



Protected Areas in East Asia

Evaluating and strengthening implementation of the
CBD Programme of Work on Protected Areas and
the East Asian Regional Action Plan



International Union for Conservation of Nature





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IUCN, International Union for Conservation of Nature, helps the world find pragmatic solutions to our most pressing environment and development challenges. It supports scientific research, manages field projects all over the world and brings governments, non-government organizations, United Nations agencies, companies and local communities together to develop and implement policy, laws and best practice.

IUCN is the world's oldest and largest global environmental network - a democratic membership union with more than 1,000 government and NGO member organizations, and almost 11,000 volunteer scientists in more than 160 countries.

IUCN's work is supported by more than 1,000 professional staff in 60 offices and hundreds of partners in public, NGO and private sectors around the world. The Union's headquarters are located in Gland, near Geneva, Switzerland.

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The IUCN World Commission on Protected Areas (WCPA) is the world's leading network of protected area managers and specialists, with over 1,300 members in 140 countries. WCPA is one of the six voluntary Commissions of IUCN and is administered by the Global Programme on Protected Areas at IUCN's headquarters in Gland, Switzerland. WCPA's mission is to promote the establishment and effective management of a worldwide representative network of terrestrial and marine protected areas, as an integral contribution to the IUCN mission.

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1. Purpose and content of the report

This paper outlines the progress of the East Asian region towards the goals adopted in the Convention of Biological Diversity (CBD) Programme of Work on Protected Areas (PoWPA) and in the implementation of the Regional Action Plan for the Protected Areas of East Asia (RAP) (MacKinnon and Yan, 2008); findings of which arose from the East Asia workshop on implementation of the CBD Programme of Work on Protected Areas (CBD PoWPA), the 'East Asia workshop'.

Section 2 starts with a brief summary of the East Asian region, the CBD PoWPA and the East Asia RAP.

Section 3 outlines the progress of the East Asia region in implementing the CBD PoWPA and the East Asia RAP

targets; and compares their progress against global progress. The paper also presents a short description of progress in each country (appendix 1).

The major section of the paper is forward looking, highlighting the areas in which the East Asian region has the potential to be pioneers in PA planning, establishment, management and governance. The report goes on to define the key issues that require attention for the successful implementation of the PoWPA and East Asia RAP. This is followed by a discussion about whether PoWPA and East Asia RAP are the most suitable for strategies to support PAs in the region's PA system and also provides some recommendations to further improve their implementation.

This report builds on the workshop report from the East Asia Workshop on implementation of the CBD programme of Work on Protected Areas and a project progress report developed by Dr John MacKinnon, IUCN Consultant. The report by Dr MacKinnon summarised and assessed the progress of the region against the CBD PoWPA and East Asia RAP.

This report should be used as tool in reviewing national and regional progress in implementing the CBD for nations of the East Asia region. The outcome of such reviews should be used in developing National Biodiversity Strategies and Action Plans (NBSAPs) and regional action plans as required by CBD (COP 10 Decision X/31)

1. (b) Develop a long-term action plan or reorient, as appropriate, relevant existing plans, taking into account national circumstances and priorities, involving all relevant stakeholders including indigenous and local communities, for the implementation of the programme of work on protected areas, including appropriate implementation mechanisms, and, where appropriate, detailing list of activities, timelines, budget and responsibilities, based upon the results of key assessments of the programme of work on protected areas...

3. ...invites Parties to foster the formation of such initiatives and formulate regional action plans, where appropriate through national focal points for the programme of work on protected areas in collaboration with the IUCN World Commission on Protected Areas and other conservation organizations, based on country action plans for implementation of the programme of work on protected areas....

The report focuses on evaluation of PoWPA targets and RAP and was compiled prior to the tenth meeting of CBD COP10 in Nagoya, Japan from 18 to 29 October 2010. A new CBD Strategic Plan, as agreed upon at the COP10, has changed a number of targets, particularly in relation to protected areas. These should be noted when reviewing the recommended strategies for successful implementation of the PoWPA and East Asia RAP.

2. Background

2.1: Overview of the East Asia Region

The East Asia region is a collection of eight countries/territories – China, Hong Kong, Macau, Taiwan, Japan, Democratic People’s Republic of Korea (DPRK, North Korea), Republic of Korea (ROK, South Korea) and Mongolia (Figure.1). This region has a combined land area of 11.79 million km² and constitutes a large and important part of the eastern Palaeartic ecozone. The region includes a diverse range of habitats from the Altai Mountains in the west to the great arc of Japanese islands in the east and the tropical seas and coral reefs of the extreme south. It also boasts the planet’s largest and highest plateau, its highest peaks, and some of its deepest land depressions and most extreme deserts.

Asia makes up 20% of the world’s land mass has very high biodiversity, and protected areas (PAs) across 15% of the region. With more than 60% of the world’s population it has a diverse economy and high GDP but produces more than 30% of global carbon emissions (in particular China, Korea and Japan).

The region contains 17 biomes as classified by Udvardy (1984) and has further been classified into 76 ecoregions by WWF (Olson and Dinerstein, 2002)¹.

GIS analysis by MacKinnon et al (2005) revealed that the overall coverage of PAs in East Asia was at 16%. However, this coverage was uneven, varying by country/territory and area. East Asia has made strong inroads into the improvement of the PA network. This is as a result of efforts in establishing transboundary PAs and marine and coastal PAs (MPAs), capitalising on the importance of sacred mountains to East Asian cultures, the designation of World Heritage sites and efforts to undertake flagship threatened species conservation to harness support, resources and awareness for improved PA management. These efforts are discussed in greater detail in Chapter 4.

2.2: CBD Programme of Work on Protected Areas (PoWPA)

PAs have emerged as one of the world’s most important and effective tools for safeguarding biodiversity (Bruner et al. 2001) because they protect species from their greatest threat: habitat loss. The CBD PoWPA states that PAs are “essential components in national and global biodiversity conservation strategies.”

At the seventh meeting of the Conference of the Parties to the Convention on Biological Diversity in 2004, 188 Parties agreed to a Programme of Work on Protected Areas (Table 1), considered one of the most ambitious environmental strategies in history, with

“the objective of the establishment and maintenance by 2010 for terrestrial and by 2012 for marine areas of comprehensive, effectively managed, and ecologically representative national and regional systems of protected areas”.

This programme of work consists of four interlinked elements intended to be mutually reinforcing and crosscutting in their implementation. The programme is one of the most target driven, specific and time-bound of the CBD’s programmes of work.

- The first element captures targets and goals relating to direct actions for planning, selecting, establishing, strengthening, and managing, PA systems and sites.
- The second element directs actions regarding the governance, participation, equity and benefit sharing of PAs.
- The third element focuses on fostering sustainable PA systems and sets targets for a number of enabling activities.
- The fourth element address targets for standards, assessment, and monitoring of PAs.

Globally the progress of implementation has been limited (Figure 2). None of the targets have been met by all countries and only target 1.5² has been completed by more than 15% of countries.

¹ defined as geographically distinct assemblages of natural communities that share a large majority of their species and ecological dynamics; share similar environmental conditions, and; interact ecologically in ways that are critical for their long-term persistence

²“By 2008, effective mechanisms for identifying and preventing, and/or mitigating the negative impacts of key threats to protected areas are in place”

Figure 1: East Asian region - China, Hong Kong, Macau, Taiwan, Japan, Democratic People's Republic of Korea, Republic of Korea and Mongolia

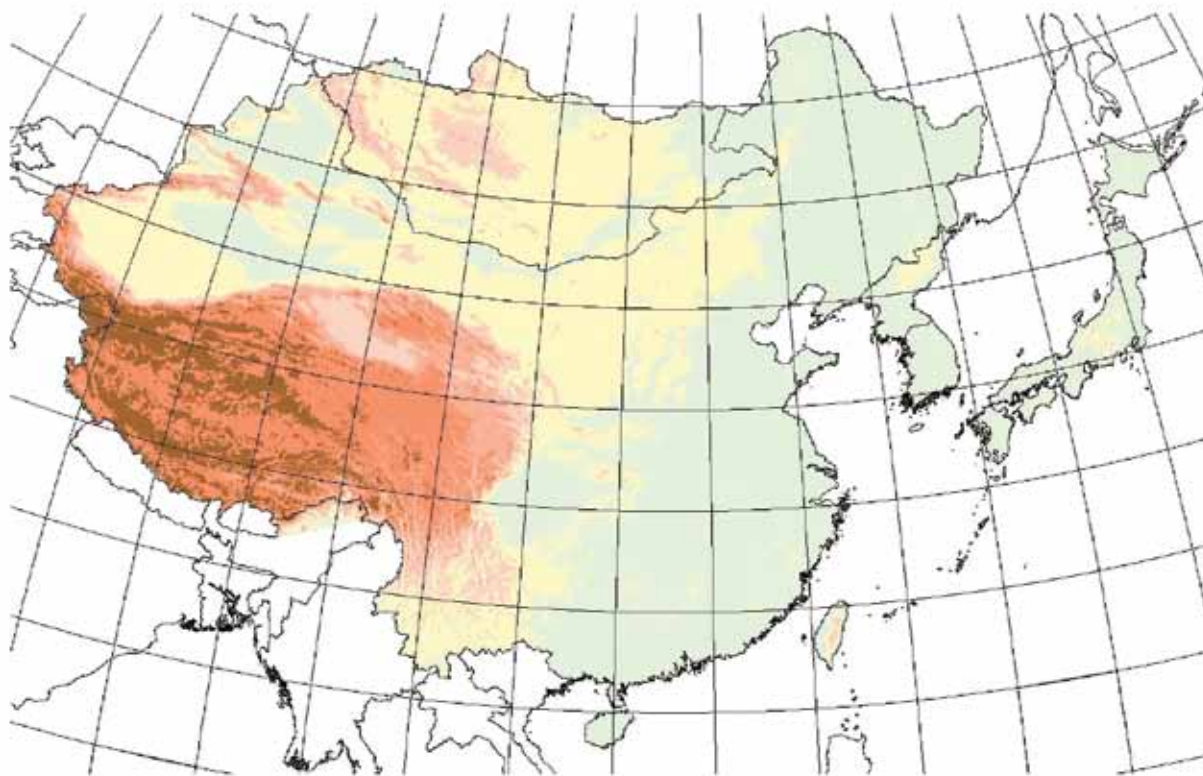


Figure 2: Global summary of PoWPA implementation (SCBD, 2010b)

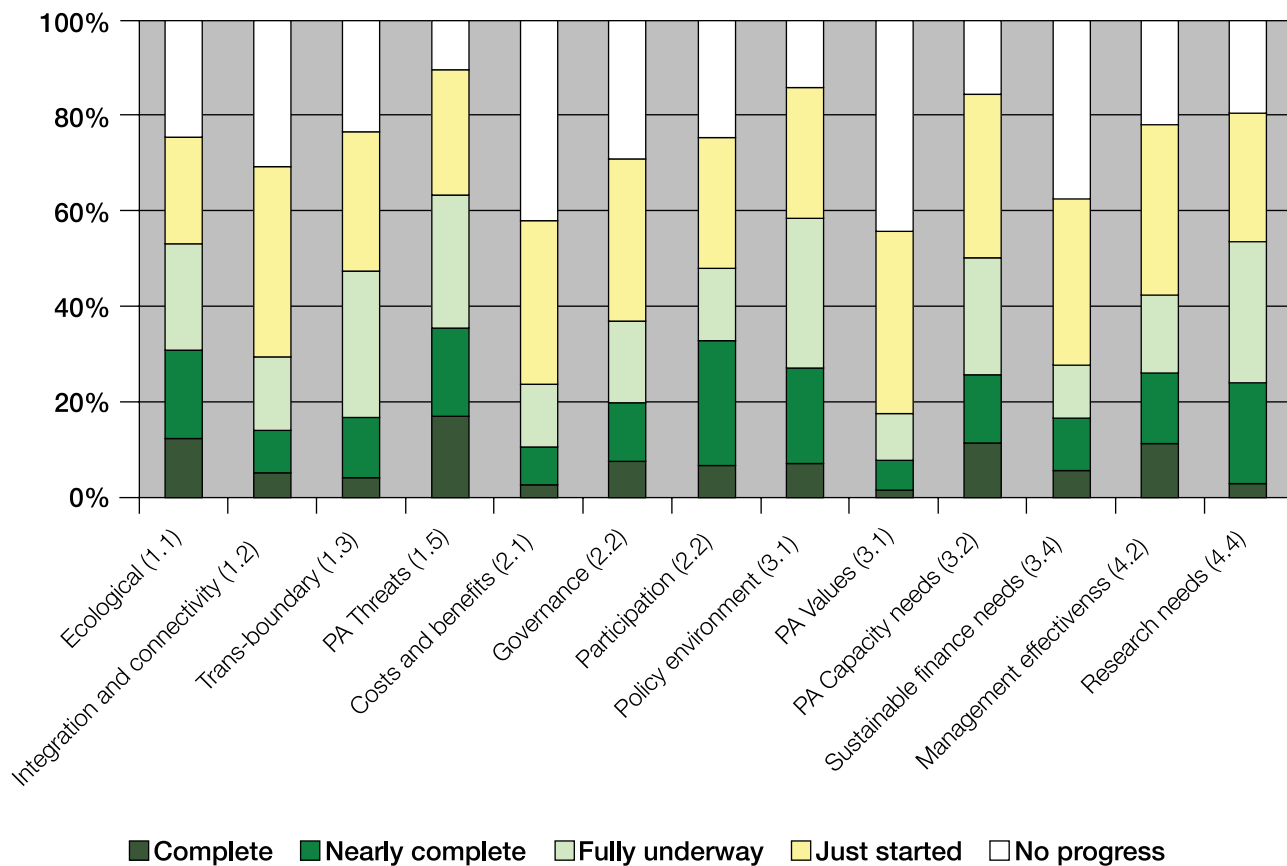


Table 1: CBD Programme of Work on Protected Areas

Element	Goal	Target
1	1.1	To establish and strengthen national and regional systems of protected areas integrated into a global network as a contribution to globally agreed goals (by 2010 for terrestrial and 2012 for marine)
	1.2	By 2015, all protected areas and protected area systems are integrated into the wider land- and seascape, and relevant sectors, by applying the ecosystem approach and taking into account ecological connectivity / and the concept, where appropriate, of ecological networks
	1.3	Establish and strengthen by 2010/2012 transboundary protected areas, other forms of collaboration between neighbouring protected areas across national boundaries and regional networks, to enhance the conservation and sustainable use of biological diversity, implementing the ecosystem approach, and improving international cooperation
	1.4	All protected areas to have effective management in existence by 2012, using participatory and science-based site planning processes that incorporate clear biodiversity objectives, targets, management strategies and monitoring programmes, drawing upon existing methodologies and a long-term management plan with active stakeholder involvement.
	1.5	By 2008, effective mechanisms for identifying and preventing, and/or mitigating the negative impacts of key threats to protected areas are in place.
2	2.1	Establish mechanisms for the equitable sharing of both costs and benefits arising from the establishment and management of protected areas (by 2008)
	2.2	Full and effective participation of indigenous and local communities, in full respect of their rights and recognition of their responsibilities, consistent with national law and applicable international obligations, and the participation of relevant stakeholders, in the management of existing, and the establishment and management of new protected areas (by 2008)
3	3.1	By 2008 review and revise policies as appropriate, including use of social and economic valuation and incentives, to provide a supportive enabling environment for more effective establishment and management of protected areas and protected areas systems.
	3.2	By 2010, comprehensive capacity building programmes and initiatives are implemented to develop knowledge and skills at individual, community and institutional levels, and raise professional standards
	3.3	By 2010 the development, validation, and transfer of appropriate technologies and innovative approaches for the effective management of protected areas is substantially improved, taking into account decisions of the Conference of the Parties on technology transfer and cooperation
	3.4	Target: By 2008, sufficient financial, technical and other resources to meet the costs to effectively implement and manage national and regional systems of protected areas are secured, including both from national and international sources, particularly to support the needs of developing countries and countries with economies in transition and small island developing States.
	3.5	By 2008 public awareness, understanding and appreciation of the importance and benefits of protected areas is significantly increased
4	4.1	By 2008, standards, criteria, and best practices for planning, selecting, establishing, managing and governance of national and regional systems of protected areas are developed and adopted
	4.2	By 2010, frameworks for monitoring, evaluating and reporting protected areas management effectiveness at sites, national and regional systems, and transboundary protected area levels adopted and implemented by Parties
	4.3	By 2010, national and regional systems are established to enable effective monitoring of protected-area coverage, status and trends at national, regional and global scales, and to assist in evaluating progress in meeting global biodiversity targets
	4.4	Scientific knowledge relevant to protected areas is further developed as a contribution to their establishment, effectiveness, and management.

2.3: Overview of the East Asia Regional Action Plan

Complementing the CBD PoWPA in the East Asia region is the Regional Action Plan for the Protected Areas of East Asia (RAP). This document provides prioritised and detailed region-specific actions for the improvement of the PA network in East Asia drawn from the CBD PoWPA. This Regional Action Plan has been published in four languages: English, Japanese, Korean and Chinese. The Plan was developed through an extensive consultative process and builds on the 2005 UNEP-World Conservation Monitoring Centre (WCMC) GIS Assessment for the PA system across East Asia. The final plan was refined through a series of consultations, particularly the major International Workshop for Better Management of Protected Areas, Jeju Island, October 2006. The 2006-2010 plan examined PA development in the region, questioned whether the actions, projects and objectives of the 1996 action plan (the first of its kind for the region) had been achieved, and identified new problems and issues that have emerged in the region since the 1996 plan. The plan further built on the continued interest of the eight nations in promoting the objectives of the CBD for PAs, and identified a number of key actions and projects that required further attention (outlined in Table 3). In addition to outlining various national actions it also highlighted those required to ensure a strong regional PA network.

