2012 Annual Report
to the Environment Agency - Abu Dhabi

Framework Support for Implementing the Strategic Plan of the IUCN Species Survival Commission
## Contents

<table>
<thead>
<tr>
<th>Page</th>
<th>Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Introduction</td>
</tr>
<tr>
<td>7</td>
<td>Activity Reports</td>
</tr>
<tr>
<td>8</td>
<td>Sustainable Use and Livelihoods Specialist Group Annual Report</td>
</tr>
<tr>
<td>16</td>
<td>Developments in the Red List Training Curriculum</td>
</tr>
<tr>
<td>24</td>
<td>Reptile Assessments for the Arabian Peninsula</td>
</tr>
<tr>
<td>30</td>
<td>Freshwater Biodiversity Assessment for the Arabian Peninsula</td>
</tr>
<tr>
<td>34</td>
<td>Reptile Assessments for the Horn of Africa</td>
</tr>
<tr>
<td>38</td>
<td>Activities of the Amphibian Red List Authority</td>
</tr>
<tr>
<td>48</td>
<td>Publication of the <em>Red List of Magnoliaceae</em> on the IUCN Red List of Threatened Species™</td>
</tr>
<tr>
<td>54</td>
<td>Results of the Second Global Conifer Assessment</td>
</tr>
<tr>
<td>60</td>
<td>Completing the Global Cactus Red List Assessment</td>
</tr>
<tr>
<td>64</td>
<td>Towards an IUCN Red List of Slipper Orchids</td>
</tr>
<tr>
<td>68</td>
<td>Carnivorous Plant Specialist Group</td>
</tr>
<tr>
<td>76</td>
<td>Consolidating the criteria for identifying sites of significance for biodiversity</td>
</tr>
<tr>
<td>84</td>
<td>Activities of the Invasive Species Specialist Group</td>
</tr>
<tr>
<td>92</td>
<td>Activities of the Species Conservation Planning Subcommittee</td>
</tr>
<tr>
<td>102</td>
<td>Moving Action Asia Forward</td>
</tr>
<tr>
<td>110</td>
<td>Situation Analysis on East and Southeast Asian Intertidal Habitats, with Particular Reference to the Yellow Sea (including the Bohai Sea)</td>
</tr>
<tr>
<td>116</td>
<td>Situation Analysis on Terrestrial and Freshwater Fauna in West and Central Africa</td>
</tr>
<tr>
<td>120</td>
<td>Conclusions</td>
</tr>
<tr>
<td>123</td>
<td>Annexes</td>
</tr>
<tr>
<td>124</td>
<td>WCC-2012-Res-021-EN</td>
</tr>
<tr>
<td>126</td>
<td>WCC-2012-Res-022-EN</td>
</tr>
<tr>
<td>128</td>
<td>WCC-2012-Res-028-EN</td>
</tr>
<tr>
<td>130</td>
<td>WCC-2012-Res-036-EN</td>
</tr>
</tbody>
</table>
Introduction

Simon Stuart, Chair IUCN Species Survival Commission

I am delighted to present the 2012 report of the work accomplished under the Framework Support for Implementing the Strategic Plan of the IUCN Species Survival Commission (SSC), generously funded by the Environment Agency - Abu Dhabi (EAD) for a three-year period (2011-2013).

This is the second annual report from the SSC to the EAD on the work accomplished so far. Under the Memorandum of Agreement signed in June 2011, it is stated that “the funds will be used for the implementation of the SSC Strategic Plan, as adopted and agreed by the IUCN World Conservation Congress. The funds will be allocated to particular items of work in the Strategic Plan at the discretion of the Chair of the SSC, in consultation with EAD and the Global Species Programme, focusing in particular on high-priority activities that are poorly funded from other sources”. The Strategic Plan is detailed in Annex 1 of the Memorandum of Agreement, and the eighteen activities selected for funding in this first year were chosen based on this plan.

The eighteen Activity Reports that follow are impressive in terms of the breadth and depth of the issues addressed. The EAD support has been instrumental in helping to launch or grow five major global initiatives on sustainable use and livelihoods, Red List training, Key Biodiversity Areas, invasive species and species conservation planning. On all of these, the progress achieved is very pleasing, and the multiplier effect of the EAD investment will be felt for many years to come.

EAD support has also been instrumental in enabling the SSC to significantly expand the breadth of its work on plant assessments. For many years the IUCN Red List of Threatened Species™ has had poorer coverage of plants than animals. In this report we present information from the assessments being undertaken on Magnolias, Conifers, Cacti, Slipper Orchids and Carnivorous Plants. EAD support is also allowing us to start important work on an assessment of the status of the bumblebees of the world (a key group of pollinators), and is helping in the update of all the amphibian assessments (these species were first included in the IUCN Red List in 2004, and so it is time to determine how the status of these species has changed since then). There has been an important focus on assessments of species in the Arabian Peninsula, including Reptiles and various freshwater species (Fishes, Molluscs, Dragonflies and Plants), with the reptile work now expanding into the Horn of Africa.

Finally, EAD support has been instrumental in enabling the SSC to work on preparing independent, authoritative situation analyses on major conservation crises. The first, on East and Southeast Asian intertidal habitats (and the associated East Asian-Australasian Flyway for migratory birds) is now completed, and its impact is already being felt in policy discussions in the region. Work on the second situation analysis, on the terrestrial and freshwater fauna in West and Central Africa, is just starting.

In addition to the activities outlined in this report, funds from the Framework Support were also used to employ an intern in the SSC Chairs’ Office to help with the administration of the Framework Support and also to assist with the preparations for the SSC Chairs’ Meeting which was held in Abu Dhabi in February 2012. A separate report on the Chairs’ Meeting has already been sent to EAD, as this funding for the meeting came mainly from a separate grant agreement.

I should point out that in most cases the funding provided by EAD has proved to be catalytic in generating additional funding from other sources, and this makes the EAD support even more important to the SSC. There are, therefore, many reasons for the SSC to express our deepest thanks the EAD, and especially to the Secretary General, HE Razan Khalifa Al Mubarak.

