Turks and Caicos Islands</b>	<b>42.92</b>	0.95
Tuvalu	0.44	0.19
Uganda	10.26	
Ukraine	3.51	4.86
United Arab Emirates	5.62	2.57
<b>United Kingdom</b>	<b>26.35</b>	5.70
<b>United States</b>	12.38	<b>28.60</b>
Uruguay	0.26	0.33
Uzbekistan	2.26	
Vanuatu	4.26	0.05
<b>Venezuela, Bolivarian Republic of</b>	<b>53.75</b>	<b>15.33</b>
Viet Nam	6.24	1.71
Virgin Islands, British	5.05	1.77
Virgin Islands, United States	15.22	0.64
Wallis and Futuna Islands	0.17	0.00
<b>Western Sahara</b>	5.69	<b>16.42</b>
Yemen	0.52	1.77
<b>Zambia</b>	<b>36.04</b>	
<b>Zimbabwe</b>	<b>28.01</b>	