2.4: Overview of 'East Asia workshop'

The 'East Asia workshop' (EA workshop), provided an opportunity for the region to critically assess progress towards implementation of the CBD PoWPA and to develop strategic directions to drive the improvement of PAs in the region in the coming years.

In addition, as the current RAP is drawing towards its completion date, the EA workshop was ideally timed to provide a review of the progress made towards implementation of the national and regional actions of the RAP, and to determine the format, application and relevance of future iterations of the RAP and its relationship with the CBD PoWPA.

The EA workshop was strategically timed to immediately follow on from the International Workshop on the Future of the CBD PoWPA, the 'Futures workshop', and so reflect on the outcomes of this global meeting at a sub-regional level.

It should be noted that the progress reports delivered at the EA Workshop and summarized in this paper reflect the views of the IUCN-WCPA and the opinions of the EA workshop participants and do not reflect the results presented in the official National Reports. National reporting is being undertaken through the CBD processes and submitted national reports are available on the CBD website (<http://www.cbd.int/information/>)

3. Progress in implementing the CBD PoWPA and the East Asia RAP

3.1: Global coverage versus East Asian coverage

The development of PAs in the East Asia (EA) Region progresses well. All territories are well beyond global targets in terms of percentage of area (Table 2) and the region boasts some of the largest PAs in the world, despite being the world's most densely populated region. The EA region has progressed very well in the combined proportion of terrestrial and marine areas protected when compared against global progress (15.3% v 10.9 %; Figure 3a) and is amongst the three best performers of the developing regions (Figure 3b). On closer examination, China appears to dominate the region's progress as a whole, however, the rest of the areas continue to exceed targets and are comparable to the global average (Asia, had a net loss of

forests in the 1990s, but reversed this trend with a reported net gain of forests in the period 2000–2010, primarily due to large-scale afforestation efforts by China (SCBD, 2010)).

Figure 4a illustrates the significant progress in regards to the proportion of terrestrial areas protected compared to global averages. From 1990 – 2000 the region, excluding China, made exceptional progress in the proportion of terrestrial PA cover; increasing from 4% to 12.1%.

Including China's proportion of terrestrial cover, the East Asia region is amongst the three best performers of the developing regions (Figure 4b). Figure 4b illustrates that the region (when excluding China) has comparable progress to those of other developing regions.

Table 2: Number of and percentage of PA cover for countries and/or territories of the East Asia region (Source: EA workshop, UNEP-WCMC and National Reports to the CBD).

	Number of PA	Area (km2)	PA % / Total territory
China	2,531	1,518,800	15.20%
Taiwan	84	11,127	21%
Hong Kong	41	440	40%
Mongolia	65	219,000	14%
Japan	397	54,180	14.3 % (Natural Park)
ROK	1,308	16,270	16.40%
DPRK	327	8,720	7.30%
Total	4,746	1,828,457	15.51%

Figure 3: Percentage of terrestrial and marine (territorial waters up to 12 nautical miles) areas protected as a) a global comparison and b) comparison with developing regions (IUCN and UNEP-WCMC, 2010).

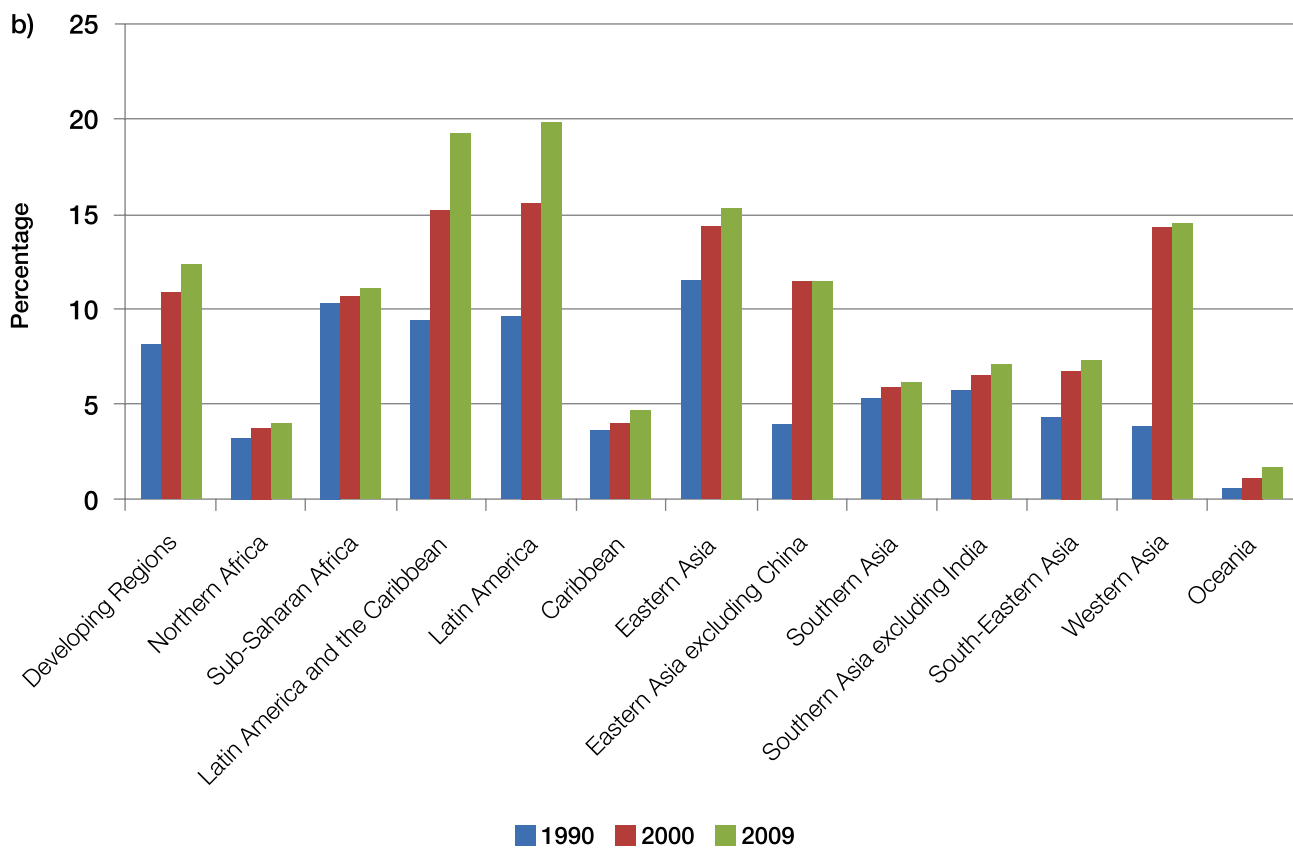
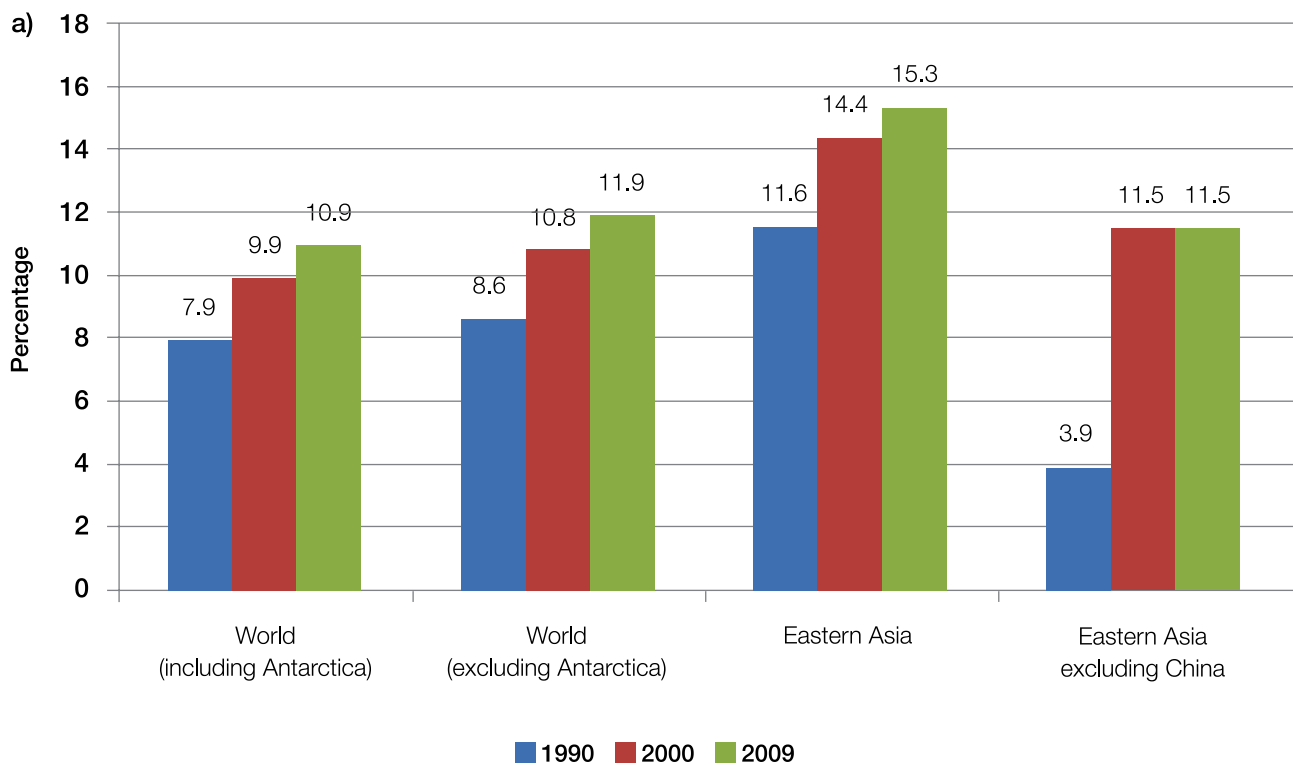


Figure 4: Percentage of terrestrial areas protected as a) a global comparison and b) comparison with developing regions (IUCN and UNEP-WCMC, 2010).

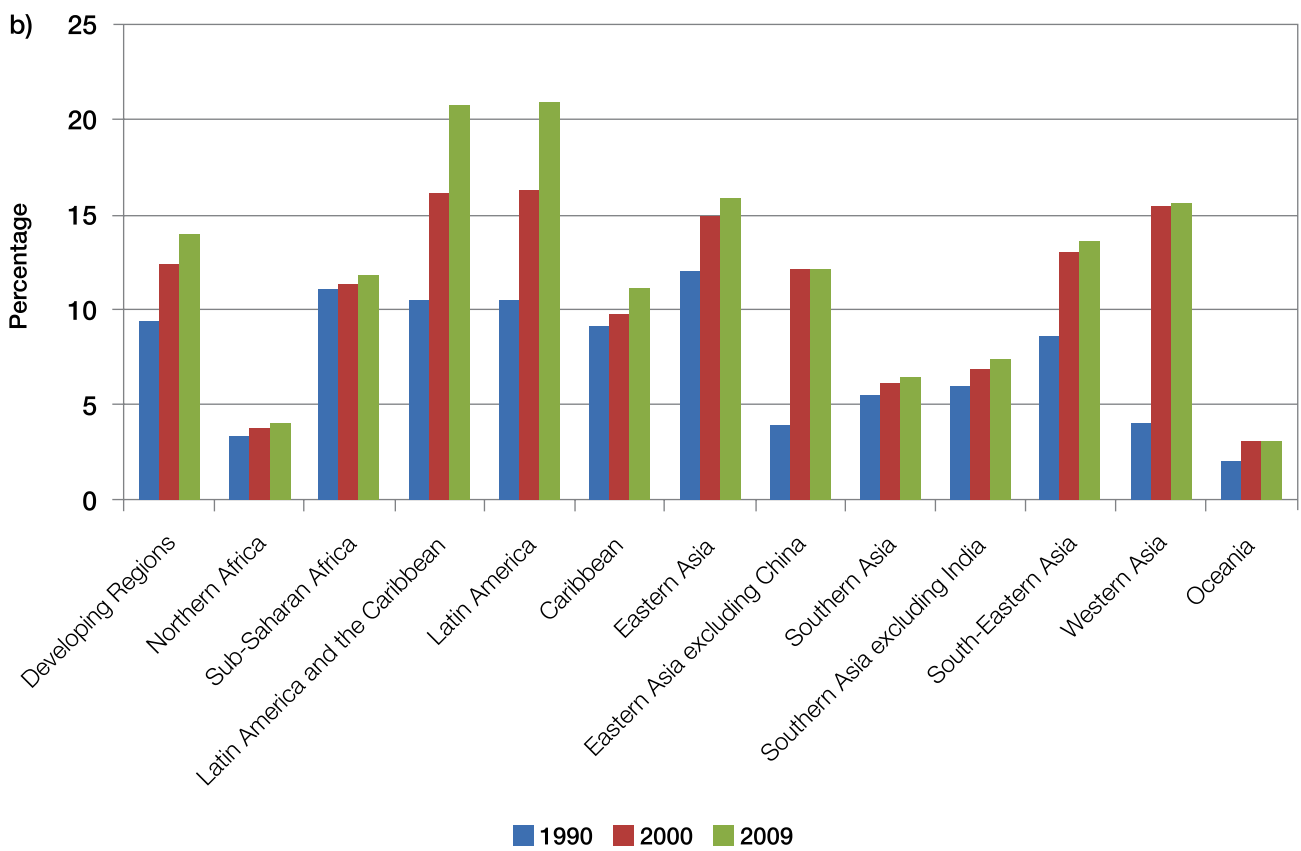
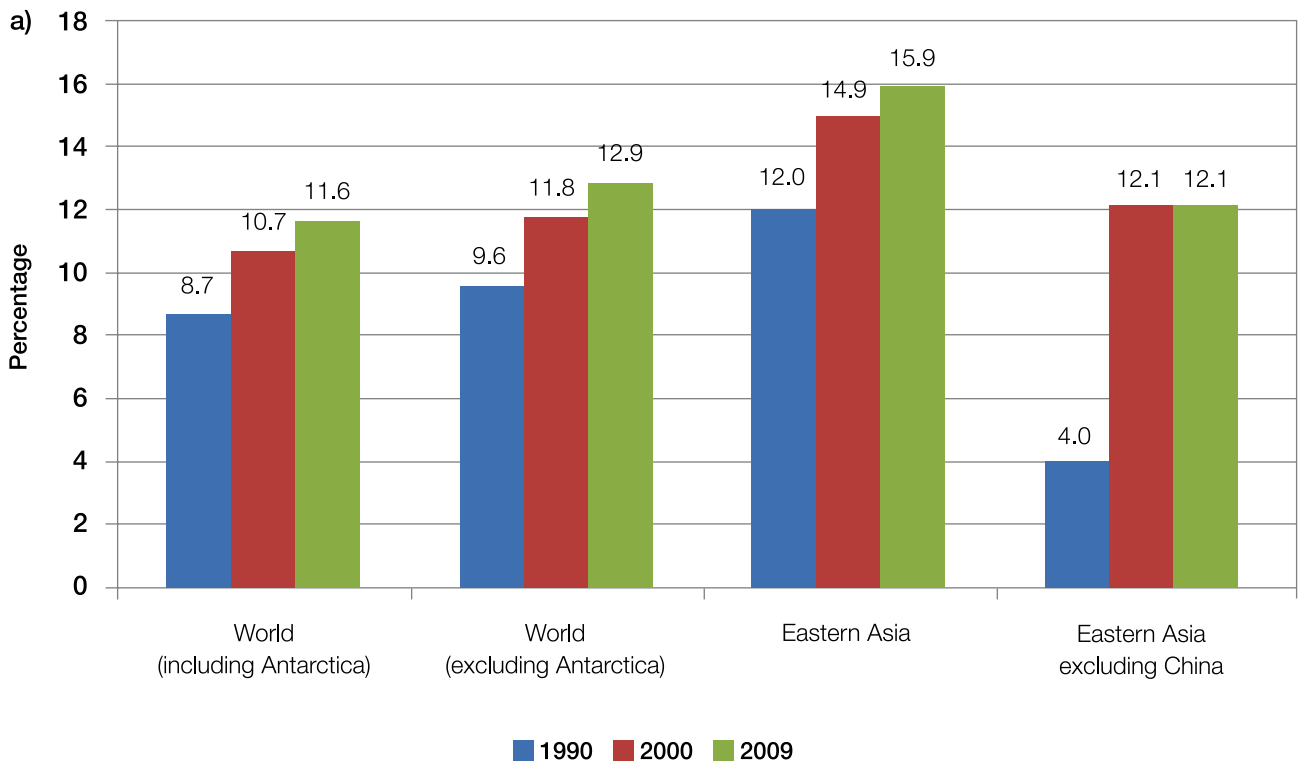
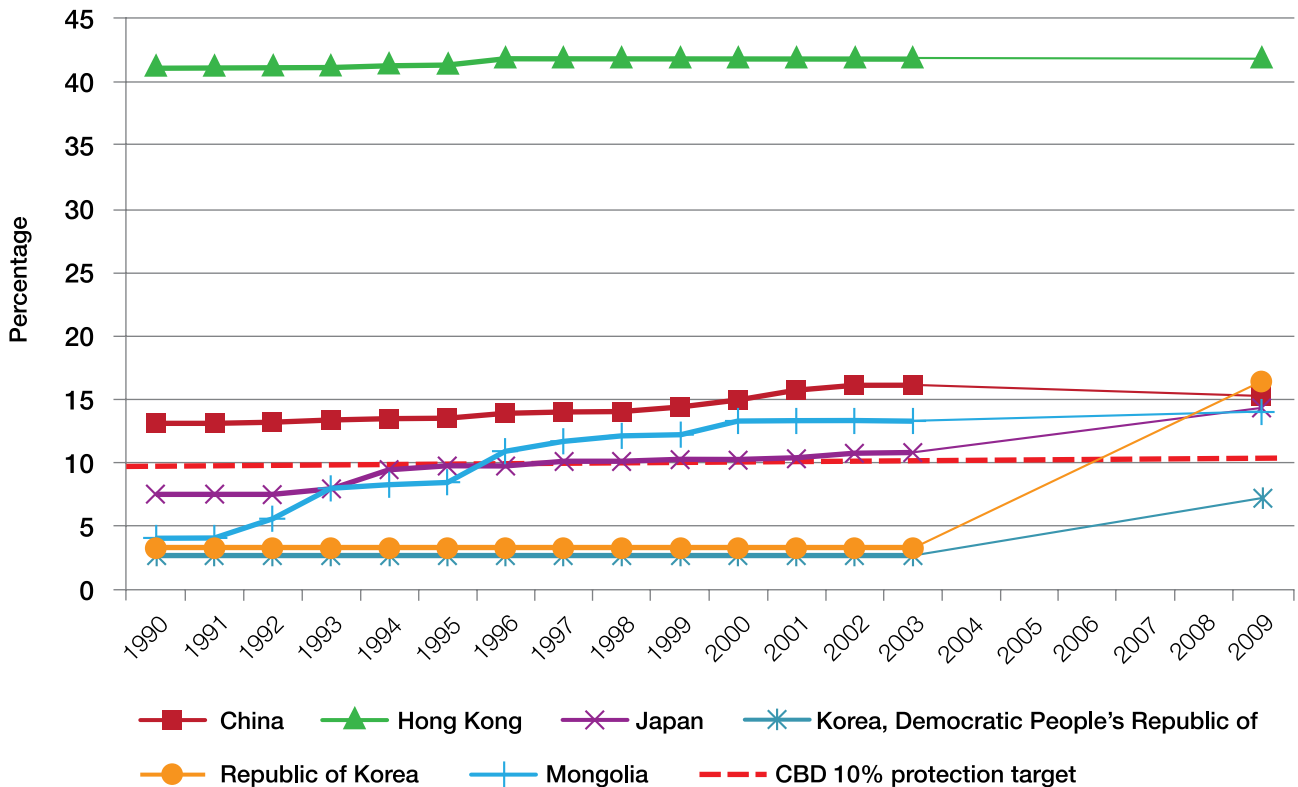