Simon N. Stuart
Key achievements

• Re-invigorating debate and policy development on sustainable use in IUCN;
• Building a new constituency uniting natural and social sciences to work together on sustainable use;
• Channeling expertise on sustainable use for IUCN into international policy, particularly the Convention on Biological Diversity;
• Catalysing debate and networking on key issues of sustainable use and livelihoods at the IUCN World Conservation Congress;
• Launching new communications tools to share information and learning in and beyond SULi;
• Establishing a new governance structure for SULi;
• Co-leading the development of IUCN SSC Guiding Principles on trophy hunting as a Tool to Create Conservation Incentives;
• Laying the ground work for three focused initiatives under development in 2013.
1. First priority: Building the Specialist Group

The new Chair of this Specialist Group, Dr Rosie Cooney, was appointed at the end of 2011, so the first priority for 2012 was establishing the basic structure and functioning of the new group.

The name of the group had to change from the old Sustainable Use Specialist Group (SUSG) to a new name, which would reflect the initiation of a new group bringing together the social science expertise from the IUCN Commission on Environmental, Economic and Social Policy (CEESP) and the biological expertise from the SSC, with an enhanced focus on issues of rights and participation of indigenous and local communities. After consultation we chose the “Sustainable Use and Livelihoods Specialist Group”; or SULi.

Governance and membership

A Steering Committee, drawn from a range of regions and backgrounds and including expertise from both CEESP and SSC, has been established to advise and guide the work of the Chair. It met twice in 2012 (at the Abu Dhabi SSC Chairs’ meeting and at the World Conservation Congress), and held several Skype meetings.

SULi has been established as a single integrated global group, instead of a set of decentralised regional groups as under SUSG. This makes a flatter structure with many more cross-regional linkages, enabling people to work together at regional level where appropriate, but also in thematic groups cutting across regional boundaries. This model was chosen both because many issues cut across regional boundaries, and also because it means that SULi’s ongoing activity of the group itself is less dependent on the availability of resources and time of Chairs at regional level.

The membership was completely reviewed and re-established over 2012 (and the first month of 2013), and now comprises almost 250 people from across the globe. The expertise of the group is very broad, covering many dimensions of sustainable use and livelihoods, from specialists in use of specific taxa (medicinal plants, raptors, crocodiles, fisheries, elephants, etc), to community development, monitoring, indigenous knowledge and international policy. Currently, efforts are being made to improve representation from regions where the group is weak (particularly Asia and the Pacific) and to increase expertise around livelihoods based on use.

Communications

Promoting communication is the basis for all the work of the Specialist Group and was thus a major priority for the first year. A website on the IUCN site was established providing information about the group, and is gradually being expanded to provide an online resource of articles and policy documents relevant to sustainable use (SU) and livelihoods. It is currently being overhauled now that the group is up and running. David Beamont from the UK has kindly volunteered a large amount of time to liaise with IUCN and get this site up and running. The current site can be viewed at: https://www.iucn.org/about/union/commissions/sustainable_use_and_livelihoods_specialist_group/.

A newsletter has been launched called SULiNews, with the expert editorship of Robin Sharp and David Beamont. Three editions were produced in May, August and November 2012 (and a fourth in early 2013), which can be found on this webpage: http://www.iucn.org/about/union/commissions/sustainable_use_and_livelihoods_specialist_group/sulinenews/. SULiNews combines topicality with some hard-edged thinking, and provides a space in which findings and best practice can be shared, new ideas or approaches and emerging controversies explored, and theories developed and tested. Newsletter issues typically comprise around 15 articles. The aim is to provide a hub for news on sustainable use and livelihoods for the whole IUCN community and beyond, so articles are regularly invited from other SSC Specialist Groups, other Themes of CEESP, and other researchers working in the field. SULiNews also features book reviews, brings together relevant publications and meetings, and in each edition shines a spotlight on a member of the group (through an
The number of SULiNews subscribers has steadily climbed since its launch – many more read it directly from the website.

2. Next Priority: Planning and Priority-setting

The IUCN Policy Statement on Sustainable Use of Wild Living Resources was adopted at the 2nd IUCN World Conservation Congress in 2000. This statement represents the broad consensus of the IUCN community, and, among other things, recognizes that “both consumptive and non-consumptive use of biological diversity are fundamental to the economies, cultures, and well-being of all nations and peoples”, that “use, if sustainable, can serve human needs on an ongoing basis while contributing to the conservation of biological diversity”, and that “use of wild living resources, if sustainable, is an important conservation tool because the social and economic benefits derived from such use provide incentives for people to conserve them”. The broad aim of SULi is to help all relevant stakeholders throughout the world to put this policy into practice. We see this as comprising four interrelated priorities:

- Recognising and valuing the contribution wild biodiversity makes to human livelihoods, economies and cultures;
- Promoting sustainability in use of resources that are currently overexploited;
- Enhancing the incentives for conservation that can be generated by use of wild resources;
- Promoting the rights and interests of indigenous peoples and local communities in benefiting in an equitable manner from the use of biodiversity.

Over the course of 2012, Rosie, carried out extensive consultation with other parts of SSC and CEESP, IUCN relevant programmes and regional offices, NGOs, experts in sustainable use, and others, to help understand the most important issues at hand; other work currently taking place; what people want from the SULi network; and the successes and failures of past approaches to developing a Specialist Group on sustainable use, and this was the focus of much discussion in the Steering Committee. The 2012 SSC Chairs’ meeting in Abu Dhabi was an invaluable opportunity to initiate this process. We now have a clear idea of how we work and what issues are current priorities, as follows:

How we work:

i. Communicating and convening
ii. Building understanding of theory and practice
iii. Developing guidance
iv. Influencing practice and policy
Our priority issues (2013-2016):

i. Building a strong and sustainable SULi network
ii. International trade in wild resources
iii. Community management of wild resources
iv. Wild meat, conservation and food security
v. Technical tools to support sustainable use and management
vi. Illustrating good practice in sustainable use

This planning process is continuing in 2013, with Rosie aiming to carry out a further strategic planning exercise based on a SWOT analysis (Strengths, Weaknesses, Opportunities, Threats) to further pin down SULi’s long-term strategy and specific niche in catalyzing more effective action toward sustainability. This will include, in particular, clarifying the relationship of SULi’s work to other institutions working in the field of sustainable use and livelihoods to ensure effective synergies and avoid duplication.