Figure 5: Proportion of terrestrial and marine areas protected in the East Asia region. Trendlines for China display data for the Special Administrative Region of the People's Republic of China, which includes Taiwan. (Source: Presentations at the EA workshop, UNEP-WCMC (has not been updated since 2003, illustrating the inconsistencies in reporting PA coverage) and National Reports to the CBD.)



3.2: Status of regional PA coverage

Most countries/territories are well beyond global targets for terrestrial PA coverage (Table 2, Figure 5). Hong Kong boasts the greatest percentage of PAs (40%), followed by Taiwan at 21%. Mongolia, ROK, China and Japan have also exceeded global area-based targets with 14%, 16.4%, 15.2%, and 14.3%, respectively, of their territories in PA systems (Table 2). The latest available data, as of 2005, for DPRK indicates 8,720km² or 7.3% land area is part of a PA (DPRK MAB committee, 2005).

The region should continue to promote progress in PA coverage while also attempting to address representivity and addressing issues that allow the system to persist in the long term e.g. Connectivity in the face of climate change (section 5.1.11 of this report). Concerns remain that the PA systems are biased towards mountain habitats and protection of grasslands, marine areas and lowland

forests are less than desired. Greater effort is required to undertake both regional and national PA system gap analyses and to improve the integrity of PA systems based on the findings.

Figure 5 above illustrates the inconsistencies in reporting progress in PA coverage. This is a requirement under the PoWPA and requires significant improvement for the East Asia region (the UNEP-WCMC data for the region has not been updated since 2003). There has been recent efforts by IUCN, together with UNEP-WCMC (World Conservation Monitoring Centre), Korea National Park Service (KNPS) and ACB (ASEAN Centre for Biodiversity) to improve the quality of the WCMC data through developing a review methodology with IUCN-WCPA experts and sample testing it in 3 Asian countries (Thailand, Republic of Korea, and Indonesia). Together with the recommendations and methodologies from this study PA data would be most effectively collated and coordinated by a regional PA coordination and capacity building body (further details in section 3.4).

3.3: Global PoWPA progress versus East Asian PoWPA progress

East Asia's progress in the implementation of the 16 goals of the PoWPA is similar to that of global progress; against 11 of the goals progress is the same and against 3 of the goals the region is progressing better than the global average (outlined in the tables below). The region has been most successful in the implementation of goals 1.1, 1.2 and 1.3, which focus on addressing ecological gaps, integration and connectivity of the PA system along with transboundary collaboration.

Goal 3.5 – 'By 2008 public awareness, understanding and appreciation of the importance and benefits of protected area is significantly increased' – requires further effort to meet the global target progress.

An outline of the PoWPA progress for each East Asian nation is provided in appendix 1, including a description of their PA system and a map depicting PA coverage. Global and EA target progress assessments are based on CBD reports and the information from the EA workshop. These assessments are based on the project progress report provided by Dr John MacKinnon.

Goal 1.1: To establish and strengthen national and regional systems of protected areas integrated into a global network as a contribution to globally agreed goals

Highlighting of the target indicates activities require regional level action identified in the EA RAP. They are detailed in section 3.4.

Key: • very little progress; •• some progress; ••• fair progress; •••• good progress; ••••• excellent progress

Target	Global Target Progress	East Asia Target Progress
To establish and strengthen national and regional systems of PAs integrated into a global network as a contribution to globally agreed goals (by 2010 for terrestrial and 2012 for marine)	•••• globally for terrestrial; • for marine areas	••••• for terrestrial; •• for marine areas

Examples of progress: Since 2004, 134 new PAs (3,653.3km²) have been designated by ROK. China has had similar progress, creating 136 new PAs from the end of 2006 to the end of 2007 (340,000 km²). Mongolia has increased its PA coverage by 3% since 2004; since 2004 Japan has established 31 new PAs (792.53 km²), 24 Ramsar sites and 1 World Heritage site.

ROK have established 3,974 km² (about 0.9% of the total Marine Area) of marine PAs. Hong Kong has 5 marine PAs protecting 2,430ha or 1.4% of their marine territory. Japan will be strengthening their Marine Park Sites into Marine Park Zones (to protect tidal flat, shore reef area and habitat for seabirds, marine animals, seaweed and sea grass bed).

Goal 1.2: To integrate protected areas into broader land- and seascapes and sectors so as to maintain ecological structure and function

Key: • very little progress; •• some progress; ••• fair progress; •••• good progress; ••••• excellent progress

Target	Global Target Progress	East Asia Target Progress
By 2015, all PAs and PA systems are integrated into the wider land- and seascape, and relevant sectors, by applying the ecosystem approach and taking into account ecological connectivity / and the concept, where appropriate, of ecological networks	•• likely to be achieved provided more systematic effort are put in place in next five years	••• likely to be achieved provided more systematic effort are put in place in next five years

Examples of progress: ROK has established a countrywide ecological network with 379 eco-corridors. Mongolia has conducted a Biodiversity Gap Analysis in partnership with WWF and TNC. Hong Kong (under its

National PAs Systems Plan) and Taiwan have plans to strengthen country-wide land management and cooperation (Formulating an island-wide Land Use Planning Act, Backbone Ridge Conservation Corridor).

Goal 1.3: To establish and strengthen regional networks, transboundary protected areas (TBPAs) and collaboration between neighbouring protected areas across national boundaries

Key: ● very little progress; ●● some progress; ●●● fair progress; ●●●● good progress; ●●●●● excellent progress

Target	Global Target Progress	East Asia Target Progress
Establish and strengthen by 2010/2012 transboundary PA areas, other forms of collaboration between neighbouring PAs across national boundaries and regional networks, to enhance the conservation and sustainable use of biological diversity, implementing the ecosystem approach, and improving international cooperation	●●● <i>could be achieved partially if current trends continue</i>	●●●● <i>some excellent initiatives underway and many other areas for cooperation are identified</i>

Examples of progress: China has established an agreement on Common Nature Reserves among China, Mongolia and Russia and formed an intergovernmental working group for transboundary nature reserves and biodiversity conservation between China and Russia.

Mongolia and Russia have established the Sokhondinski Federal Nature Reserve. The region, especially ROK as the secretariat, continues to participate in East Asian-Australasian Flyway Partnership.

Goal 1.4: To establish and strengthen regional networks, transboundary protected areas (TBPAs) and collaboration between neighbouring protected areas across national boundaries

Key: ● very little progress; ●● some progress; ●●● fair progress; ●●●● good progress; ●●●●● excellent progress

Target	Global Target Progress	East Asia Target Progress
All PAs to have effective management in existence by 2012, using participatory and science-based site planning processes that incorporate clear biodiversity objectives, targets, management strategies and monitoring programmes, drawing upon existing methodologies and a long-term management plan with active stakeholder involvement.	●●● <i>likely to be partially achieved; but effective implementation is poor</i>	●●● <i>Will be achieved in Japan, Taiwan, ROK and Hong Kong, partially achieved in China and Mongolia</i>

This target will be achieved in Japan, Taiwan, ROK and Hong Kong and partially achieved in China and Mongolia.

Examples of progress: ROK has many system level plans (e.g. Natural Parks Basic Plan, National Master Plan for Wetland Conservation, and Ecosystem/Landscape Conservation Area); and has site management plans in

place for all NPs, all wetland PAs, and all Ecosystem/Landscape Conservation Areas. In Mongolia new management plans (2006-2010) have been developed for 7 National Parks. China has many PA management plans but many of them have not been implemented due to various impediments.

Goal 1.5: To prevent and mitigate the negative impacts of key threats to protected areas

Key: ● very little progress; ●● some progress; ●●● fair progress; ●●●● good progress; ●●●●● excellent progress

Target	Global Target Progress	East Asia Target Progress
By 2008, effective mechanisms for identifying and preventing, and/or mitigating the negative impacts of key threats to PAs are in place.	●●● <i>re identification of threat but mitigation and prevention is poor</i>	●●● <i>re threat identification but mitigation and prevention is poor</i>

Examples of progress: In general there is good progress on identifying the threats. However, mitigation and prevention is poor. In China actions to mitigate threats are well supported by laws and notices. ROK has several plans and processes for managing key threats including a

comprehensive plan of restoration on trails and degraded areas; Environmental Impact Assessment and Pre-Environmental Review and Strategic Environmental Assessment (SEA); and has published the results from a survey on the status of invasive species.

Goal 2.1: To promote equity and benefit-sharing;

Goal 2.2: To enhance and secure involvement of indigenous and local communities and relevant stakeholders

Key: ● very little progress; ●● some progress; ●●● fair progress; ●●●● good progress; ●●●●● excellent progress

Target	Global Target Progress	East Asia Target Progress
2.1: Establish mechanisms for the equitable sharing of both costs and benefits arising from the establishment and management of PAs (by 2008); 2.2: Full and effective participation of indigenous and local communities, in full respect of their rights and recognition of their responsibilities, consistent with national law and applicable international obligations, and the participation of relevant stakeholders, in the management of existing, and the establishment and management of new PAs (by 2008)	●● <i>for both the targets in some areas; way behind meeting the targets at global level</i>	●● <i>indigenous peoples not regarded as relevant priority in the region and involvement of local communities still not well developed. Private land owners are well involved in Japan and ROK.</i>

Examples of progress: Private land owners are involved in PA management in Japan and ROK. There is a Park Management Association in each park in ROK, and in Japan, PA management coordination has strengthened with

respect to people's property rights and businesses through various conferences and volunteer programs. Involvement of local communities still needs to strengthen throughout the other areas of the region.

Goal 3.1: To provide an enabling policy, institutional and socio-economic environment for protected areas

Key: ● very little progress; ●● some progress; ●●● fair progress; ●●●● good progress; ●●●●● excellent progress

Target	Global Target Progress	East Asia Target Progress
By 2008 review and revise policies as appropriate, including use of social and economic valuation and incentives, to provide a supportive enabling environment for more effective establishment and management of PAs and PA systems.	●●● <i>partially achieved at global level</i>	●●● <i>partially achieved at global level</i>

Examples of progress: Most countries have already put in place appropriate policy, institutional and socio-economic frameworks. There is also progress on economic evaluation

assessments; for example ROK has assessed the economic value of national parks at approximately US\$ 3,070million

Goal 3.2: To build capacity for the planning, establishment and management of protected areas;

Goal 3.3: To develop, apply and transfer appropriate technologies for protected areas

Highlighting of the target indicates activities require regional level action identified in the EA RAP. They are detailed in section 3.4.

Key: ● very little progress; ●● some progress; ●●● fair progress; ●●●● good progress; ●●●●● excellent progress

Target	Global Target Progress	East Asia Target Progress
3.2: By 2010, comprehensive capacity building programmes and initiatives are implemented to develop knowledge and skills at individual, community and institutional levels, and raise professional standards	●●● <i>partially achieved at global level</i>	●●● <i>partially achieved. Standards already high in richer territories and being developed in China and Mongolia. Probably poor in North Korea.</i>
3.3: By 2010 the development, validation, and transfer of appropriate technologies and innovative approaches for the effective management of PAs is substantially improved, taking into account decisions of the Conference of the Parties on technology transfer and cooperation	●●● <i>partially achieved at global level</i>	●●● <i>partially achieved but transfer of technology to North Korea a priority</i>

Examples of progress: Standards are generally high in some territories but require further development in China and Mongolia. China did, however, establish biodiversity conservation and ecosystem management training and

education center in 2006 and Mongolia undertook capacity training and needs assessments and provided an official certified professional rangers training course in 2007.

Goal 3.4: To ensure financial sustainability of protected areas and national and regional systems of protected areas

Key: ● very little progress; ●● some progress; ●●● fair progress; ●●●● good progress; ●●●●● excellent progress

Target	Global Target Progress	East Asia Target Progress
Target: By 2008, sufficient financial, technical and other resources to meet the costs to effectively implement and manage national and regional systems of PAs are secured, including both from national and international sources, particularly to support the needs of developing countries and countries with economies in transition and small island developing States.	●● <i>but far behind meeting the target at global level</i>	●● <i>but far behind meeting the target at regional level</i>

Examples of progress: There has been some progress in the EA region but it is still lagging behind meeting the agreed target. Progress includes a financial needs

assessment in Mongolia and Japan has financially supporting the region via IUCN.

Goal 3.5: To strengthen communication, education and public awareness

Key: ● very little progress; ●● some progress; ●●● fair progress; ●●●● good progress; ●●●●● excellent progress

Target	Global Target Progress	East Asia Target Progress
By 2008 public awareness, understanding and appreciation of the importance and benefits of PAs is significantly increased	●●●● <i>partially achieved at global level</i>	●●● <i>partially achieved especially with high visitor numbers to regional PAs</i>

Goal 4.1: To develop and adopt minimum standards and best practices for national and regional protected area systems;

Goal 4.2: To evaluate and improve the effectiveness of protected area management

Highlighting of the target indicates activities require regional level action identified in the EA RAP. They are detailed in section 3.4.

Key: ● very little progress; ●● some progress; ●●● fair progress; ●●●● good progress; ●●●●● excellent progress

Target	Global Target Progress	East Asia Target Progress
4.1: By 2008, standards, criteria, and best practices for planning, selecting, establishing, managing and governance of national and regional systems of PAs are developed and adopted	●● <i>standards, criteria and best practices but poor global adoption</i>	●● <i>for developing standards, criteria and best practices but adopting them poor at regional level</i>
4.2: By 2010, frameworks for monitoring, evaluating and reporting PA management effectiveness at sites, national and regional systems, and transboundary PA levels adopted and implemented by Parties	●● <i>further assessments being carried out so could be partially achieved at global level</i>	●● <i>further assessments being carried out so could be partially achieved</i>

Examples of progress: Globally over 100 countries have assessed management effectiveness, but less than 10% PAs have been assessed. Within East Asia ROK conducted a Management Effectiveness Evaluation (MEE) between

2008~2009 with a number of other territories preparing for these evaluations (e.g. Japan and MEE of Marine Protected Areas).

Goal 4.3: To assess and monitor protected area status and trends

Key: ● very little progress; ●● some progress; ●●● fair progress; ●●●● good progress; ●●●●● excellent progress

Target	Global Target Progress	East Asia Target Progress
By 2010, national and regional systems are established to enable effective monitoring of PA coverage, status and trends at national, regional and global scales, and to assist in evaluating progress in meeting global biodiversity targets	●●● or coverage and trends monitoring in WCMC, but status monitoring is poor	●●● for monitoring coverage and trends through WCMC, but monitoring status is poor

Examples of progress: Coverage and trends monitoring in WCMC is in line with global progress, but status monitoring is poor. Japan has been undertaking a general review and gap analysis of its National Park system since 2007;

Mongolia conducted a mid-term assessment of the implementation of National Programme on PAs; and in South Korea & China a number of evaluation and monitoring mechanisms are employed.

Goal 4.4: To ensure that scientific knowledge contributes to the establishment and effectiveness of protected areas and protected area systems

Key: ● very little progress; ●● some progress; ●●● fair progress; ●●●● good progress; ●●●●● excellent progress

Target	Global Target Progress	East Asia Target Progress
Scientific knowledge relevant to PAs is further developed as a contribution to their establishment, effectiveness, and management.	●●●● good progress to date	●●●● good progress to date

3.4: Regional Progress against EA RAP targets

Discussions at the EA workshop highlighted the need for a stronger alignment with the CBD PoWPA goals. The problems and issues identified through the EA RAP harmonise with those of the CBD PoWPA and the need for future RAP actions is discussed in section 5.2.