3. The Real Work: Actions and Achievements

This section is structured around how we work, summarizing major interventions and achievements. However, to illustrate how these add up to a coherent program of work on a priority issue, a case study on wild meat is provided.

i. Communications and convening

This is largely covered in section 1, so is not discussed further here.

ii. Building understanding of theory and practice

- On wild meat, SULi developed a project proposal in collaboration with IUCN PACO (Central and West Africa Office) and TRAFFIC to distil lessons from experience with community based natural resource management (NRM) in Cameroon for policy and management on wild meat. The project was submitted to the Darwin Initiative (DI), made it to the second round, but was not a final grant recipient. The proposal received good feedback, however, and we are looking for other places to submit it; perhaps even resubmitting a strengthened version to DI in the future.

- Also on this subject, SULi is also involved with a process in southern Africa to tackle wild meat, led by the Wildlife Conservation Society/Zoological Society of London Rangewide Program for Cheetah and Wild Dog, and Panthera. SULi members provided input to a Technical Experts Meeting and the following SADC (Southern Africa Development Community) governmental meeting, and has helped develop and fund a study (due to start April 2013) examining the contribution of wild meat to food security in southern Africa.

- A team exploring the insights economic theory provides to understanding trade chains for wildlife products (from fish to vicufias, cycads to rhinos) has been established and is developing ideas. This initiative is a joint effort between SULi and the CEESP Theme on Environment, Macroeconomics, Trade and Investment (TEMITI), involving Michael T’Sas Rolpes and Alejandro Nadal in particular, working with the SSC African Rhino and South American Camelids Specialist Groups and others. It is focused particularly on understanding what economic theory (particularly the insights of industrial organization theory) can tell us about how the structures of trade chains (e.g. the number of buyers at each step, transaction costs, information flows, etc) affect conservation and livelihood outcomes.

- A Sustainability Modeling Group has been established within SULi, led by David Lusseau at the University of Aberdeen, aiming to use agent based modeling and resilience concepts to better understand the dynamics of social-ecological systems of use. This group includes expertise from economics, natural resource management, development, and social sciences, and is currently considering opportunities to develop specific funding proposals.

- On small scale fisheries, initial discussions have been held to bring together leading global fisheries expertise with practitioners working directly to support communities in fisheries management and livelihood efforts. There is an intense flurry of activity globally at the moment addressing fisheries, and yet there are concerns both that the interests and voices of small scale fishers are being left out, and that prevailing mainstream ideas about the best way to manage small scale fisheries for sustainability and food security are poorly empirically supported and may be quite wrong. We are planning a global initiative bringing together positive experiences in sustainable use in small scale fisheries around the world, highlighting food security and livelihood dimensions, integrating natural and social science, and particularly highlighting examples of successful integration of scientific and traditional/local knowledge in management. Key people involved include Despina Symons, Vivienne Solis and Jeppe Kolding. A first event – a panel discussion – will take place at the MARE Fishers and the Sea meeting in Amsterdam in May 2013, involving SULi, the International Collective in Support of Fishworkers, CoopeSolidar, and the Commission on Ecosystem Management’s Fisheries Expert Group.
iii. Developing guidance

- Working closely with the SSC Caprinae Specialist Group, SULi played an important role in contributing to the development of the *IUCN SSC Guiding Principles on Trophy Hunting as a Tool to Create Conservation Incentives*, including developing case studies of good practice from Namibia and Pakistan. The existence of SULi enabled extensive expertise on community-based and private land conservation in southern Africa and Central Asia in particular to influence and the principles.

- A Charter on Fungi and Biodiversity was developed by SULi members working closely with European governments. Surprisingly enough, fungi gathering is one of the most widely practised uses of wild biodiversity in Europe, and can drive overexploitation if poorly managed or be a driver for conservation and restoration where well managed. This Charter aims to provide a guiding framework for the management, regulation and conduct of gathering of wild fungi to promote sustainable use and conservation. The draft Charter is currently under review by the Member States of the Council of Europe for adoption under the Bern Convention.

- SULi provided considerable input into new *IUCN Guidelines on Reintroductions and Other Conservation Translocations*. SULi was able to gather extensive inputs from members with experience of translocation and restoration on private and community lands in particular.

iv. Influencing practice and policy

The second half of 2012 was dominated by two major international meetings – the World Conservation Congress and the Convention on Biological Diversity Conference of the Parties. At these meetings ideas were raised, decisions made, directions set, partnerships announced – with potentially major long-term impacts for the practice of sustainable use of wild resources on the ground. SULi contributed extensively to these two events.

World Conservation Congress

- At IUCN’s fifth World Conservation Congress in September 2012 in Jeju, South Korea, SULi organised three congress events and participated in several others, and worked to coordinate participation and negotiation on a range of motions related to local livelihoods and sustainable use.

- The official launch of SULi at the Congress, in partnership with TRAFFIC, served as a networking event and a way for people from different IUCN commissions and other like-minded colleagues to discuss, brainstorm and socialize. The event was well attended, with people from at least four Commissions and many different parts of the world generating new linkages across disciplines and regions on sustainable use and livelihoods issues.

- SULi and partners held a discussion event on the proposed “Collaborative Partnership on Wildlife” (CPW), bringing together representatives of IUCN members, IUCN regional offices, inter-governmental bodies (CBD, FAO) and SSC Specialist Groups (particularly African Elephant SG). This is a potentially extremely important global platform for coordination and stimulus of action addressing wildlife management, particularly bushmeat and medicinal harvest in the tropics and sub-tropics. This partnership, initially proposed within the CBD, responds to the need for a global platform to bring together diverse perspectives and expertise on wildlife management, including on conservation and sustainable use, food security and livelihoods, and human and wildlife health. This event was very well-attended, including high-level representatives of a number of international organisations and many government delegates, and led to agreement of text for an IUCN Resolution on the subject, which was passed by the Congress.

- SULi organized a workshop on “Re-developing IUCN’s work on Sustainable Use”, highlighting emerging issues and future directions in sustainable use, and seeking input from the audience. The presentations illustrated the vast scope of thematic areas and approaches related to sustainable use of biodiversity and the interrelation with community livelihoods, including:
  - Indigenous access to wild resources;
  - Legal frameworks for access and benefit-sharing – whether and to what extent they can support indigenous/local access to and management of wild resources;
Rosie speaking at the Collaborative Partnership on Wildlife event (note the Secretary-General of the CBD participating, two seats to her right) at the World Conservation Congress, Jeju, September 2012.