Table 3 summarises the EA region’s progress against the actions of the EA RAP. The region has made good progress with the first 3 actions, relating to PA system plans and categories. Marine PA planning is not as far advanced but clear efforts exist in China, Hong Kong, ROK, Taiwan and Japan. These actions align with Goal 1.1 of the CBD PoWPA, against which the region is performing well in comparison to global averages.

There has been good progress in strengthening PA systems by developing transboundary collaboration and alignments (RAP Action 4; CBD PoWPA Target 1.3). ROK, China, Mongolia and Japan are keenly promoting their biodiversity through the use of the World Heritage nominations, and using it as a tool for better management (RAP action 11; CBD PoWPA target 1.2).

Actions that require regional efforts require leadership and resources. The RAP outlines a number of actions for the regional level and to date there have been few achievements (RAP actions 9, 15, 20, 22, 26, 28, 30). These actions include competence standards and capacity building for PA professionals, improved reporting to international databases and efforts in protecting migratory species. These actions and issues would benefit greatly from a coordinated lead and response (see box below).

The need for a regional coordination mechanism is highlighted a number of times throughout the following discussion. Ideally this would be met via a regional coordinating and technical capacity building centre that would lead on issues including, but not limited to, monitoring databases for migratory and invasive species, facilitating transboundary PA agreements, regional climate change strategies and action plans, act as the focal point for data and monitoring collection for WDPAs and technical services such as training and expert input and review.

IUCN-WCPA Asia, as part of its draft strategy for 2011-2014, has proposed the establishment of a IUCN-WCPA Asia Secretariat. This would be the ideal group to support the establishment and implementation of the regional coordinating and technical capacity building centre.

Table 3: Summary of regional progress against actions in 2006 East Asia Action Plan

(yellow highlight indicate actions requiring regional level action)

(Summary of progress statements taken from progress report by John MacKinnon)

No	Actions	Lead Agents	Funding Source	PoWPA target	Summary of progress since 2006
1	Each country should undertake a National PA Systems Plan to identify additional PA needs and identify national priorities	National	National	1.1	Most countries already have a National PA System Plan at some level and the East Asia regional plan serves as an overview of further needs.
2	Countries/territories should review their range of PA categories and zones in a ways that offer more management options, especially for integrated management within PAs (e.g. by more than one agency), sustainable use of some resources and greater involvement of local communities.	National	National	1.1	Most areas/territories in the region now have a wide range of categories available. China's suggestions about introducing more categories of PAs are again being revived and reviewed. Zoning of PAs is not utilized in all countries/territories.
3	Within PA Systems Plans or as separate plan each territory with marine areas should undertake a review of marine PA needs	National	National	1.1	Quite a few new marine and coastal PAs have been created. Clear efforts in marine PA planning have occurred in China, Hong Kong, ROK, Taiwan and Japan. Problems remain in offshore seas and open seas overlapping sovereignty claims.
4	Each country/territory should take special attention to identify and act on opportunities to strengthen the PA system by developing transfrontier collaboration and alignments with PAs in adjacent territories	Bilateral initiatives	National and International	1.3	Good progress remains in this area. Transboundary WH sites are being planned in Altai Mts (4 countries), Tianshan (3 countries), Pamirs (4 countries), Himalayas (2 countries); Greater Mekong corridor (China and Indochina); Guangxi limestone (border reserve with Vietnam); Tumen river (China – Russia), Lake Kanka (China-Russia); Hulunbeir grasslands and wetlands (China-Russia-Mongolia). Linkage between ROK and DPRK remains unilateral.
5	Strengthen East Asian Flyway Programme	Secretariats of various migratory conventions	National and international	1.3	There is little progress to report.
6	Each country/territory should review its existing PA legislation in relation to emerging trends and new needs	National	National	3.1	Countries/territories are addressing this action with reviews of existing legislation. China is about to commence a review once again and plan new legislation for Nature Reserves.
7	Regional Meetings should be used to formulate shared viewpoints to be delivered to important COP meetings of International Conventions	EA-WCPA	National contributions plus international sponsors	1.3	East Asia workshop fulfils this action. It feeds into a wider meeting in Dehra Dun and to the Copenhagen climate negotiations in December 2009 and CBD COP10 in Japan 2010.
8	Each country/territory should develop management plans for all PAs. Standards for preparation and approval of such plans should be issued	National	National	1.4	Continues to remain a challenge. There are now more than 7000 PAs in the region. The major reserves and World Heritage Sites mostly have management plans and can serve as models for other sites. In China sites develop master plans to secure budgets for development but these do not cover all aspects desired for a management plan.
9	Adopt competence standards that list the various professional skills and knowledge (competences) for different positions and levels within a PA management organisation	IUCN	International sponsorship	4.1	More work needed on this but the standards developed for ASEAN countries were translated into Chinese and being used in Yunnan province and some international support programmes.

No	Actions	Lead Agents	Funding Source	PoWPA target	Summary of progress since 2006
10	Regional governments and related international organisations should implement the CBD PoWPA as the global standard for the comprehensive and effective management of the World's PAs	National	National and International	All	Efforts have been made especially during the recent regional workshop in Jeju. ROK is working to harmonise the East Asian action plan with the CBP PoWPA.
11	Promote Biodiversity through World Heritage	Regional	International funding sources	1.2	China, Mongolia, ROK, and Japan continue to keenly extend their nominations for natural and mixed WH Sites. These sites serve as models of standards for other PAs to emulate within the region and can be used as venues for technical meetings where managers from other sites can see the highest standards.
12	Promote PA development through other International Programmes: MAB, RAMSAR, Bonn Convention etc.	Regional	International funding sources	1.2	MAB programme within the region remains rather slow. RAMSAR, however, is strong and serving an important role vis-à-vis wetland PA development in the region.
13	Highlight linkage between PA development and Climate change.	National	National	1.5	This has become a major theme within the region. More so than globally under PoWPA. Several international workshops and many papers on this issue have emerged in the past 2 years
14	Establish routine PA monitoring of biodiversity impacts, management effectiveness and socio-economic data of local communities	IUCN	International funding sources	2.1, 2.2, 4.2, 4.3	The best example of great progress in this direction is the recently concluded review of management effectiveness in PA system of ROK with IUCN assistance. Some progress on this issue continues in China.
15	Establish databases on PA details and experts database and network for the region	WCPA-EA secretariat with UNEP-WCMC	International funding to be sought	4.2	Some efforts being developed in individual countries to develop expert databases. IUCN has carried out a project related to the WCMC Asia in cooperation with UNEP-WCMC, KNPS and ACB. The aim of this project is to improve the quality of WCMC data through developing a review methodology with WCPA experts and sample testing it in 3 Asian countries (Thailand, Republic of Korea, and Indonesia).
16	Establish an Invasive Species information and alert website	China Academy of Sciences	International funding to be sought	1.5, 4.4	This is occurring at national level in all territories.
17	Sharing experience in ecological recovery	Host to be sought	International sponsorship required	3.3, 4.4	Efforts still largely at national level. This became a priority issue in China following the disastrous earthquakes that damaged a lot of PA habitat in Sichuan and Gansu in 2008.
18	Take firm action to curtail the large-scale illegal hunting and wildlife trade within the region	National with NGO support	Many sources	1.5	Progress is patchy. Falcon smuggling from Xinjiang and wildlife smuggling across the Guangxi borders are much improved, but smuggling across the Mongolia/China and Russian/China borders remains a big problem.
19	Halt the rodent and pika spraying programmes in northern China	MOA, China. IUCN leverage needed	National	1.5	The issue has been highlighted in recent international forums such as Society for Conservation Biology (Beijing 2009) but the programmes continue.

No	Actions	Lead Agents	Funding Source	PoWPA target	Summary of progress since 2006
20	Establish links between species monitoring databases in different countries on shared species of wide regional concern e.g. cranes, migratory turtles, etc.	East Asia Biodiversity Centre, when established	Links can be set up before centre established using existing centres	3.2	Little progress.
21	Promote East Asian Field guide Series	National requests	World Bank support sought	3.2	Some progress. Bird guides available in Korea, Taiwan, Japan, Hong Kong and Mongolia. Hong Kong has field guides for many taxa. Digital field guide to China birds now available, new field guide of China mammals published in English, translated to Chinese and now in press.
22	Translate and distribute IUCN's best practices series	IUCN	International funds to be sought	3.3	Remains a priority. A few titles available in Chinese.
23	Adopt and enforce eco-tourism codes of conduct	WCPA and BGO lobbying needed	Voluntary adoption by industry	3.5	Slow progress. Ecotourism currently dipping as a result of natural disasters in 2008 and economic downturn 2008-9.
24	Develop broader alliances for PA support	National with NGO encouragement	Private sector and others	3.4	Little progress.
25	Develop better ways for the involvement of local communities in PA establishment, planning and management	IUCN through promotion of good experiences	Funds for models and pilots to be sought	2.1, 2.2	Little progress. The IUCN WCPA and CEESP (Commission on Environmental, Economic and Social Policy) theme working group 'Theme on Indigenous Peoples, Local Communities, Equity and Protected Areas (TILCEPA)' should be engaged on how to improve progress.
26	Develop training course for PA managers in each country/territory and establish a regional course for training of trainers to promote some level of standardisation	IUCN and national	International and national sources	3.2, 3.3	Little progress but still very relevant. Funding urgently needed. CBD Secretariat should be involved in the design of training course materials
27	Supplement formal training with in-service training for PA staff	National	National plus international sources	3.3	Some progress but dependent upon hap hazard external programmes. For example Global Parks volunteers from US are now helping train staff in China.
28	Establish an East Asian Technical Cooperation Programme	National	National and international	3.3	This will depend largely on the establishment of a capacity building centre.
29	The East Asian governments should explore ways to make significant increases in the level of funding afforded to PA establishment and development	National following IUCN guidelines	National and private development funds	3.4	National budgets continue to rise. High levels of tourism earnings can also be redirected into protection and management. Still little progress in involvement of private sector, though many PAs in ROK and Japan are on privately owned lands.
30	Establish a WCPA-EA secretariat	Host country with IUCN support	Major funding to be sought	1.1	Financially challenging.

No	Actions	Lead Agents	Funding Source	PoWPA target	Summary of progress since 2006
31	Disseminate the Action Plan and promote a wide range of stakeholders to implement it. Review and monitor the success of the action plan during Regional Committee Meetings and regional workshops	IUCN-WCPA secretariat and membership	Small funding to be found	3.3	This has been successfully achieved. IUCN secured funding to translate the plan into the main regional languages and these have been distributed in hard copy and available in digital format on request.
32	Develop links to neighbouring regions' programmes	All agents	Little funding required	1.3	Linkage with SE Asia already improved through IUCN-WCPA combining these two sub-regions. Participation with South Asian Regional also developing. Still necessary to involve Russia more strongly.

4. Areas in which East Asia is progressing well

4.1 Sacred Mountains as a basis for popular support

Most East Asia countries/territories share a deep-rooted respect for sacred mountains and lakes. These have been targets of pilgrimage over the centuries for Mongolians, Tibetans, Taoists, Confucianists, Koreans and Japanese alike. Access to sacred mountains ranges from totally off-limits (being retained wholly for the gods or spirits), strictly controlled (for example being confined to religious leaders or elders) to accessible by anyone. The East Asia region has embraced the tourism potential of these areas and today many of these areas have become adapted to mass tourism and with extremely high numbers of visitors to famous sacred sites.

Challenges and strategies employed in East Asia in using sacred mountains to support biodiversity conservation.

Sacred sites constitute both a challenge and a great opportunity to build support for conservation and sustainable use of natural areas. They may be of high conservation value; more strongly protected and better managed than those that are solely government sanctioned and regulated; important for preserving traditional knowledge; significant manifestations of culture and cultural diversity; of intrinsic value because of their sacredness; and destinations for ecotourism. They may also attract increasing recognition, funding, and other support in contrast to secular places. However, sacred sites may also be semi-natural instead of pristine nature or wilderness; they may be too small or fragmented to possess much if any value for biodiversity conservation; they may be vulnerable to changes in the associated culture and religion; their economic values may be allowed to supersede religious ones; traditional custodians may wish to keep them secret; and knowledge and control of them may be

reduced or removed from their traditional users (Dudley et al, 2005)

Many sacred sites in the East Asia region are small yet have to manage several million visitors each year. Impact is also concentrated by cultural practices such as the perception that a visit to the park is not complete unless the mountain is climbed. Migration of locals from surrounding areas to the parks is also a management issue, as farmers for example, are drawn to the park to reap the benefits associated with tourists (e.g. opportunities to earn money).

Standards and approaches developed to cope with such large numbers of tourists and local migrants are highly advanced and provide pioneering models for the rest of the world. For example the Korean National Parks Service carries out its Temporary Closure Program designed for the purposes of restoring ailing ecosystems, habitats, and preserving regions rich in biodiversity. The 'sabbatical' process aims to 'rest' heavily used areas or PAs for long enough periods to promote recovery (Figure 4). First implemented in 1991 and currently in its sixth incarnation, the program oversees the closure of regions for periods up to ten years (Korean Mountain Preservation League, 2010).

The Huangshan municipal government of China has taken a number of actions to address the environmental pressures of tourism and local migration at the Huangshan Mountain Scenic Spot. A key action has been to develop areas located at lower, less sensitive sites rather than the mountaintop. This redirects visitors from overcrowded areas and relieves some of the pressure experienced in the fragile mountaintop areas. Local migration issues have been addressed by sending education teams to the surrounding villages to promote the idea of protecting the Huangshan Mountain with tangible benefits of sustainable tourism (Eagles et al 2001).

Figure 4: Korea's 'sabbatical' process that aims to 'rest' heavily used areas of PAs for long enough periods to promote recovery.



Tourism, if effectively managed, can be a key element in generating support for the protection of unique areas. The huge use of mountainous and sacred PAs and growing demand for more destinations forms a strong basis for the growth and development of wider systems of PAs and provides high financial returns, high public support and avenues for involvement of the private sector in PA development (an issue that requires greater attention throughout the region – section 5.1.8). Having effective management plans for these sites and considering how they are integrated as a part of a wider system plans will become crucial to addressing the issue of tourism pressures and infrastructure impacts in these areas. With the ever-increasing population numbers of the East Asia region pressure from tourism will be one of the major challenges for mountain PAs of the region in the future and will have to be effectively managed and monitored.

4.2 Connectivity/transboundary initiatives

East Asian countries/territories have firmly embraced the concept of connectivity and several regional initiatives are among the most ambitious globally. Taiwan has linked all its inland terrestrial national parks and a few other PAs to a protected mountain core that runs the entire length of the island (Figure 5)

Transboundary agreements exist across the China - Russian border at Lake Xingkai/Kanka, the China/Russian/Mongolian borders of Hulunbuir grasslands and lakes, the Gobi desert reserves between China and Mongolia, the Karakoram reserves in China and Pakistan, the Qongmalonga/Everest and other Himalayan connections with Nepal, the Gaoligong Mountains between China and Myanmar, the Shangyang-Hanma connection between China and Lao PDR, and the Lian Shan mountains and Guangxi Limestone reserves between China and Vietnam. Plans are also underway to create four country reserves between China and Mongolia in the Altai Mountains. China has also participated with Myanmar, Vietnam and Laos as part of the Greater Mekong Subregion Biodiversity Corridors Initiative.

Figure 5: Corridor of conservation areas in the central mountains of Taiwan (Taiwan Government Information Office, 2008)



In August 2010 China and Russia agreed to transboundary cooperation and protection of the large Amur River basin. Jilin and Primorsky provinces will increase information sharing on Amur tiger and Far East leopard protection, work to adopt identical monitoring systems for tigers and their prey, conduct joint ecological surveys and develop plans to launch an anti-poaching campaign along the China-Russia boarder over an area of 2.12 million km²(WWF, 2010).

ROK have developed three corridors of protection, the most ambitious of which, Baekdu Daegan, runs up the mountain

backbone of the entire Peninsula, through the Democratic People's Republic of Korea and links to the Changbai Mountain in China which is itself connected via further corridor initiatives through the Tumen river area and adjacent Amur forests of SE Siberia. The Baekdu Mountain area along the Chinese-North Korean border forms a 328,456 ha biosphere reserve spanning PAs in both countries. Containing extensive, contiguous primary forest and the highest plant biodiversity of any in the cool temperate zone, the area provides important habitat for numerous species of wildlife such as the endangered snow leopard

The importance of implementation of PA plans and the extreme challenges that transboundary-protected areas (and PAs in general) face are illustrated by a recent study into the Baekdu Mountain area. Tang et al (2010) found that the North Korean side of the biosphere reserve is faring especially poorly. They found that the North Korea side underwent extensive loss of primary forest - between 50-75% had been logged by 2007. The extent of primary forest held within PAs in China, where strict rules prohibit logging, was maintained. It did however undergo serious degradation from over-harvesting of pine seeds, which have become highly desirable in food markets. However, in 2007 the Chinese government prohibited pine seed collection, so it seems like the situation should improve.

• **Next steps:**

The need for thinking and acting beyond the sub-regional boundaries is apparent – in both marine and terrestrial environments. Cooperation and the ability to implement transboundary commitments are crucial to meeting the conservation objectives of PAs in the region. This may be further enhanced and monitored by a regional coordinating body.

4.3 Embracing the World Heritage Convention as a tool for conservation promotion and better management

The countries/territories of East Asia are showing great interest in the World Heritage Natural Sites programme. There is fierce competition to get on the tentative lists and eventual inscriptions are greatly treasured. Although inclusion in the World Heritage List (WHL) does not in itself entail financial assistance from the international community, modest resources have become available from the World Heritage Fund for technical assistance, including emergency funding for sites under threat or in danger, and for monitoring and capacity-building activities in developing countries.

Such sites also attract more visitors and are being developed as the standard setting models for their

countries/territories. This is important as PAs have been created so fast within the region that training, sharing of technology and experiences and development of local standards are urgent priorities. Even the nomination of a site for inclusion in the WHL brings many benefits, including national and international support for improving management and increased pressure to deal with existing and potential threats (ICEM, 2003).

Some frustration is felt at the slow pace of processing World Heritage sites and there is some discussion about creating a Regional system of Heritage sites just as the South East Asia region have done with their ASEAN Heritage Sites Programme. There is scope to develop Green Listing type certification processes to recognise best practice management thereby tapping into the East Asian culture of healthy competition (see below box).

A downside of the strong emphasis on World Heritage is that other parts of the national PA system may be considered as 'second-class citizens' and so can become neglected. Recent questions have been raised through the media and public on the relatively high levels of investment being made to see national sites inscribed onto the World Heritage List³. This again raises the issue of how limited budgets can be most effectively used to support broader PA needs.

The Green List is an initiative to support, celebrate and share the success of protected areas in reaching good standards of management.

Its objectives are:

1. Establish and improve standards for protected area management by working with protected areas agencies, protected areas and their stakeholders
2. Celebrate success (positive approach)
3. Share good practice

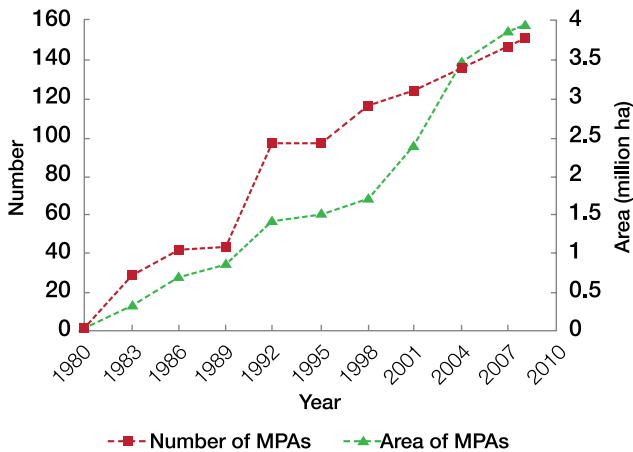
The initiative is in a developmental phase and is being lead by IUCN-WCPA whom are developing the criteria and guidelines for the certification.

4.4 Coastal MPAs

Establishment of an increased number of coastal MPAs is a positive given the large areas of coastline and the leadership happening in places like Japan. Japan and ROK have reasonably good systems of coastal reserves despite the relatively low percentage of coastline protected and given the enormous value and pressure for coastal development within the region. In Japan, the Natural Parks Law has been amended, and Marine Park Site has been strengthened to Marine Park Zone, which protects marine dependent

³ For example: <http://opinion.globaltimes.cn/commentary/2010-08/561971.html>
<http://www.worldheritagesite.org/forums/index.php?action=vthread&forum=8&topic=1508>

Figure 6: Growth of MPAs in China
(Source: Zhenghua 2009)



habitats from tidal flat to sea grass bed. Taiwan's marine PAs cover more area than terrestrial PAs (marine 371,706ha versus terrestrial 307,773ha) and China continues to increase the number and area of marine PAs (Figure 6).

Marine Protected Areas (MPAs) are a valuable tool in efforts to secure, or indeed restore marine biodiversity. They are also increasingly seen to be having a wider role in supporting the sustainable use of marine resources (De Fontaubert et al, 1996; Gell and Roberts 2003; Halpern 2003; Norse and Crowder 2005; Robertsetal, 2005). Sea foods are highly prized and highly priced within the region and there is great potential and adequate economic incentive for development of sustainable approaches to protection, harvesting and mariculture.

4.5 Flagship species conservation programmes

The region has strategically increased PA coverage through capitalising on flagship species conservation programmes and captive breeding assisted reintroductions.

For example in China, a 4-year survey that was completed in 2004, counted 1,600 giant pandas in the wild, which was a very encouraging number⁴. There are now over 50 nature reserves in the panda habitat compared to 13 just two decades ago, protecting more than 10,400km² and over half of the remaining giant panda habitat. This includes over 500,000ha of new and expanded nature reserves in the Minshan Mountains and 8 new nature reserves and 5 green corridors that have been created in the Qinling Mountains, China (WWF, 2010b).

The ROK provides another example, with 54 threatened species having been selected for restoration action until 2015 under its 'Master plan on Propagation and Restoration of Endangered wild species in Korea'. It focuses on damaged or artificial landscapes and endangered, threatened or endemic species. Korea National Parks Service has designated 9 ecological areas, 22 plant species and three animal species as subjects of restoration under this plan.

In the future a possible flagship species for increasing PA coverage may include the Pere David Deer. The Pere David Deer is listed as Extinct in the Wild, as all populations are currently under captive management. The captive population in China has increased in recent years, and the possibility remains that free-ranging populations can be established sometime in the near future (Zhigang & Harris 2008).

⁴In more recent surveys population estimates are less than 2,500 mature giant pandas in the wild with each population is believed to have less than 250 mature individuals. Previous population declines are thought to be reversing by general habitat improvements (although remains an uncertainty) (Lü et al 2008).

5. Future directions

5.1 Areas for improvement/Issues that need greater attention

Adaptation to Climate Change

(CBD PoWPA Goal 1.1, 1.2; EA RAP action 1, 2, 3)

ISSUE

Climate change was only briefly mentioned in both the CBD PoWPA and the EA RAP but it has now come to dominate the global conservation policy debate and also has implications for PA management. Global Biodiversity Outlook 3 (SCBD, 2010) indicated climate change as one of 5 principal pressures directly driving biodiversity loss (others include habitat change, overexploitation, pollution and invasive alien species). It will be recommended that the revised PoWPA include targets for incorporating climate change response strategies, including mitigation and adaptation projects in PA systems and surrounding landscapes/seascapes. Amongst the East Asia region there is poor recognition and/or awareness of climate change impacts on PA systems and the role of PAs in carbon storage or mitigation through sequestration; and ecologically-system based adaptation needs to be better recognised and quantified.

STRATEGY

Develop appropriate responses to increase the resilience of PAs systems to climate change impacts and further increase awareness of the contribution of PA systems to climate change adaptation and mitigation.

ROK, in cooperation with IUCN RPAP Asia, has been preparing a Climate Change Training Programme for the Asia region. This program will be a substantial contribution in raising awareness of climate change in the Asia region. China is currently developing a National Biodiversity and Climate Change Strategy and Action Plan. Other countries should also attend to this issue. These plans should incorporate recommendations of vulnerability assessments including climate change predictions; boundary adjustments to existing PAs; the development of linkages between PAs on climatic gradients; the expansion of PAs to include critical refuges, carbon rich habitats and ecosystem process; the involvement of the full suite of governance types; and the identification of practical measures for managers to address climate change-induced pressures and threats.

Appropriate monitoring and vulnerability assessment processes should be employed and it is important that any strategies and practical measures;

- be achievable;
- address a range of levels;
- link support with other initiatives;
- facilitate the sharing of knowledge and expertise;
- address the practical implementation and review available resources; and

- include immediate (short term), medium term, and long term actions.

More traditional approaches to ecological gap analysis and management effectiveness evaluations should consider other vital ecosystem services (e.g. carbon) as well as biodiversity, and some management approaches may need to be modified. Recognition of disaster reduction options will add impetus to increasing PAs, in particular for mountains, steep slopes and coastal and inland wetlands.

Better intersectoral coordination will assist in integrating biodiversity into climate change and land use planning decision-making and activities. A regional coordinating body should investigate the development of a Regional PA Climate Initiative.

Further guidance on the role of PAs in climate change mitigation and adaptation can be found in Natural Solutions: Protected areas helping people cope with climate change (2010). Translation of this book into IUCN official languages should be considered a priority action.

Management of Invasive Alien Species

(CBD PoWPA Goal 1.5; EA RAP target 16, 19)

ISSUE

Although targets are being met in terms of the percentage of terrestrial area protected, many PA systems fail to adequately protect biodiversity. CBD announced that the target agreed by the world's Governments in 2002, "to achieve by 2010 a significant reduction of the current rate of biodiversity loss at the global, regional and national level as a contribution to poverty alleviation and to the benefit of all life on Earth", has not been met (SCBD, 2010). Invasive species have been shown to be amongst the greatest threats to the integrity of biodiversity in PAs, if not the greatest threat to biodiversity. (Global Invasive Species Programme, 2010). For example, China has estimated a loss of US\$29.3 billion a year due to invasive species. 46.3% of known invasive species have invaded China's natural reserves and 50 of the world's 100 most invasive alien species can be found in China (Wei, 2009).

Most PAs harbour some invasive species with new introductions occurring at an increasing rate. However, few PA managers and their associated staff, especially in developing countries, are aware of this threat nor are they able to address it (Global Invasive Species Programme, 2010).

While some countries have PA management systems that take note of, and manage, biological invasions, the vast majority don't have the capacity or resources to identify invasive species; are largely unaware of their impacts; and, more importantly, don't possess the necessary information and equipment to actually manage them (Global Invasive Species Programme, 2010).

STRATEGY

We need to recognise and promote invasive alien species management as a cost effective tool for the restoration and maintenance of PAs and the ecosystem services they provide. More attention to and better sharing of information amongst the region about the spread of alien invasive species is required.

Establishing a regional specific database of invasive species and learning network to gather such information would be most effective through the regional coordinating body, together with assistance and guidance from The East Asia and Southeast Asia Biodiversity Information Initiative (ESABII)⁵ and the Global Invasive Species Programme (GISP). This would also allow for more effective information sharing at the global level. Training programs for PA staff, in the form of exchange programs, workshops and expert site visits, in the identification of and management of invasive species would be best coordinated through the regional body in partnership with ESABII.

IUCN and TNC⁶ have published detailed best practice guidance notes on assessing and managing invasive species.

Establishment of High Seas protected areas
(CBD PoWPA Goal 1.1 & 1.2; EA RAP action1, 2, 3 & 5)

ISSUE

Managing and protecting high seas areas, with the adjacent coastal zones, is essential given the intricate relationship that exists between shallow coastal waters and deeper areas of the open ocean (UNEP-WCMC, 2008). Although the development of inshore and coastal PAs in the East Asia region is notable and acknowledged in section 4.4, the development of high seas marine PAs is to some extent slowed by disagreement of marine territorial limits. Given the growing threats from marine pollution and sedimentation, mining of coral, over-fishing and use of destructive fishing practise, excessive harvesting of sharks and turtles, increasing temperatures due to climate change and pressures to restart whaling this gap in the PA system should be addressed urgently.

The legal framework for the management of High Seas PAs is the 1982 United Nations Convention on the Law of Sea (UNCLOS) with the CBD providing technical and scientific information. But the protection of any area of high seas depends on several states agreeing to regulate the conduct of their nationals and nationally flagged vessels within it, and the lack of a mechanism for this has been a major obstacle (Gjerde & Kelleher 2005; UNEP-WCMC, 2008). Significant gaps exist in the legal and governance frameworks that are

needed for the implementation of a network of high seas marine PAs. No global instrument currently in place is competent to address the threats impacting the high seas in a cross-sectoral manner, nor is there a governance structure with the capabilities to facilitate cooperation and coordination of activities on the high seas (IUCN 2008). Competing territorial claims in the region's high seas and its resources further complicate discussions and attempts to establish PAs in the region.

STRATEGY

Despite the lack of global instruments and significant gaps in the legal and governance framework, East Asia countries/territories should explore the creation of an Implementation Agreement under UNCLOS. This Agreement would clarify the terms under which States are required to co-operate regarding the utilisation and protection of the high seas, for example through cross sectoral integrated management, thus reducing the likelihood of conservation measures on the high seas being undermined by non-cooperative States (Corrigan & Kershaw 2008).

Existing regional cooperative bodies such as the Northwest Pacific Action Plan (NOWPAP), Coordinating Body on the Seas of East Asia (COBSEA) or the Asia-Pacific Economic Cooperation (APEC) Marine Resource Conservation Working Group (MRCWG) could be approached to initiate and coordinate the process on the Implementation Agreement.

East Asian countries/territories, possibly via the above-mentioned regional coordinating bodies or ASEAN (as part of the ongoing territorial disputes discussions), should also explore options to conduct cooperative environmental research and protection in the regions high seas. Any national and regional efforts should join all sectors, including the fishing industry, NGOs and government, to promote responsible high seas management.

The creation of any MPAs require that East Asian countries/territories need to consider that they need to be placed into a broader framework of management which incorporates, inter alia, water-shed management, coastal zone planning, shipping regulations, and basin-wide sheries controls (Spalding et al 2008)⁷. Cooperation and the ability to implement transboundary commitments are also crucial to meeting the conservation objectives of MPAs and large marine ecosystem conservation. As the process in other nations has demonstrated a step-wise process to implementation is often more practical, than as a single package. Pilot areas can be implemented, lessons learnt, and the network progressively built up, the plan being refined as information, funding and capacity becomes available (UNEP-WCMC, 2008).

⁵ ESABII goals include the development of biodiversity information system and taxonomic capacity building in East and Southeast Asia. <http://www.esabii.org/about>

⁶ Further information: IUCN guidelines for the prevention of biodiversity loss caused by alien invasive species: <http://data.iucn.org/dbtw-wpd/edocs/Rep-2000-052.pdf>

The Nature Conservancy (TNC) has prepared a set of guidelines for addressing biological invasions in PAs: "Assessing and Managing Invasive Species within PAs. A Quick Guide for PA Practitioners" available at <http://www.cbd.int/invasive/doc/ias-tnc-guide-2009-en.pdf> as well as on <http://www.gisp.org/>

⁷ Further information: Further guidance for the establishment of MPAs is available, including WCPA-Marine's principles and guidance for MPA network establishment (IUCN/WCPA, 2008a) and the CBD's guidelines for developing national systems of marine and coastal PAs (MCPAs) (SCBD, 2004)

Capacity transfer to developing nations
(CBD PoWPA Goal 3.2 and 3.3; EA RAP action 26 and 27)

ISSUE

Technical and management standards of PAs in the richer territories -Taiwan, ROK, Japan and Hong Kong - are of a global standard and China is making significant progress. However, raising the standards of the weaker regional countries/territories is an important responsibility. Capacity building for PoWPA and EA RAP implementation needs to be increased to the developing nations of East Asia, such as Mongolia and DPRK, both in terms of the effort and precision with which it is being focused on practitioners.

STRATEGY

The sub-region lacks any centralised training and capacity building nodes. More assistance is needed to share technology and skills with Mongolia and DPRK. As outlined in the 2006 EA RAP the establishment of an East Asian Technical Cooperation Programme may be the most suitable organisation to progress this urgently required capacity building and skills transfer strategy. The region could develop a regional PA short course, similar to the United States PA short course, which is targeted towards young professional PA practitioners with leadership potential. The region, with assistance from IUCN, should investigate possible funding opportunities for the establishment of a Cooperation Programme.

Technology and knowledge sharing needs to be further developed in the region. Agreements to share data both within the region and with the UNEP-WCMC as well as recommendations to develop a regional coordinating body are aimed to improve standards across the whole region. The region should identify aspects of PA improvement that PA practitioners are already trying to achieve, and determine how they can be assisted. The region would also greatly benefit from assembling a roster of experts in PA management. East Asian Biosphere Reserve Network (EABRN), part of UNESCO's Man and the Biosphere (MAB) Programme, facilitates exchange and transfer of information between reserves and governing bodies, and conducts regular regional meetings on issues of common concern. It should be investigated whether EABRN could extend its responsibilities to be the main training provider/coordinator for the region, either permanently or in the interim whilst the regional coordinating body is being established.

Raising standards of technical and management of PAs is a major focus for funding by the Global Environment Fund (GEF). Options for GEF funding should be considered for the region. This option has been implemented in Mongolia with funding provided for an assessment of capacity building needs and country specific priorities in biodiversity and could be further explored for other countries to assist with implementing other PoWPA related activities

It was also recognized that IUCN has developed many valuable books and guidelines but these are in English. Priority should be assigned to translate and disseminate these documents in the regional languages if they are to be

made best use of and increase the capacity of the region.

A major management effectiveness evaluation (MEE) exercise has just been completed in ROK, which can serve as a model for other countries of the region. MEE would highlight each countries/territories specific PA training and management needs and encourage greater effectiveness in any future cooperation programmes. The countries/territories have indicated a need for greater technical assistance with undertaking MEE and a regional coordinating body would be best suited to source funding and assistance.

Intersectoral Coordination
(CBD PoWPA Goal 1.1; EA RAP action 2)

ISSUE

Coordination of PA planning, establishment and management remains difficult as responsibilities are often split between different government agencies. For example in China this occurs over four major agencies plus several smaller ones and is undertaken at different levels from national to provincial and county. No single agency or institution has up to date data on the entire PA system however periodic reviews such as the one by Yan and Li (2004) help to monitor coverage and identify gaps. Issues with a lack of cohesion and effective communication across agencies involved in parks and PAs are not exclusive to China or the EA region; globally it's an issue that has been highlighted and as such the CBD Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) has recommended to COP 10 that parties:

Expedite establishment where appropriate of multisectoral advisory committees for strengthening intersectoral coordination and communication to facilitate the integration of protected areas in national and economic development plans

STRATEGY

A major effectiveness evaluation exercise would be the first step in highlighting the areas of improvement needed in a nations PA management system. Any findings and recommendations would need to identify the agency(s) responsible for taking action. In addition conducting more regular periodic reviews of the state of PAs would be beneficial in addition to delegating one agency as the focal point of all PA monitoring and evaluation.