- Human-wildlife conflict and sustainable use – presenting cases where restrictions on use decreased local benefits while exacerbating human-wildlife conflict, with control strategies then burdening the public purse;
- Problems with the application of current “scientific” fisheries management strategies to small scale fisheries, from both a sustainability and food security perspective;
- Systems to provide information to support local community biodiversity decision-makers, focused in Europe;
- The promise and pitfalls of certification as a tool to improve sustainability and increase local benefits from resource harvest and trade, with focus on medicinal plants.

- SULi members played an important role in leading, influencing and steering several Congress motions relevant from an SU and livelihoods perspective, including on: Establishing an Indigenous Peoples’ Organization (IPO) membership and voting category in the IUCN; Respecting ecologically sustainable use of abundant biological resources; Bear farming in Asia, with particular reference to the conservation of wild populations; Promoting and supporting community resource management and conservation as a foundation for sustainable development; and Prioritizing community-based natural resource management for social and ecological resilience.

**Convention on Biological Diversity, 11th Conference of the Parties**

Since its initiation, SULi has begun acting as a focal point for IUCN in bringing together input on sustainable for the CBD. Sustainable use is one of the three “pillars” of the CBD and is an inherent part of action to reach the CBD’s agreed “Aichi Targets” for 2020. This included, in 2012:

- Development of IUCN’s position paper for CoP 11 on sustainable use, focusing on recommendations regarding wild meat;
- Joint preparation of a side-event at the CBD CoP entitled “Sharing Experience: Options for Implementing the Recommendations on Bushmeat”, led by TRAFFIC, with Zoological Society of London, COMIFAC (Central African Forest Commission) and the CBD Secretariat as partners. The SULi talk drew in experience from Africa, Central Asia and Latin America to highlight the importance of community-based resource management for addressing wild meat while meeting community food security and livelihood needs;
- Consultation on and development of IUCN recommendations on indicators for customary sustainable use;
- In the lead-up to the CoP, carrying out extensive IUCN consultation and development of IUCN input on proposed Collaborative Partnership on Wildlife Management.
Other policy-relevant events

SULi further sponsored member participation in the following meetings in 2012:

- An International Society of Ethnobiology conference event on food security and wild resources;
- The first meeting of the Saker Task Force under the Convention on Migratory Species meeting. Saker falcon is threatened by over-exploitation, but sustainable use could potentially be the basis for recovery;
- The Freshwater Fish Specialist Group meeting, to discuss a potential new certification scheme aimed at improving sustainability and local benefits from trade.

4. The Future

In 2013, SULi is currently focusing on taking forward three major areas of work:

- The economics of international wildlife trade (described above);
- Small scale fisheries (described above); and
- Supporting the integration of indigenous/traditional knowledge into wildlife management and monitoring, including into Red Listing assessments and CITES decision-making.

SULi in Action: Wildmeat

Here we follow a priority issue – wild meat - to show how the various types of SULi activities interact to create a coherent programme of work.

Use of wild animals for meat ("bushmeat") is both a key factor threatening the survival of many species, and a critical element of food security and livelihood strategies for many people. These imperatives need to be balanced in any response. We identified this as a key issue for SULi and have pursued action on this through a number of linked actions, engaging SULi expertise from across the world.

SULi developed IUCN’s policy on sustainable use for the CBD COP 11, focusing on wild meat. Through this it became apparent that the role of communities and community management was receiving little recognition at the international level. Key people involved were Rosie Cooney and Robert Kenward (UK).

SULi gathered expertise and input from three continents to present examples of successful indigenous and local community wild meat management at a side-event at the CBD to draw attention to this. Key people involved: Rosie Cooney, Bernardo Ortiz (Ecuador), Tahir Rasheed (Pakistan), Nathalie Van Vliet (Denmark) and Mike Murphree (South Africa).

Recognising that more concrete information was needed, SULi partnered with IUCN West and Central Africa and TRAFFIC to develop a project examining on-the-ground experience in Cameroon with community wild meat management (submitted to the Darwin Initiative). Key people involved were Lawrence Baya (Cameroon), Leonard Usungo (Cameroon), Rosie Cooney, Nathalie Van Vliet and Mike Murphree.

At the Society for International Ethnobiology meeting in Montpellier, France, SULi organised an event highlighting and examining the importance of use of wild resources for local food security. Key people: Iain Davidson-Hunt (Canada) and Lawrence Baya.

SULi contributed to and has provided seed funding for a project (starting April 2013) in southern Africa to examine the role of wildmeat in food security and explore ways to transform highly wasteful and unsustainable illegal use
into sustainable legal management, and assist SADC (Southern Africa Development Community) governments to develop a strategy to address it. Key people involved have been Peter Lindsey (South Africa), Mike Murphree and Rosie Cooney.

In SULiNews we have commissioned a series of articles from members highlighting specific contexts of wild meat use, the threats posed to biodiversity, and sharing experience on successful strategies for management.

SULi is a founding partner of the Collaborative Partnership on Wildlife, a new initiative of twelve global organisations aimed at improving coordination and cooperation on wildlife management, initially focused on wild meat. SULi consulted across IUCN (including regional programs and Commission members in Latin America, Asia and Africa in particular) to provide input to the CBD Secretariat in developing ideas for this partnership and has worked closely with FAO (UN Food and Agriculture Organisation) to help shape it.
Developments in the Red List Training Curriculum

Rebecca Miller and Caroline Pollock, Red List Unit, IUCN Global Species Programme

Key achievements

- 17 Red List Assessor Training events held in 2012, involving more than 265 participants;
- Number of certified IUCN Red List Trainers increased to 25;
- Stand-alone SIS self-teach tool developed and released;
- First two modules of online Red List training course fully completed and ready for release;
- Remaining modules of online Red List training course close to completion (for release in 2013);
- Translation of Red List Training materials into French and Spanish underway;
- Red List Training initiative showcased at IUCN World Conservation Congress.

2012 Annual Report
Background

The IUCN Red List of Threatened Species™ is a fundamental tool, widely used by governments, conservation organizations and the private sector to underpin decision making and action. Improving, maintaining and expanding the data presented in the IUCN Red List are vital to ensuring this tool is used effectively to leverage positive change for biodiversity conservation. Achieving this objective requires building Red List expertise by training scientists around the world on how to properly apply the Red List methodology; training and sustaining a network of Red List Trainers is fundamental to meeting this growing global need for capacity-building.

Prior to receiving EAD funding in 2011, work was underway to improve and expand the IUCN Red List training materials and tools as part of a larger initiative. The overall aim of this work is to significantly increase the range of Red List training resources available to the global network of Red List Assessors, and thereby improve and maintain the high quality of data available on the IUCN Red List and in national and regional Red Lists. Through generous support from EAD we are able to extend this work and ensure Red List training tools are developed to a high standard, are maintained, and are made available to an even wider audience.

There are three main components to the Red List Training initiative:

- IUCN Red List Assessor training curriculum
- IUCN Red List Trainer certification course
- Online Red List training course

We have made significant progress in all three areas since the end of 2011. These resources are being used to successfully train new Assessors to produce high-quality Red List assessments and new Trainers to facilitate Red List training.

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**What is the IUCN Red List?**

*World’s most comprehensive information source for extinction risk of species*

- Not just a list: a compilation of the conservation status of species at the global level
  - Based on the best scientific information available
  - Widely used to inform and influence biodiversity conservation

**Nature of the Criteria**

**CRITERIA**

| A | Population reduction |
| B | Restricted geographic range |
| C | Small population size & decline |
| D | Very small or restricted population |
| E | Quantitative analysis |

**THREATENED CATEGORIES**

- Critically Endangered (CR)
- Endangered (EN)
- Vulnerable (VU)

**Biological standards: What are we mapping?**

- Known or inferred limits of the species’ distribution range
  - Distribution depicted as polygons
  - Means species probably only occurs within the polygon
  - Does not mean species is distributed equally within the polygon

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**Figure 1. A selection of slides from the IUCN Red List Assessor Training curriculum presentations.**
Red List Assessor Training Curriculum

The IUCN Red List Assessor training curriculum and all of the resources associated with this course were finalised in November 2011. Since then all of the training presentations have been made freely available on the IUCN Red List website (see Figure 1 and www.iucnredlist.org/technical-documents/red-list-training/red-list-assessor-training). This curriculum and the materials are regularly reviewed to ensure any changes to Red List guidelines are included appropriately, and to add newly developed case studies, exercises, etc.

The course uses a practical and learner-led approach to teach new Red List Assessors how to prepare high-quality Red List assessments based on the IUCN Red List Categories and Criteria. The format includes short presentations, frequent and interactive working group sessions, case studies, and mechanisms throughout the workshop to allow Red List Trainers to monitor participants’ understanding of the information being presented to them. Participants report high levels of satisfaction and are impressed by the professionalism and comprehensiveness of the course.

Initial plans to develop a dedicated Red List training website to house all of the Red List training resources (and more) have been postponed. After investigating a range of options for developing this website we decided to postpone its development because:

• Ongoing work throughout 2012 to develop the user-friendly Red List sub-site raised practical questions of how this, the main Red List website, and the Red List training website could interact; and

• To have the option of hosting the online Red List Training course on the Red List training website at some point in future, this website must be based on a Moodle platform. This will require more financial resources than are currently available and it is uncertain whether that platform is appropriate for the other functionalities planned for this website.
In 2012, 11 Red List Assessor Training workshops were held (in Europe, Africa, the Middle East, Asia, and the Caribbean) involving more than 180 participants. In addition to full training workshops, the training materials were used to provide background presentations for six Red List assessment workshops involving 86 participants (held in Europe, Africa, the Middle East, and Central America). Since the start of this project in 2011, a total of 35 Red List Training events have been held in 21 countries, involving 586 participants (Figure 2).

We continue to receive very positive feedback from participants about the workshop format and training materials and requests for training workshops are continuing to increase, particularly from national Red List projects. We eventually hope to offer regular Red List Assessor training workshops organised directly through the Red List Unit; this would not only provide more consistent training opportunities for experts to become Red List Assessors, but would also help to kick start and support the Red List Trainers network by allowing future Red List Trainers to experience the Red List Assessor curriculum in person before they attend a Red List Trainer workshop.

**Red List Trainer Certification Course**

The Red List Trainer certificate course was developed and tested in December 2011. This course is designed to provide motivated Red List Assessors, Red List Authority Coordinators, and global and regional assessment project staff with the skills and confidence to teach the Red List Assessor training course. The course emphasizes developing facilitation skills, provides advice on training techniques and organizing training workshops, and gives guidance on explaining complex issues and answering questions that commonly arise when training new Red List Assessors.

All certified trainers are provided with badges, a detailed Facilitator’s Manual and a training toolkit with the latest materials required to conduct training workshops, including presentations, a wide range of case studies, learning aids and interactive materials, ensuring consistency in training across the regions.

In 2011, potential Red List Trainers were identified from within the Global Species Programme, the Red List Partners, regional IUCN offices and the SSC network. Twelve Trainers were certified at the first Red List Trainers workshop in December 2011, and a further 13 Trainers with proven experience were certified at the SSC Chairs’ meeting held in Abu Dhabi in February 2012 (Figure 3).

These Trainers have already put their skills to work facilitating Red List Assessor Training: 71% of training events in 2012 were facilitated by new Red List Trainers. Currently there are 25 Red List Trainers; this number will continue to increase, as others are being invited to participate in Red List Trainer workshops to become certified trainers. Indeed, the Red List Trainer network has the potential to grow dramatically; interest in becoming a certified Red List Trainer far exceeds the financial resources currently available for providing Red List Trainer workshops.

**The Online Red List Course: providing training where it is needed most**

Since the IUCN Red List Categories and Criteria were first adopted in 1994, requests for Red List training have steadily increased; these requests come both from within the IUCN Red List and SSC networks, and also from national Red List projects. However, limited capacity within the IUCN Global Species Programme meant that over the years many of these requests could not be accommodated. But thanks to the the birth of the internet era and vast improvements in access to online resources around the world, we have been provided with a new way reach out to a global network of Red List Assessors.

Developing an online training course on such a scale has been a steep learning curve for the IUCN Red List Unit. For example, we have discovered that topics that are relatively easy to explain within a workshop require a very different approach in an online course, where there is no facilitator present to provide more detailed explanations. Much more care is required over the wording of case studies and questions designed to test the user’s understanding of the subject. Such discoveries have opened our eyes to a new way of teaching.