Regular workshops and forums, for sharing lessons learnt, technical expertise and coordination are highly recommended for management agencies. The agenda of these workshops would ideally be based on the findings and recommendations of the effectiveness evaluation exercise. Input from other partners should be considered including partners such as universities, NGOs, private sector, local communities and other government agencies such as those responsible for water resources, hydropower, agriculture and tourism. Workshops and forums would also provide an opportunity for the completion of reporting templates for CBD PoWPA and for the compilation of data

for the UNEP-WCMC. One coordinating group that could be used as a model for other EA nations is The Korea PAs Forum. It was established in 2006 and is composed of 13 authorities and several experts who are relevant to PAs in ROK. It holds two meetings a year in addition to several special committee meetings.

Additionally, in the planning phase of a PA, and via the Environmental Impact Assessment process, the responsible agencies should be identified and their roles clearly identified. This ensures each agency is aware of its and each other's responsibilities from the onset.

EA countries need to consider a review of their legislation relevant to PA planning, establishment and management for integrated management of PAs at a national level and a streamlining of resources.

Ecological representativeness (CBD PoWPA Goal 1.2; EA RAP action 5)

ISSUE

The coverage and degree of protection for individual sites varies greatly in the PA systems of the EA region. There are significant gaps, particularly in relation to the conservation of wetland and marine ecosystems, as well as arid ecosystems.

Conservation in key countries, such as China, has tended to focus on mountain and sub-tropical forest with the result that some areas, such as arid ecosystems, are much less effectively protected. Biologically richer and lower altitude habitats, many of which are highly threatened and reduced by human development, need greater protection efforts.

STRATEGY

One way countries can enhance the representativeness of their PA system is through regional zoning, whereby certain types of development for construction or industry are prohibited in areas of environmental, recreational or biodiversity value. The use of biodiversity assessments combined with good land use planning would enable informed decisions about the utilization of both natural resources and land. Governments can then decide on which areas of land should be managed for conservation. Forward looking land use planning and zoning of appropriate uses would then facilitate establishment of PAs.

With the support of IUCN-WCPA and the regional coordinating body, nations should focus on systemic identification and analysis of their PAs. Identification and gap analysis of Key Biodiversity Areas, as outlined in the IUCN-WCPA Best Practise Guideline (Langhammer 2007), provides guidance on how to best target, prioritize and create a comprehensive and ecologically representative PAs networks.

PA governance types and participatory mechanisms (CBD PoWPA Goal 2.1, 2.2, 3.2 and 3.4; EA RAP action 24 and 25)

ISSUE

All the PAs systems of the region are Government run and there is limited development of participatory management approaches. There is a lack of active participation by stakeholders, including 'local communities' or 'ethnic minorities' in China, pastoral herdsmen in Mongolia (and parts of northern and western China) and private landowners in Japan and South Korea.

STRATEGY

A range of governance types should be encouraged including indigenous and community conserved areas, private reserves, co-managed areas, and PAs managed at the state level.

PA legislation must recognise that private individuals or institutions already own or may be able to acquire tracts of land suitable for development as private nature reserves. Laws should allow non-State PAs and private sector management of State-owned PAs. They should specify that private sector involvement in providing services and facilities within PAs is subject to concession agreements, and provide tax credits and other incentives to encourage private sector investment in PA support and management.

Within a national system of PAs a diversified funding strategy makes it possible to focus public resources on the PAs that cannot be self-financing but are critical to achieving the system's biodiversity objectives (Saporiti, 2006). This strategy may include parastatal (government-owned) organisations, which have more autonomy in financial and decision-making matters, compared to government bureaucracies, and have proved to be successful models for managing PAs in Malaysia, East Africa and the Caribbean (ICEM, 2003).

Local, traditional and indigenous communities have been extremely important to the support, management and maintenance of PAs in many parts of the world (Scherl 2005) and have become involved in establishing and managing PAs and community-based conservation areas, either on their own or in partnership with local authorities (ICEM, 2003). There are numerous facets to the relationship between local and indigenous communities and PAs, including livelihood security; economic security; cultural and spiritual; psychological well-being and recreation; educational and governance. Without mechanisms for local involvement there is the potential of park management to be more onerous and require greater resources.

Partnerships need to be built with indigenous peoples and local communities regarding both PA values. Technical guidance, best practice, new impact assessment techniques, and capacity building for these groups should be developed and undertaken. East Asia countries/territories should also review their PA legislation to include

local communities in PA establishment, planning and management and actively seek to develop and draw upon these partnerships. In Japan and ROK, where much of the land within PAs is privately owned, participation mechanisms exist in legislation and the emphasis and resources should be directed to how to best implement and actively seek participation of private land managers in PA management.

With any diversification of PA governance it is important to ensure PAs with different institutional and administrative arrangements fit within and contribute to the national PA system (Davey 1998).

Countries/territories should consider carrying out a PA governance gap analysis (either as part of a national wide management effectiveness evaluation or as a separate exercise) to better inform further steps. Countries/territories should also consider an inventory of community based PAs and ensure reporting to WCMC and other national databases.

Management Effectiveness Evaluations (CBD PoWPA Goal 4.2)

ISSUE

Reserve designation alone does not ensure effective biodiversity conservation, as the reserve also needs to be effectively managed. The effectiveness of reserves in protecting biodiversity, and how to measure effectiveness, has emerged as a burning issue for PA managers and those who assess their work, especially in the East Asia region; the increasing population numbers of the region mean that there is a greater pressure on PAs. If PA designation is evidence that governments are showing a growing commitment to protection of biodiversity and adaptation to climate change, it would be a waste of time, money and land if commitments for adequate resource management do not match those of land and marine area.

The CBD has recognised management evaluations as one of the major issues that need greater attention and parties adopted a target of 60% of all PAs to be assessed by 2015 at CoP10.

Management effectiveness evaluations facilitate adaptive management to help improve planning processes, provide greater clarity to managers in determining priorities, and support the decision-making process through continuous learning (Growcock et al 2009). They were identified as one of the best opportunities to support budget proposals for national and international funding, by calculating costs for improvements and providing a business case to national treasury departments. They emphasise values and incentives of PAs. Management effectiveness data, when combined with the information on PA spatial coverage, will also allow a much fuller assessment of the achievement of the CBD PA target (Coad et al 2009).

STRATEGY

National MEEs, such as the one completed by South Korea, should be a priority action for each nation. Data and findings from national level MEEs could then inform and identify opportunities of transboundary cooperation via either 'lessons learnt' or clear definition of management issues common to the region, thus allowing a coordinating body to better target capacity building needs.

The regional coordinating body should also be responsible for reporting MEE findings and data to the global database on management effectiveness, maintained by the World Conservation Monitoring Centre of the United Nations Environment Programme (UNEP-WCMC).

5.2 PoWPA and RAP – complementary actions in the East Asia Region?

IUCN-WCPA is supporting two complementary initiatives to achieve better development and management of effective PA systems in the East Asia Region – the PoWPA and the RAP. These processes differ in various respects. PoWPA is developed and agreed under the CBD and is therefore entered upon by government commitments but follows a generalized globally agreed programme of actions. The RAP is developed and agreed among by IUCN-WCPA members and representatives from the eight countries/territories of the East Asia Region. It is therefore not officially agreed by the governments concerned but focuses on specific ways to support implementation within the context of the conditions and priorities of the region. While the direction and emphasis of both programmes is much the same, the RAP places more emphasis on developing mechanisms for sharing technology and data across the region through establishment of a regional focal point; and establishing dialogue links beyond the sub-region to Russia, Central Asia and SE Asia. PoWPA places more emphasis on community involvement and indigenous people's rights. The RAP also places more emphasis on establishing the links between PAs and the emerging crisis of climate change. In the latter case the Futures workshop recognized that not enough attention was being paid to climate change and one resolution of the workshop was to expand the focus of PoWPA in this area.

Since these systems were developed separately, with the RAP having being initiated in the 1990s, it is confusing for national agencies to implement and separately report on two closely overlapping programmes, and therefore there is a need for integration and nesting of the RAP activities within the framework of PoWPA. IUCN-WCPA recognises that the RAP has been critical to prioritizing the regional actions under PoWPA its targets. It was agreed at the East Asia workshop that revisions of the RAP should harmonise with the PoWPA. The timetable of targets in subsequent revisions should also align with those of the government-obligated CBD PoWPA, especially any of those agreed on post-2010 at COP 10.

To progress in strengthening the implementation of the PoWPA it was agreed at COP -10 that all parties: *“Develop a long-term action plan or reorient, as appropriate, relevant existing plans for the implementation of the programme of work on protected areas, including appropriate implementation mechanisms, and, where appropriate, detailing list of activities, timelines, budget and responsibilities, based upon the results of key assessments of the programme of work on protected areas, with a view to contributing to the implementation of the Strategic Plan for Biodiversity 2011-2020”.*

This is clearly a means to achieve the integration of the PoWPA and RAP as envisaged above. It is important to note that whilst national agencies take heed of these ambitious programmes, what happens in each territory is not much driven by such plans. Each territory tends to follow its own planning cycles, at its own pace, based on its own identified priorities and funding or capacity limits.

The future of the RAP

In determining whether the future revisions of the RAP are a worthwhile tool in guiding the region, an assessment needs to take place to assess the direct adoption of the RAP within policies at the national level. Other points for consideration should include that:

- The region may benefit more by focusing on a much more limited number of actions than the 32 actions listed in the RAP. The region could focus on implementation of three or four large activities.
- Japan's Ministry of Environment has provided ongoing funding for many years, which has allowed important regional work to be carried out including development of the RAP. Other countries/areas should follow their initiative and provide matching funding to support regional PA development.
- It is essential to involve the representatives who will be implementing the RAP into the planning and development stages of action planning. Previously, planning of the RAP has involved some countries/areas, but representatives from key areas including China have not participated in development of the RAP.
- The regional coordinating body should drive the RAP implementation and reinforce its importance through packaging agreed actions into projects and fundraising for their implementation.
- A four year timeframe for the RAP may be too short, particularly given the time taken for translation, printing

and distribution which has only just been completed for the current RAP, halfway through its timeframe.

- Time frames for a future RAP or action plan need to consider the level of red tape in governments and bear in mind that activities will be slow to be implemented.
- The post 2010 approach should be to develop a “PoWPA Regional Support Framework”. The framework would need to be simple, deal with areas of regional cooperation, coordination, standards and capacity building and transfer
- It would need to be short and easily accessible to WCPA members and PA institutions and site managers across Asia
- The future regional strategy should preferably translated into a number of Asian languages

5.3 Proposed future strategies of IUCN-WCPA relevant to the East Asia region

Under IUCN's ‘One Programme’ concept, the three previous WCPA subregions of Asia have been newly consolidated into a single IUCN-WCPA Asia. The ultimate aim is assist the region in implementation of the PoWPA.

IUCN-WCPA Asia's future directions, facilitated through a proposed IUCN-WCPA Regional Secretariat, include:

- network support
- regional involvement in the CBD and next World Parks Congress
- a network of regional PA training institutions
- PA legal policy and governance reform
- Showcasing the thematic areas in which the region is a global leader, for example use of the world heritage conventions, sacred protected areas, and connectivity
- positioning IUCN-WCPA Asia as a Technical Advisory Service in Asia responding to the market niche and demand and based on a cost recovery business model
- a PAN Asia PA network (similar to ASEAN Heritage Parks or Europe's Natura 2000)
- adopting region wide voluntary PA standards and certification systems and marketing these to national interests

6. Recommendations

Reviewing East Asia's progress to date in implementing the CBD PoWPA and the East Asia RAP, and considering the future directions of such PA initiatives, the following is recommended:

1. In accordance with the CBD COP10 decision, integrate and reorient, as appropriate, the PoWPA and RAP priorities for the implementation of the programme of work on protected areas, detailing list of activities, timelines, budget and responsibilities, with a view to contributing to the implementation of the Strategic Plan for Biodiversity 2011-2020.
2. Improved reporting of PA system and site developments and changes to global and/or regional databases (consider use of the review methodology to be developed by the IUCN and UNEP-WCMC project)
3. Establishment of a regional coordinating and capacity building centre – implementation plan to be supported by the proposed IUCN-WCPA Asia Secretariat.
4. Continued focus on establishing transboundary marine and terrestrial PA
5. Develop a certification process to recognise best practice management in PA (i.e. ASEAN Heritage Site Programme)
6. Develop appropriate responses to increase the resilience of their PAs systems to climate change impacts and further increase awareness of their contribution to climate change adaptation and mitigation.
7. Translation of 'Natural Solutions: PAs helping people cope with climate change' (2010) into East Asian languages
8. More attention to and better sharing of information amongst the region about the spread of alien invasive species. Efforts should be focused on a regional database and exchange training programs.
9. Explore the creation of an Implementation Agreement under UNCLOS for the effective protection of high sea ecosystems.
10. Actively seek to developing partnerships and the involvement of indigenous peoples and local communities in PA management
11. Consider establishing PA coordination forums in each nation to facilitate effective communication across agencies involved in parks and PAs.
12. With the support of IUCN-WCPA and the proposed East Asia regional coordinating body, nations should focus on systematic identification and analysis of their PAs to determine the most effective and ecologically representative PA network.
13. National governments should consider carrying out a PA governance gap analysis (either as part of a national wide management effectiveness evaluation or as a separate exercise). An inventory of community based PAs should be created and reported to WCMC and other national databases.
14. National MEEs, such as the one completed by South Korea, should be a priority action for each nation.

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Appendix: Summary of progress by territory

There is no updated available from DPRK and as such it has not been included as part of this summary. For a description of DPRK's PA system refer to the 2006-2010 EA RAP.

1. Republic of Korea

Korea is a peninsula with 64% of its area covered in mountains, approximately 3000 offshore islands and 63 important freshwater wetlands. Today there are over 1200 PAs in a variety of designations and management types. Only a very small number of these are currently listed on the WDPA or have a designated IUCN management category. Amongst the region ROK is a leader in the establishment of PAs and are managed by highly motivated staff. ROK completed a management effectiveness evaluation of its PA system – the first in Asia – and is undertaking improvements based on the recommendation and findings of this study.

Number of PAs	Areas (km ²)	PA % / Total territory
1,308	16,270	16.40%

Figure 1.1: Map of terrestrial and marine protected areas in the Republic of Korea (data from WDPA as of 2003)



Progress against CBD PoWPA and EA RAP targets

Table 1.1: Republic of Korea's progress against CBD PoWPA and EA RAP targets

Goal	Target	EA RAP actions	Summary of ROK's progress
1.1	To establish and strengthen national and regional systems of PAs integrated into a global network as a contribution to globally agreed goals (by 2010 for terrestrial and 2012 for marine)	1, 2, 3	<ul style="list-style-type: none"> National time bound targets for levels of protection have been established 134 new areas and 2 expanded areas (3,653.3 km²) have been designated as PA since 2004 9 new RAMSAR wetlands have been designated since 2004 Total number of PA: 1,308 Total area: 16,270 Km² Terrestrial PA: 12,295.79 Km² (about 12% of land) Marine PA: 3,974 Km² (about 0.9% of total Marine Area)
1.2	By 2015, all PAs and PA systems are integrated into the wider land- and seascape, and relevant sectors, by applying the ecosystem approach and taking into account ecological connectivity / and the concept, where appropriate, of ecological networks	5, 11	<ul style="list-style-type: none"> Planning has been undertaken for landscape scale connectivity projects. Many corridor projects have been planned or established, including three connectivity corridors, a country-wide ecological network, marine connectivity corridors, a guideline to establish urban conservation corridors, 379 eco-corridors to mitigate increased roads and reduce road-kill, the Demilitarized Zone (DMZ) peace belt, and a Marine Peace Park between North and South Korea
1.3	Establish and strengthen by 2010/2012 transboundary PAs, other forms of collaboration between neighbouring PAs across national boundaries and regional networks, to enhance the conservation and sustainable use of biological diversity, implementing the ecosystem approach, and improving international cooperation	4, 5, 7	<ul style="list-style-type: none"> The Hong do (island) Migrant Birds Research Center established to support the Flyway program Planning and discussions are underway to establish a Demilitarized Zone (DMZ) peace belt and a Marine Peace Park between North and South Korea

Goal	Target	EA RAP actions	Summary of ROK's progress
1.4	All PAs to have effective management in existence by 2012, using participatory and science-based site planning processes that incorporate clear biodiversity objectives, targets, management strategies and monitoring programmes, drawing upon existing methodologies and a long-term management plan with active stakeholder involvement.	8	<ul style="list-style-type: none"> Many system level plans are in place including the Natural Parks Basic Plan, National Master Plan for Wetland Conservation, and Ecosystem/Landscape Conservation Area: Management Basic Plan that were developed and put in place through highly participatory process Site management plans in place for 18 NPs, all Wetland PAs, and all Ecosystem/Landscape Conservation Areas
1.5	By 2008, effective mechanisms for identifying and preventing, and/or mitigating the negative impacts of key threats to PAs are in place.	13, 16, 18, 19	<ul style="list-style-type: none"> An initial gap analysis has been undertaken to determine gaps in protection of endangered species habitat Surveys have been undertaken in national parks, BaekduDaegan Mountain Reserve, wetland PAs, and special islands Monitoring programs have been undertaken for mudflat ecosystems, invasive alien species, and to measure ecological changes in some NPs Within 16 NPs there has been areas of Strict Nature Reserve imposed to prevent visitor access at degraded sites and wildlife areas which has successfully allowed habitat to recover Survey of invasive alien species and eradication programs has been implemented for 16 selected species and the Journal on Invasive Alien Wildlife was published in 2009
2.1, 2.2	2.1: Establish mechanisms for the equitable sharing of both costs and benefits arising from the establishment and management of PAs (by 2008); 2.2: Full and effective participation of indigenous and local communities, in full respect of their rights and recognition of their responsibilities, consistent with national law and applicable international obligations, and the participation of relevant stakeholders, in the management of existing, and the establishment and management of new PAs (by 2008)	14, 25	<ul style="list-style-type: none"> Tax breaks are given to private land owners in PAs The 4th comprehensive plan revision plan (2006~2020) is in place to guide engagement of local communities in important development plans, and law requires stakeholder engagement when developing management plans Various laws relating to PAs have been enacted or revised A Biodiversity Management Contract Program has been implemented to promote engagement of local communities in conservation activities for areas where high conservation values exist but are not designated as PAs, such as migratory bird sites.
3.1	By 2008 review and revise policies as appropriate, including use of social and economic valuation and incentives, to provide a supportive enabling environment for more effective establishment and management of PAs and PA systems.	6	<ul style="list-style-type: none"> Enhanced legal institutions related to PAs by the Enactment/Revision of Various Laws related to PAs; creating several mid-and long-term strategies related to PAs; and the establishment of 2 new organizations related to PAs (and 3 other planned). Conducted Wetlands and Mudflats value assessment and assessed the economic value of the nations PA system. Established an incentive mechanism and legal framework for private PAs
3.2	By 2010, comprehensive capacity building programmes and initiatives are implemented to develop knowledge and skills at individual, community and institutional levels, and raise professional standards	26	<ul style="list-style-type: none"> A Ranger Academy in 2008 had 287 participants in 7 curriculums Development and operation of training programs by each park The Korea Protected Area Forum was established in 2006 to coordinate ministries and agencies
3.3	By 2010 the development, validation, and transfer of appropriate technologies and innovative approaches for the effective management of PAs is substantially improved, taking into account decisions of the Conference of the Parties on technology transfer and cooperation	17, 22, 26, 27, 28	<ul style="list-style-type: none"> Participated in pilot projects to set international standards in order to update WDPAs and utilize PA data (UNEP-WCMC, ASEAN Bio-diversity Center, IUCN Asia, KNPS, 2009~2010)

Goal	Target	EA RAP actions	Summary of ROK's progress
3.4	Target: By 2008, sufficient financial, technical and other resources to meet the costs to effectively implement and manage national and regional systems of PAs are secured, including both from national and international sources, particularly to support the needs of developing countries and countries with economies in transition and small island developing States.	29, 24	<ul style="list-style-type: none"> • 39.5% increase in 2008 • However, the ratio for the conservation projects is relatively low (7.8% of Ministry Of Environment's budget)
3.5	By 2008 public awareness, understanding and appreciation of the importance and benefits of PAs is significantly increased	23	<ul style="list-style-type: none"> • KNPS has published various kinds of publications e.g. reports on resources survey and monitoring, research reports, a national parks white paper, books etc • A range of environmental education programs are carried out including in National parks, a program to Expedite Wetland PAs, and as part of school curriculums
4.1	By 2008, standards, criteria, and best practices for planning, selecting, establishing, managing and governance of national and regional systems of PAs are developed and adopted	9	<ul style="list-style-type: none"> • Many standards are in place, for example objective standard to designate PAs (2007), a detailed guideline to observe ecological changes (2009), and a guideline to designate coastal wetland PAs (Directive of MLTMA, 2009) • Regulations have been set up to guide the legal procedures for designating PAs
4.2	By 2010, frameworks for monitoring, evaluating and reporting PAs management effectiveness at sites, national and regional systems, and transboundary protected area levels adopted and implemented by Parties	14, 15	<ul style="list-style-type: none"> • A Management Effectiveness Evaluation of Major 39 PAs was undertaken March 2008 ~ July 2009
4.3	By 2010, national and regional systems are established to enable effective monitoring of protected-area coverage, status and trends at national, regional and global scales, and to assist in evaluating progress in meeting global biodiversity targets	14	<ul style="list-style-type: none"> • As of July 2008, 34 MOUs with foreign organizations were signed and had taken effect for the cooperation of biodiversity protection, joint-research etc • MOE has been supporting the establishment and activities of the East Asia Biosphere Reserve Network (EABRN) since 1993
4.4	Scientific knowledge relevant to PAs is further developed as a contribution to their establishment, effectiveness, and management.	16, 17	<ul style="list-style-type: none"> • MOE published the guideline 'Investment Planning of R&D in Environment Technology' in 2005, and 5% of the Government Research and Development Budget was committed to Environment Technology Research and Development

2. Japan

The Japanese archipelago runs parallel to the eastern rim of the Eurasian continent, and extends some 3,000 kilometers, with climatic zones ranging widely from subarctic to subtropical. The islands are extremely varied, with mountainous areas, including volcanoes and hills, occupying almost three quarters of the total land. Japan has a high human density (nearly 125,000,000) but only 21% of the total land area is utilized for cultivation and urban use. Forests account for 67%, with natural forest 19%, secondary forest 24%, forest for timber production 25% respectively. There are a variety of designations and management types which can be separated into two broad categories; Nature Conservation Areas - are areas with outstanding nature or areas almost untouched by humans and account for 0.3% of total land area - and Natural areas - designated as National Parks, Quasi-National Parks, or Prefectural Natural Parks- which account for 14% of total land area.

Number of PAs	Areas (km ²)	PA % / Total territory
397	54,180	14.3% (Natural Park)

Figure 2.1: Map of terrestrial and marine protected areas in Japan (data from WDPA as of 2003)



Progress against PoWPA and RAP targets

Table 2.1: Japan's progress against CBD PoWPA and EA RAP targets

Goal	Target	EA RAP actions	Summary of Japan's progress
1.1	To establish and strengthen national and regional systems of PAs integrated into a global network as a contribution to globally agreed goals (by 2010 for terrestrial and 2012 for marine)	1, 2, 3	<ul style="list-style-type: none"> Nearly completed the assessment of the representativeness and ecological gaps of the PA network and have National Biodiversity Strategy Nature Conservation Areas are areas with outstanding nature or areas almost untouched by humans and account for 0.3% of total land area. Natural areas of outstanding scenic beauty in Japan are designated as National Parks, Quasi-National Parks, or Prefectural Natural Parks. Natural parks account for 14.3% of total land area. 29 National Parks, an increase of 1 since 2004; 56 quasi-National Parks, an increase of one since 2004; 309 prefectural National parks, an increase of 3 since 2004. There are 37 Ramsar sites (increased from 13 sites in 2004) and 3 World Natural Heritage sites (increased from 2 in 2004). The Natural Parks Law was amended, and Marine Park Site was strengthened to be Marine Park Zone, which can cover tidal flat, shore reef area and habitat for seabirds, marine animals other than coral reef, seaweed and sea grass bed.
1.2	By 2015, all PAs and protected area systems are integrated into the wider land- and seascape, and relevant sectors, by applying the ecosystem approach and taking into account ecological connectivity / and the concept, where appropriate, of ecological networks	5	<ul style="list-style-type: none"> The Third National Biodiversity Strategy of Japan requires that the ecological network initiative should be implemented through coordination among relevant ministries, local governments, NGOs, companies, researchers, and others.

Goal	Target	EA RAP actions	Summary of Japan's progress
1.3	Establish and strengthen by 2010/2012 transboundary PAs, other forms of collaboration between neighbouring PAs across national boundaries and regional networks, to enhance the conservation and sustainable use of biological diversity, implementing the ecosystem approach, and improving international cooperation	4, 5	<ul style="list-style-type: none"> • “East Asian-Australasian Flyway Partnership” launched in 2006 as an international framework for the conservation of migratory water birds and their habitats in Asia-Pacific region. Japan has registered the 27 important wetlands in Japan to the network and has supported the promotion of the international communication and conservation activities. • As one of a few developed countries that have coral reefs, Japan has been promoting, in cooperation with other related countries, the International Coral Reef Initiative (ICRI). The government of Japan cooperated with the Secretariat of the ICRI and the government of Palau for two years, from July 2005 to June 2007. In 2008, the International Year of the Reef, Japan held an International Coral Reef Marine Protected Area Network Meeting in conjunction with the 4th ICRI East Asia Regional Meeting and launched the development of the regional strategy for coral reef MPA Networks focused on Asia and Oceania regions.
1.4	All PAs to have effective management in existence by 2012, using participatory and science-based site planning processes that incorporate clear biodiversity objectives, targets, management strategies and monitoring programmes, drawing upon existing methodologies and a long-term management plan with active stakeholder involvement.	8	<ul style="list-style-type: none"> • All National Parks have a Management Plan, which required soliciting comments and review by local residents and stakeholders • A review and revision of the National Parks Law was conducted
1.5	By 2008, effective mechanisms for identifying and preventing, and/or mitigating the negative impacts of key threats to PAs are in place.	13, 16, 18, 19	<ul style="list-style-type: none"> • The revised National Parks Law has strengthened PA policies • Works to restore environmental degradation from deer grazing in National and Quasi-national parks are implemented through ‘Ecosystem Management Works’ • Studies underway to identify and prevent threats include the conservation and management of aquatic organisms in inland water, rare species habitat, conservation and management of mountain wetlands, appropriate use of vehicles in mountain roads, and the impact of the deer grazing on the vegetation, deer action and movement, and capturing deer testing. • Under the legislation for the Promotion of Nature Restoration in place since 2003, various ecosystems, including forests, grasslands, satochi-satoyama areas, rivers, lakes, wetlands, tidal flats, and coral reefs, have been subject to nature restoration projects in seven regions of National Parks and eight regions of Quasi-National Parks. • Based on the “Automobile Use Adjustment Guideline in National Parks” the use of cars has been restricted. As of the end of March 2007, this guideline is in place in 26 regions in 17 National Parks.
2.1, 2.2	2.1: Establish mechanisms for the equitable sharing of both costs and benefits arising from the establishment and management of PAs (by 2008); 2.2: Full and effective participation of indigenous and local communities, in full respect of their rights and recognition of their responsibilities, consistent with national law and applicable international obligations, and the participation of relevant stakeholders, in the management of existing, and the establishment and management of new PAs (by 2008)	14, 25	<ul style="list-style-type: none"> • The National Parks Law determines a compensation for any losses due to activity regulations. In cases where regulations govern activities, measures for reducing the fixed property tax are implemented. • The Park Management Organization (PMO) system has been introduced by the amendment of the law in 2002. To date, five PMOs are designated by the Minister of the Environment. In addition to the PMOs, many citizen groups and the Council consisting of the local stakeholders engage in the park management. • The local governments and councils organized by local people contribute financially. • Under the Green Worker Program, the government has implemented some activities to engage and employ local residents and councils in activities such as the removal of alien species, repairing facilities in the observation areas and mountain trails, and control of crown-of-thorns starfish to protect coral reefs

Goal	Target	EA RAP actions	Summary of Japan's progress
3.1	By 2008 review and revise policies as appropriate, including use of social and economic valuation and incentives, to provide a supportive enabling environment for more effective establishment and management of PAs and PAs systems.	6	<ul style="list-style-type: none"> • As a member of IUCN-WCPA, Japan has engaged proactively in works for updating Work Plan on PAs in East Asia. In addition, Japan has provided IUCN-WCPA with financial support every year since 1998. • Furthermore, Japan has provided other technical supports to other countries through JICA.
3.2	By 2010, comprehensive capacity building programmes and initiatives are implemented to develop knowledge and skills at individual, community and institutional levels, and raise professional standards	26	<ul style="list-style-type: none"> • Training programs have been implemented for staff that engages in Park Management at the government, local government levels and visitor centers.
3.5	By 2008 public awareness, understanding and appreciation of the importance and benefits of PAs is significantly increased	23	<ul style="list-style-type: none"> • Nationwide distribution of brochures, which illustrate the National Park system.
4.2	By 2010, frameworks for monitoring, evaluating and reporting PAs management effectiveness at sites, national and regional systems, and transboundary protected area levels adopted and implemented by Parties	14, 15	<ul style="list-style-type: none"> • The Amendment of the Natural Parks Law in 2002 introduced the Regulated Utilization Area system, which has been applied to Nishiodai zone in Yoshino-Kumano National Park since 2006, to promote the sustainable numbers of visitors.
4.3	By 2010, national and regional systems are established to enable effective monitoring of protected-area coverage, status and trends at national, regional and global scales, and to assist in evaluating progress in meeting global biodiversity targets	14	<ul style="list-style-type: none"> • The Comprehensive Assessment of Biodiversity has been conducted to understand the status and trend of biodiversity in Japan including social aspects and to present it in a simple way of communication. In 2008, the first year of the Assessment implemented, Japan has investigated the indicators for the changes in biodiversity status and for the effects of several activities on biodiversity. • The National Survey on the Natural Environment has been implemented to investigate vegetation and the distribution of wildlife from the nationwide perspective. • The Monitoring Sites 1000 project has been promoting long term ecosystem monitoring on qualitative and quantitative changes in the status of the various types of ecosystem in Japan. • In 2008, the government of Japan began to investigate on the locations of sites and the study methods for the Monitoring Sites 1000 project for impacts of climate change on alpine ecosystems. • Revisions to Park Management Plan occur yearly to respond to challenges in the protection and utilization of National Parks.

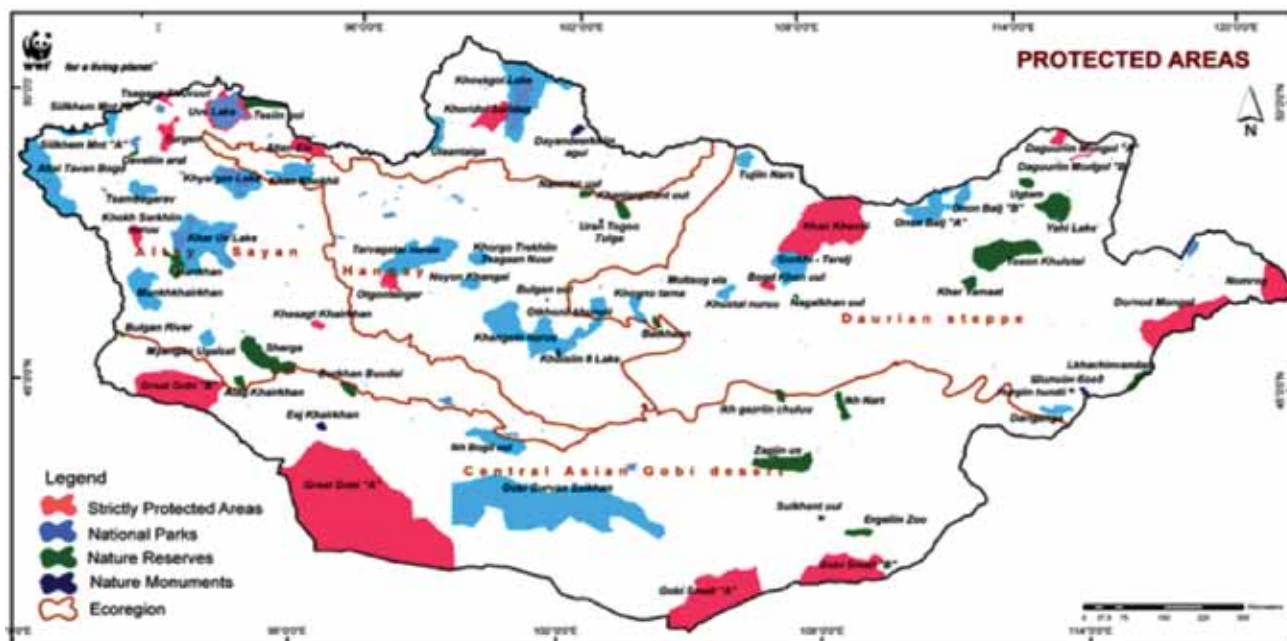
3. Mongolia

Mongolia is one of the largest landlocked countries in the world, covering an area of 1.56 million km². Mongolia is a land of diverse landforms including lakes, wetlands, grasslands, forests, deserts and mountains.

The system of PAs in Mongolia contains 65 areas, including four PAs added in January 2010 that are legally protected under the Mongolian Law on Special PAs (MLSPA). These are divided into four categories of protection - Strictly Protected, National Park, Nature reserves, and Natural Monuments. Strictly PAs (SPA) represents the strongest level of protection, followed by National Parks.