The combination of The Nature Conservancy’s skills in developing online courses and IUCN’s knowledge and experience of Red List Training through workshops has proved to be a fruitful partnership that will result in the first online IUCN Red List Training course being released to the world in 2013.
The next Red List Trainers workshop is scheduled for June 2012, in Cambridge, UK. That workshop will focus on training specialists from IUCN SSC Plant Specialist Groups (based in RBG Kew and RBG Edinburgh), along with staff involved in coordinating major Red List assessment projects (e.g., IUCN Freshwater Biodiversity Unit, the Mammal assessment project); these will be valuable additions to the Red List Trainer network.

As mentioned above, initial plans to develop the Red List training website, which would include a password-protected section specifically for materials, discussion boards and information for Red List Trainers, have been postponed. In 2013, it is likely that an online Wiki will be prepared specifically for Red List Trainers to access training resources specific to their needs.

Online Red List Training Course

In 2012 our main focus was on developing the online Red List training course. This comprehensive e-learning course will allow people worldwide to learn how to prepare both global and regional IUCN Red List assessments cost-effectively and in their own time, without needing to wait for a training workshop to become available. It also opens the door to potential incorporation of standardised Red List training into academic courses and other formal education curricula.

This course is being developed in collaboration with The Nature Conservancy (TNC) and hosted on the Conservation Training website (www.conservationtraining.org), a centralized online learning portal developed by TNC to provide a wide range of free online training courses for conservation practitioners (Figure 4). The online Red List Training course is comprehensive, involving seven modules and a final exam: 1) Introduction to the IUCN Red List; 2) The IUCN Red
List assessment process; 3) IUCN Red List Categories and Criteria; 4) Supporting information requirements for IUCN Red List assessments; 5) IUCN Red List mapping protocols; 6) IUCN Species Information Service (SIS); 7) Regional and national Red List assessments; 8) Final exam.

As of October 2012, we have scripted and developed four of these modules: Modules 1 and 2 are fully completed and will be released in May 2013; the other two modules (covering supporting information requirements for IUCN Red List assessments and the IUCN Species Information Service) require a final review before these are ready for release.

A preview of the course, including work already completed and work underway, can be viewed at:

Website: https://www.conservationtraining.org/mod/page/view.php?id=3824
Username: review
Password: preview1

Throughout 2013, development work will continue to complete the remaining three modules (covering the more technical aspects of the IUCN Red List Categories and Criteria, applying the Red List Criteria for national and regional Red List assessments, and mapping standards for taxa listed on the IUCN Red List); these require a more extensive review process within IUCN before they can be finalized and released. In 2013, a final exam will also be developed; all users taking the online course will be required to pass this exam before they can receive a Red List Assessor certificate.

Translating the IUCN Red List Training materials

Our experience providing Red List training around the world has emphasized the crucial importance of making Red List training resources available in a broad set of languages. Now that most of the training materials are completed, and others are nearing completion, we aim to significantly increase the reach of Red List Training by making all of these materials available in all three of IUCN’s official languages: English, French and Spanish. This will greatly improve understanding of Red List methodology in major regions of the world and increase effectiveness and value of Red List training.

Red List training resources have been developed in English. We have now begun to translate the following materials into both French and Spanish:

• The Red List Assessor training workshop curriculum (including presentations, exercises, case studies, etc);
• All modules in the online Red List training course;
• Fundamental Red List publications used by Red List Assessors and included in Red List Trainer toolkits (e.g. the IUCN Red List Categories and Criteria: Version 3.1 Second edition and Guidelines for Application of IUCN Red List Criteria at Regional and National Levels: Version 4.0 methodology booklets);
• Other Red List guidance documents (e.g., User Guidelines, Classification Schemes guidance documents, etc).

Some of this work has already been completed; the second edition of the *IUCN Red List Categories and Criteria: Version 3.1 Second Edition* and the *Guidelines for Application of IUCN Red List Criteria at Regional and National Levels: Version 4.0* have been translated. In 2012 these were published electronically (available on the IUCN and IUCN Red List websites), and in April 2013 hard copies of these booklets were printed (available from the IUCN Red List Unit, Cambridge, UK, or from the IUCN Global Species Programme office in Gland, Switzerland).

Translations for the other guidance documents and training materials are being carried out in 2013 (e.g. translations of the current version of the *Guidelines for Using the IUCN Red List Categories and Criteria* were completed in April 2013, and the online course modules are being translated as soon as the English versions are completed and ready for release). We expect the translations for the key training materials to be completed in 2013.

Next Steps for 2013

In 2013, we will continue to work toward Result 5 of the Red List Strategic Plan (*IUCN Red Listing capacity built through expanded training programmes*) and build on the work that has already been carried out, to develop and maintain improved Red List training resources to meet the global need for this important training. This includes, but is not limited to:

• Hold at least one Red List Trainer workshop to add at least 10 more Red List Trainers to the network;
• Actively encourage newly qualified Red List Trainers to put their training skills to good use through facilitating Red List Assessor Training workshops;
• Complete and launch the online IUCN Red List Training Course.
• Investigate the best option for providing for Red List Trainers with easy access to Red List Training materials and to share training experiences (e.g. an online Wiki) and begin developing this resource.
• French and Spanish translations completed for:
  ○ Online Red List Training course modules
  ○ Red List Assessor Training curriculum
  ○ User Guidelines
  ○ Other Red List guidance documents
• Continue to maintain Red List training materials to account for updates in Red List guidance documents and add new materials (e.g., case studies, exercises, etc).

Showcasing the IUCN Red List Training initiative: IUCN World Conservation Congress

In September 2012 the IUCN World Conservation Congress was held in Jeju, South Korea. Held every four years, this is the world’s largest conservation gathering, aiming to improve how we manage our natural environment for human, social and economic development. Participants include leaders from governments, the public sector, non-governmental organizations, business, UN agencies, and social organizations brought together to discuss, debate and decide on solutions for the world’s most pressing environmental and development issues.

The IUCN Congress provided an ideal forum for maximising communication about and catalyzing participation in Red List training opportunities. It has become clear that proactive communication and promotion of our portfolio of training resources is required to raise awareness of and participation in these capacity building activities.

During the Congress the IUCN Red List Unit held an event at the Species Pavilion to showcase the Red List training initiative and generate additional interest. In this event participants were presented with:

• A preview of the online Red List Training course;
• A summary of the Red List training tools and materials;
• An outline of Red List training opportunities and certification courses.

The event was extremely popular, with Congress participants from a wide range of backgrounds attending. Most notable was the large proportion of people involved in regional and national Red List activities in the audience, as well as many IUCN SSC Members.

Audience feedback in this event clearly illustrated the need for and interest in Red List training around the world and enthusiasm for getting access to online training resources; people are extremely eager to be involved in these new training resources. We anticipate very high enrolment in the online course, from individuals both within and beyond the traditional Red List network.
Trainees of two workshops held last year at the Royal Botanic Gardens, Kew, UK (above) and the Red List Unit in Cambridge, UK (below).
Reptile Assessments for the Arabian Peninsula

Philip Bowles, Coordinator, IUCN Snake and Lizard Red List Authority

Neil Cox, Manager, IUCN-CI Biodiversity Assessment Unit

Marcelo Tognelli, IUCN-CI Biodiversity Assessment Unit

Key achievements

- Joint IUCN-CI BAU conservation assessment workshop hosted by BCEAW in Sharjah, February 2012;
- 90 of 172 assessed species submitted for publication on the IUCN Red List in June 2012, and published in October 2012;
- Final workshop data incorporated into an IUCN report on the conservation status of Arabian reptiles, and published in February 2013.
Summary

A conservation assessment workshop was organized by the joint IUCN-Conservation International (CI) Biodiversity Assessment Unit (BAU), in order to determine the conservation status of reptile fauna on the Arabian Peninsula. The BAU workshop took place thanks to the generous financial support of the Environment Agency Abu Dhabi (EAD) and the logistical support of the Breeding Centre for Endangered Arabian Wildlife (BCEAW). The workshop was hosted by BCEAW in Sharjah on 5-9 February 2012.

Background

Reptiles are widely recognized as an important part of the fauna of dryland habitats. This is especially the case for the Arabian Peninsula (geographically defined here as Kuwait, Saudi Arabia, Yemen, Oman, the United Arab Emirates, Qatar, and Bahrain); of the 184 species recognized from the Peninsula and the adjacent Socotra archipelago (politically part of Yemen), 89 are endemic.

Although drylands are under pressure from human activities both regionally and globally, it has been difficult to determine conservation priorities for dryland reptiles because IUCN Red List assessments had not previously been completed for most of these species.

Prior to the 2012 assessment workshop, BAU staff drafted accounts in the IUCN Species Information Service database (SIS) for each one of the Peninsula’s reptile species. The reptiles of the Socotra archipelago had been previously assessed, and the endemic species published on the IUCN Red List in 2011. These accounts detailed the geographic distribution, population status, habitat and ecology requirements, threats to the species, and conservation measures in place. Digital maps outlining the distribution of each species were also created. Most of the information was sourced...
from widely-available references (mainly from published journal articles and books), thus forming a solid base on which to undertake assessments of these species’ conservation status.

The Assessment Workshop

In collaboration with BCEAW, BAU organized a workshop of approximately thirty reptile experts in order to review the material that had been collected for the SIS accounts. These experts were both international herpetologists and expert participants from the countries of the Arabian Peninsula region. Participants were given presentations on the Global Reptile Assessment and the IUCN Red List of Threatened Species™ Categories and Criteria—the global gold standard used to assess extinction risk for a species. Experts were split into two working groups, each facilitated by a trained IUCN staff member. The species were divided into geographically distinct units (for example ‘Yemen endemics’). This method allowed maximum utilization of the time available to the experts for reviewing the data that had been collected for each species.

The data for each species were discussed and supplemented by the information collated within SIS and on hard-copy maps. This process was particularly important for ‘grey’ information, i.e. information of which the participants were aware, but had yet to be formally published. Data on threats in particular, which was poorly-represented in the primary and secondary literature used to compile the accounts but well-known to the regional experts, is difficult to obtain outside this kind of workshop setting, and the workshop participants provided critical information necessary to inform the conservation status of each species.

![Figure 2. Summary of the present major threats to reptiles of the Arabian Peninsula in both threatened and non-threatened Red List categories.](image)

It is this review process that causes IUCN accounts to be the leading source of data on the reptiles of the Arabian Peninsula. Using the data discussion as a foundation, the workshop participants were required to agree on an Red List Category for each species (where Critically Endangered, Endangered and Vulnerable species are considered to be threatened with extinction).

The Post-workshop Review

Between the February workshop and the submission of completed accounts for final sign-off by IUCN’s Red List Unit in June, the accounts and maps drafted at the workshop were individually cleaned up and checked for consistency with the IUCN Red List Categories and Criteria by BAU staff. Outstanding questions were identified and resolved through remote correspondence with the specialists who had attended the workshop and with additional specialists who had been unable to attend the workshop. Taxonomic changes affecting the identities of species included in the workshop were made at this stage. The final accounts and maps were made available on an FTP server for final comments and corrections from the specialists prior to submission. This peer review process is an essential part of the quality control IUCN Red
The Omani Spiny-tailed Lizard

Lizards of the genus *Uromastyx* are known locally as Dabbs and internationally as spiny-tailed lizards. The animals are herbivorous, moderately large with slow generation times, and live in small colonies, and have been collected locally for food and medicinal use for centuries. Despite CITES regulation on all members of the genus, they are also popular in the international pet trade and are also now captured for their oil, which is exported to Southeast Asia for use in traditional medicine. Two of the six species in the Arabian Peninsula are listed as Vulnerable, and two (both endemic) as Near Threatened, in all cases primarily as a result of exploitation.

The Omani spiny-tailed lizard (*Uromastyx thomasi*) is endemic to this country, and is provisionally listed as Vulnerable. Herpetologists have only collected the species occasionally since its original description in the 1930s, however the species is in high demand in the international pet trade and a single shipment confiscated in Munich Airport in 2012 contained 32 animals, roughly as many as have been recorded on the Omani mainland since the species was first described, and no confirmed recent records exist for mainland Oman. It is only known to survive on Masirah Island, where it is likely to have been lost from at least one locality following development and appears to have undergone significant declines over the last 15 years (three generations), believed to be in excess of 30%.

*Uromastyx thomasi* photographed on Masirah Island.
©Thomas Wilms

List assessments go through prior to publication, and ensures that the resulting assessments provide the best available scientific consensus concerning the status of these species, and are fully supported in the database (and on the IUCN Red List website) with relevant literature and references.