Number of PAs	Areas (km ²)	PA % / Total territory
65	219,000	14%

Figure 3.1: Map of protected areas in Mongolia (WWF, 2010c)



Progress against PoWPA and RAP target

Table 3.1: Mongolia's progress against CBD PoWPA and EA RAP targets

Goal	Target	EA RAP actions	Summary of Mongolia's progress
1.1	To establish and strengthen national and regional systems of PAs integrated into a global network as a contribution to globally agreed goals (by 2010 for terrestrial and 2012 for marine)	1, 2, 3	<ul style="list-style-type: none"> An increase of 3 per cent in the coverage of PAs as percentage of territory.
1.2	By 2015, all PAs and protected area systems are integrated into the wider land- and seascape, and relevant sectors, by applying the ecosystem approach and taking into account ecological connectivity / and the concept, where appropriate, of ecological networks	5	<ul style="list-style-type: none"> A Biodiversity Gap Analysis for the whole country was undertaken in partnership with WWF and TNC to assess representativeness of biodiversity in the PA network.
1.3	Establish and strengthen by 2010/2012 transboundary PAs, other forms of collaboration between neighbouring PAs across national boundaries and regional networks, to enhance the conservation and sustainable use of biological diversity, implementing the ecosystem approach, and improving international cooperation	4, 5	<ul style="list-style-type: none"> Transfrontier PA agreements developed; there are currently three Mongolia-Russia transboundary sites, and by the end of 2009 there will be a Mongolia-Russia-China PA in place

Goal	Target	EA RAP actions	Summary of Mongolia's progress
1.4	All PAs to have effective management in existence by 2012, using participatory and science-based site planning processes that incorporate clear biodiversity objectives, targets, management strategies and monitoring programmes, drawing upon existing methodologies and a long-term management plan with active stakeholder involvement.	8	<ul style="list-style-type: none"> New Management Plans (2006-2010) have been developed for 7 National Parks. These management plans have been approved and implementation of activities has commenced
2.1, 2.2	<p>2.1: Establish mechanisms for the equitable sharing of both costs and benefits arising from the establishment and management of PAs (by 2008);</p> <p>2.2: Full and effective participation of indigenous and local communities, in full respect of their rights and recognition of their responsibilities, consistent with national law and applicable international obligations, and the participation of relevant stakeholders, in the management of existing, and the establishment and management of new PAs (by 2008)</p>	14, 25	<ul style="list-style-type: none"> Participatory approaches have been developed and strengthened. 19 community groups have been developed in the KUNNP buffer zone area and 5 community groups in the Uvs lake Special PAs. Participatory rangeland management, wildlife management and tourism in cooperation with relevant authorities and community groups have been supported as well as capacity development in general. A tourism development programme of PA was developed and approved by MNET
3.2	By 2010, comprehensive capacity building programmes and initiatives are implemented to develop knowledge and skills at individual, community and institutional levels, and raise professional standards	26	<ul style="list-style-type: none"> In 2007, capacity training and needs assessments for PAs in the Mongolian part of Altai Mongolia were undertaken; and recommendations for increasing capacity were developed. In 2007, an official certified professional rangers training course was conducted for staff and rangers of five NP and environmental inspectors. 33 participants received certificates.
3.3	By 2010 the development, validation, and transfer of appropriate technologies and innovative approaches for the effective management of PAs is substantially improved, taking into account decisions of the Conference of the Parties on technology transfer and cooperation	17, 22, 26, 27, 28	<ul style="list-style-type: none"> A Financial needs assessment was conducted and elaborated into a sustainable financing mechanism for PAs.
3.5	By 2008 public awareness, understanding and appreciation of the importance and benefits of PAs is significantly increased	23	<ul style="list-style-type: none"> An Open Forum on PA values and threats was organised for all PA projects and NGOs.
4.1	By 2008, standards, criteria, and best practices for planning, selecting, establishing, managing and governance of national and regional systems of PAs are developed and adopted	9	<ul style="list-style-type: none"> The Law on PAs is currently being updated and amended
4.2	By 2010, frameworks for monitoring, evaluating and reporting PAs management effectiveness at sites, national and regional systems, and transboundary protected area levels adopted and implemented by Parties	14, 15	<ul style="list-style-type: none"> An action plan for implementation of the National Programme of PA has been developed.

4. Hong Kong SAR

Hong Kong is a Special Administrative Region (SAR) of the People's Republic of China and has a total land area of 1,104 km², consisting of part of the Chinese mainland plus Hong Kong Island, Lantau Island and some smaller islets. It has a high rate of protected area coverage. This is largely designated as Country Parks and Special Areas, consisting of open wild secondary habitat. The systems of marine PAs established in 1996 covers the major ecologically sensitive marine and coastal sites.

Number of PAs	Areas (km ²)	PA % / Total territory
41	440	40%

Figure 4.1: Map of terrestrial and marine protected areas in Hong Kong (SCBD, 2010b)



Progress against PoWPA and RAP targets

Table 4.1: Hong Kong's progress against CBD PoWPA and EA RAP targets

Goal	Target	EA RAP actions	Summary of Hong Kong SAR's progress
1.1	To establish and strengthen national and regional systems of PAs integrated into a global network as a contribution to globally agreed goals (by 2010 for terrestrial and 2012 for marine)	1, 2, 3	<ul style="list-style-type: none"> National PAs Systems plan have been completed Continuing to review PA categories and zones to incorporate more management options. A review of marine PAs found they are progressing well. There are 24 Country Parks (Cat. V) and 17 Special Areas (Cat.IV) totalling 44,004 ha. (~40% of land area) Established 4 Marine parks (Cat.V) and 1 Marine Reserves (Cat.IV) totalling 2,430 ha. (~1.4% of sea area)
1.2	By 2015, all PAs and protected area systems are integrated into the wider land- and seascape, and relevant sectors, by applying the ecosystem approach and taking into account ecological connectivity / and the concept, where appropriate, of ecological networks	5	<ul style="list-style-type: none"> Progress is ongoing to strengthen the East Asian Flyway Programme. 7 new marine protected areas are being planned with a total area of about 3100 ha; if successful the marine protected area coverage will become about 3.1% of the 1650 ha. of sea in HK 5 special areas are being planned for the protection of geo features within the National Geoparks of Hong Kong
1.3	Establish and strengthen by 2010/2012 transboundary PAs, other forms of collaboration between neighbouring PAs across national boundaries and regional networks, to enhance the conservation and sustainable use of biological diversity, implementing the ecosystem approach, and improving international cooperation	4, 5	<ul style="list-style-type: none"> Close liaison with Guangdong province on the development of ecological corridor along the frontier. Progress is ongoing to strengthen the East Asian Flyway Programme
1.4	All PAs to have effective management in existence by 2012, using participatory and science-based site planning processes that incorporate clear biodiversity objectives, targets, management strategies and monitoring programmes, drawing upon existing methodologies and a long-term management plan with active stakeholder involvement.	8	<ul style="list-style-type: none"> Management plans of all PAs are in place
1.5	By 2008, effective mechanisms for identifying and preventing, and/or mitigating the negative impacts of key threats to PAs are in place.	13, 16, 18, 19	<ul style="list-style-type: none"> Actively enforce CITES Convention

Goal	Target	EA RAP actions	Summary of Hong Kong SAR's progress
3.1	By 2008 review and revise policies as appropriate, including use of social and economic valuation and incentives, to provide a supportive enabling environment for more effective establishment and management of PAs and PAs systems.	6	<ul style="list-style-type: none"> Continuing to review PA legislation.
3.2	By 2010, comprehensive capacity building programmes and initiatives are implemented to develop knowledge and skills at individual, community and institutional levels, and raise professional standards	26	<ul style="list-style-type: none"> Have developed a local training course for PA managers.
3.3	By 2010 the development, validation, and transfer of appropriate technologies and innovative approaches for the effective management of PAs is substantially improved, taking into account decisions of the Conference of the Parties on technology transfer and cooperation	17, 22, 26, 27, 28	<ul style="list-style-type: none"> Have developed a local training course for PA managers. Progressing with a formal training with in-service training for PA staff.
3.4	Target: By 2008, sufficient financial, technical and other resources to meet the costs to effectively implement and manage national and regional systems of PAs are secured, including both from national and international sources, particularly to support the needs of developing countries and countries with economies in transition and small island developing States.	29, 24	<ul style="list-style-type: none"> Sufficient funding has been provided for the protection and management of PA in Hong Kong by the Government. The Authority is also working with NGOs and the community in the management of areas with high conservation value.
4.2	By 2010, frameworks for monitoring, evaluating and reporting PAs management effectiveness at sites, national and regional systems, and transboundary protected area levels adopted and implemented by Parties	14, 15	<ul style="list-style-type: none"> Monitoring is undertaken of all major habitats of high conservation value and distribution & abundance of selected animal groups. Monitoring data is used to assess the ecological importance of species & sites for formulation of conservation action plans
4.3	By 2010, national and regional systems are established to enable effective monitoring of protected-area coverage, status and trends at national, regional and global scales, and to assist in evaluating progress in meeting global biodiversity targets	14	<ul style="list-style-type: none"> A database has been developed which contains data of nearly all terrestrial and freshwater representatives found in PAs, with over 75,000 records of around 4,000 species Biodiversity mapping has been undertaken and accessible through GIS
4.4	Scientific knowledge relevant to PAs is further developed as a contribution to their establishment, effectiveness, and management.	16, 17	<ul style="list-style-type: none"> Ecological information and the database is made available on websites and through the Hong Kong Biodiversity Newsletter

5. Taiwan

Off the eastern coast of Asia lie the mountainous island arcs of the Western Pacific, Taiwan is part of the arc that lies closest to the continent and marks the edge of the Asiatic continental shelf. The island is the largest body of land between Japan and the Philippines. Taiwan's tropical-to-temperate spectrum of climatic zones and contrasting topographies has endowed the island with a rich diversity of flora and fauna. Some 110 species of mammals, 500 species of birds, 100 species of reptiles, 38 species of amphibians, 400 species of butterfly and 3,000 species of fish are known to inhabit Taiwan. The abundant plant life in Taiwan includes over 7,500 species of vascular plants (including indigenous and exotic varieties), as well as a spectrum of six forest types. To protect the nation's ecosystems, the government has set aside almost 20 percent of Taiwan's total land area under a multi-tiered system of protected regions that comprises 85 protected areas, including 8 National Parks, 20 Nature Reserves, 6 Forest Reserves, 17 Wildlife Refuges, and 34 Major Wildlife Habitats.

Number of PAs	Areas (km ²)	PA % / Total territory
85	10,892 km ² (land: 6,858 km ²) (marine: 4,034 km ²)	19%

Figure 5.1: Map of terrestrial and marine protected areas in Taiwan (data from WDPA as of 2003)



Progress against PoWPA and RAP targets

Table 5.1: Taiwan's progress against CBD PoWPA and EA RAP targets

Goal	Target	EA RAP actions	Summary of Taiwan's progress
1.1	To establish and strengthen national and regional systems of PAs integrated into a global network as a contribution to globally agreed goals (by 2010 for terrestrial and 2012 for marine)	1, 2, 3	<ul style="list-style-type: none"> As of end of 2010, a total of 85 PAs were established, covering over 19% (6,858.2 km²) of Taiwan's land area, and 4,034.1 km² of Taiwan's sea area. Taiwan have established 1 marine park of 3,717 km²
1.2	By 2015, all PAs and protected area systems are integrated into the wider land- and seascape, and relevant sectors, by applying the ecosystem approach and taking into account ecological connectivity / and the concept, where appropriate, of ecological networks	5	<ul style="list-style-type: none"> An island-wide Land Use Planning Act is under development to categorise land zones. It will be based on a landscape-level ecosystem network concept and will integrate PAs into the wider landscape. Sensitive land management and environmental impact statements will apply to land outside of formally conserved areas.
1.3	Establish and strengthen by 2010/2012 transboundary PAs, other forms of collaboration between neighbouring PAs across national boundaries and regional networks, to enhance the conservation and sustainable use of biological diversity, implementing the ecosystem approach, and improving international cooperation	4, 5	<ul style="list-style-type: none"> Taiwan has hosted a range of workshops on wetlands, global warming and polar conservation, and implementation of the PoWPA

Goal	Target	EA RAP actions	Summary of Taiwan's progress
1.4	All PAs to have effective management in existence by 2012, using participatory and science-based site planning processes that incorporate clear biodiversity objectives, targets, management strategies and monitoring programmes, drawing upon existing methodologies and a long-term management plan with active stakeholder involvement.	8	<ul style="list-style-type: none"> 7 of 8 national parks had been evaluated by the National Park Administration in 2008. Regarding to those PAs under jurisdiction of Forestry Bureau except the Major Wildlife Habitats, a three year program is being undertaken to review, evaluate and improve them from 2009-2011. In total, 31 of 43 PAs, including Wildlife Refuges, Natural Reserves, and Forest Reserves, have been evaluated by WWF RAPPAM Methodology before end of 2010.
1.5	By 2008, effective mechanisms for identifying and preventing, and/or mitigating the negative impacts of key threats to PAs are in place.	13, 16, 18, 19	<ul style="list-style-type: none"> As above
3.5	By 2008 public awareness, understanding and appreciation of the importance and benefits of PAs is significantly increased	23	<ul style="list-style-type: none"> Taiwan has hosted a range of workshops on wetlands, global warming and polar conservation, and implementation of the PoWPA Climate change is being addressed through applied research (A Study of "Global Warming and Its Effects on National Park Environment"; "Long-term Evaluation of Climatic Change and Adaptation Strategy"), and awareness raising (media coverage and a newsletter)
4.4	Scientific knowledge relevant to PAs is further developed as a contribution to their establishment, effectiveness, and management.	16, 17	<ul style="list-style-type: none"> Taiwan has hosted a range of workshops on wetlands, global warming and polar conservation, and implementation of the PoWPA Climate change is being addressed through applied research (A Study of "Global Warming and Its Effects on National Park Environment"; "Long-term Evaluation of Climatic Change and Adaptation Strategy"), and awareness raising (media coverage and a newsletter)

6. China

China has a total land area of 9.6 million km², or 81 per cent of the region (Hong Kong, Macau and Taiwan are described separately). China has a huge range of biological features, from mountain chains and deserts to grasslands and forests ranging from boreal to tropical evergreen and mangroves. It contains parts of 58 of the 81 WWF ecoregions identified in East Asia. By the end of 2008, China has established 2538 nature reserves, covering a total land area of 149 million Km², the area of terrestrial reserves account for more than 15% of the national area.

Number of PAs	Areas (km ²)	PA % / Total territory
2,538	149,000,000	15.20%

Figure 6.1: Map of terrestrial and marine protected areas in China



Progress against PoWPA and RAP targets

Table 6.1: China's progress against CBD PoWPA and EA RAP targets

Goal	Target	EA RAP actions	Summary of China's progress
1.1	To establish and strengthen national and regional systems of PAs integrated into a global network as a contribution to globally agreed goals (by 2010 for terrestrial and 2012 for marine)	1, 2, 3	<ul style="list-style-type: none"> As of 2008 China has established 2538 nature reserves and terrestrial reserves account for more than 15% of the land area Among them, 303 are national nature reserves and cover a total area of 93.656 million hm² The PA system covers: <ul style="list-style-type: none"> 85% of the types of terrestrial natural ecosystems 45% of natural wetlands 20% of nature forests 85% of wild animal populations contained in conservation lists 65% of the community types of higher plants Marine PAs have been increasing since the first area was designated two decades ago
1.3	Establish and strengthen by 2010/2012 transboundary PAs, other forms of collaboration between neighbouring PAs across national boundaries and regional networks, to enhance the conservation and sustainable use of biological diversity, implementing the ecosystem approach, and improving international cooperation	4, 5	<ul style="list-style-type: none"> There have been many transboundary activities, including agreement on Common Nature Reserves among China, Mongolia and Russia, set up from an intergovernmental working group for transboundary nature reserves and biodiversity conservation (China and Russia) leading to establishment of the Xingkai Lake Nature Reserve, cooperation with Myanmar, Vietnam and Lao, and participation in the Greater Mekong Subregion Biodiversity Corridors Initiative.
1.4	All PAs to have effective management in existence by 2012, using participatory and science-based site planning processes that incorporate clear biodiversity objectives, targets, management strategies and monitoring programmes, drawing upon existing methodologies and a long-term management plan with active stakeholder involvement.	8	<ul style="list-style-type: none"> As a result of review and development of master plans and provincial level plans for Scenic and Historic Areas there has been improved management of the sites, strengthened resource protection, and promotion of reasonable development and use of resources
1.5	By 2008, effective mechanisms for identifying and preventing, and/or mitigating the negative impacts of key threats to PAs are in place.	13, 16, 18, 19	<ul style="list-style-type: none"> Action to mitigate threats is supported by laws and notices such as The Environmental Impact Assessment Law, The Notice on Issues Concerning Strengthening the Management of Nature Reserves, The Recommendation on Strengthening Oversight of Ecological Environment Protection during Resources Development and The Notice on Strengthening Environmental Protection during Hydropower Development

Goal	Target	EA RAP actions	Summary of China's progress
3.2	By 2010, comprehensive capacity building programmes and initiatives are implemented to develop knowledge and skills at individual, community and institutional levels, and raise professional standards	26	<ul style="list-style-type: none"> • A number of workshops and seminars have been held on world heritage conservation and management • The China biodiversity conservation and ecosystem management training and education center was opened in 2006 (Marine PAs focused) • Capacity building activities for Marine PAs include Integrated Coastal Management and Marine PAs Training, MPA management capacity building and GIS application training, workshops and a cross-site learning meeting, and project management training
3.3	By 2010 the development, validation, and transfer of appropriate technologies and innovative approaches for the effective management of PAs is substantially improved, taking into account decisions of the Conference of the Parties on technology transfer and cooperation	17, 22, 26, 27, 28	<ul style="list-style-type: none"> • China cooperates with universities, research institutes, and non-government organisations such as WWF, TNC, and the GEF to carry out projects on Nature Reserves, Wetlands and Sustainable Forestry, and to implement monitoring and research
3.4	Target: By 2008, sufficient financial, technical and other resources to meet the costs to effectively implement and manage national and regional systems of PAs are secured, including both from national and international sources, particularly to support the needs of developing countries and countries with economies in transition and small island developing States.	29, 24	<ul style="list-style-type: none"> • Funding is provided through various targeted programs including 'Capacity building in national nature reserves', the National Wildlife Conservation and Nature Reserve Construction Project', 'The Subsidy for Management and Protection of National Key Noncommercial Forests', and the National Implementation Plan for Wetlands Conservation Project
4.2	By 2010, frameworks for monitoring, evaluating and reporting PAs management effectiveness at sites, national and regional systems, and transboundary protected area levels adopted and implemented by Parties	14, 15	<ul style="list-style-type: none"> • A number of evaluation and monitoring mechanisms are employed with documents produced to describe processes and criteria (e.g. The Measures for Supervision and Inspection of National Nature Reserves), and a series of inspections are carried out on nature reserves. Evaluations have been undertaken of the management of nature reserves (MEP together with 6 other ministries and commissions)
4.3	By 2010, national and regional systems are established to enable effective monitoring of protected-area coverage, status and trends at national, regional and global scales, and to assist in evaluating progress in meeting global biodiversity targets	14	<ul style="list-style-type: none"> • Remote sensing and advance techniques have been used four times to supervise and examine Scenic and Historic Areas with effective results in their protection



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