The final results from the workshop following review were very encouraging: only five of the species reviewed at the workshop were considered to be threatened with global extinction (all listed as Vulnerable); an additional four were found to be threatened regionally within the Arabian Peninsula, but of Least Concern globally. The only Critically Endangered species identified for the region, the Socotran endemic gecko *Hemidactylus dracaeniculus*, had been assessed and published prior to the workshop. This result indicates that nearly all conservation activities and management for reptiles on the Arabian Peninsula are working. This encouraging result is tempered by the finding that 13.4% of the species assessed were Data Deficient, and it was also found that many of the Least Concern species were found primarily in poorly-developed areas such as western Yemen, and were perceived as being at low risk due to underdevelopment rather than active conservation.

Of the five species considered to be globally threatened, three were affected by over-collection for food, medicinal use and the pet trade (particularly spiny-tailed lizard species in the genus *Uromastyx*), while the remaining three species were considered to be threatened by habitat loss. The latter were species endemic to the Arabian Peninsula with restricted ranges. The four species at risk of regional extinction have a marginal occurrence in the Peninsula, mainly in coastal areas subject to development that threatens their habitat. These threatened species are well-served by the Ara-
bian Peninsula’s protected area network, and only a single threatened species, the endemic leaf-toed gecko *Asaccus montanus* (provisionally listed as Vulnerable), is not found in any protected areas. Eleven additional species of potential conservation concern (9 Data Deficient, and 2 Near Threatened) are absent from the protected area network.

**Red List Publication**

In June 2012, following the post-workshop review, 90 species were submitted to the Red List Unit for publication in the October 2012 IUCN Red List update. Because of the regional nature of Red List assessment workshops, and the need to assess each species throughout its global range, it is a necessary practice to retain species accounts in draft following the post-workshop review until they have been assessed for their entire range. Consequently, species that range into areas of Africa or Asia, and for which assessment workshops have not yet been completed, were excluded from the submission.

The submitted accounts included all but two of the species endemic to the Arabian Peninsula; the remaining species included in the submission had previously been included in assessment workshops for the Mediterranean and Caucasus, and assessments for the Arabian Peninsula completed these global assessments. The two endemic species withheld from the submission (*Uromastyx thomasi* and *Asaccus montanus*) were withheld due to outstanding questions, and were included in the following Red List submission, in March 2013.

**IUCN Report**

The final results from the workshop were incorporated into a report entitled *The Conservation Status and Distribution of Reptiles of the Arabian Peninsula*, authored by members of the IUCN-CI Biodiversity Assessment Unit and partners at the Arabian Breeding Centre for Endangered Wildlife in Sharjah (United Arab Emirates). This report was produced in 2012 following the workshop, and published at the start of February 2013.
The sand gecko *Stenodactylus doriae* (Least Concern) ranges through much of the Arabian Peninsula and the Middle East. While locally threatened by habitat loss in some areas, it remains locally abundant within its Arabian range.

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Freshwater Biodiversity Assessment for the Arabian Peninsula

Nieves Garcia and Ian Harrison, IUCN-CI Biodiversity Assessment Unit (BAU)

Key achievements

• Data compilation began in early March 2012 and, to date, the risk of extinction of 271 species and sub-species have been assessed at global and regional levels and their assessments submitted for publication on the IUCN Red List of Threatened Species™, including all aquatic plants, dragonflies and damselflies and molluscs native to the Peninsula. These represent an important contribution to the knowledge of freshwater biodiversity at the global level as, prior to this project, 172 species (58% of the total) had never been published on the Red List.

• Our network of regional experts was strengthened through the participation of members of the IUCN SSC Dragonfly Specialist Group, IUCN SSC Mollusc Specialist Group, and IUCN SSC Freshwater Plant Specialist Group.

• We are working to apply the outcome of these projects to conservation planning efforts in the region; in particular, through the integration of all spatial data generated in the databases of the Abu Dhabi Global Environmental Data Initiative (AGEDI).

• Results of this project will be published in English and Arabic showcasing important areas for freshwater biodiversity conservation, the number of threatened and Data Deficient species, it will highlight causes of threat, and outline recommendations for conservation.
Background

With the support of Environment Agency Abu Dhabi, BAU is working with SSC Specialist Groups to assess the extinction risk of freshwater fishes (23 species and sub-species), freshwater molluscs (30 species), dragonflies and damselflies (59 species and subspecies), and aquatic plants (182 species) of the of the Arabian Peninsula region.

Data Compilation

The best information on all known species within the priority taxa was compiled for this assessment. All data compilers had experience using IUCN’s Species Information Service (SIS), in the application of the IUCN Red List Categories and Criteria (IUCN 2001) to assess a species’ risk of extinction in the wild, and in mapping freshwater species’ distributions using Geographic Information System (GIS).

Data for the molluscs were compiled by N. García (IUCN-Conservation International Biodiversity Assessment Unit) in consultation with members of the IUCN SSC Mollusc Specialist Group; data for fishes were compiled by I. Harrison (IUCN-Conservation International Biodiversity Assessment Unit and IUCN SSC-Wetlands International Freshwater Fish Specialist Group) in consultation with members of the Freshwater Fish Specialist Group and other international experts; data for dragonflies were compiled by J.-P. Boudot (IUCN SSC Dragonfly Specialist Group); data for plants were compiled by R. Lansdown (IUCN SSC Freshwater Plant Specialist Group) in consultation with other international experts. The dragonfly and plant taxa compilers were contracted as consultants with EAD funding to carry out this work.

Workshop: IUCN Red List for the Freshwater Biodiversity Assessments in the Arabian Peninsula

The IUCN Red List assessment workshop for the freshwater species of the Arabian Peninsula took place at the Senckenberg Research Institute and Museum of Nature in Frankfurt, between April 30th and May 4th 2012. The workshop was lead by staff of the Biodiversity Assessment Unit (Ms Nieves García and Dr Ian Harrison), with facilitating support from Mr. Kaldhoun Alomari, who was then Species Focal Point of IUCN’s Regional Office for West Asia (Figure 1).

An additional seven regional and international scientists, experts on the freshwater flora and fauna of the region, worked on assessing the risk of extinction of a total of 261 native species of aquatic plants, freshwater molluscs and dragonflies and damselflies (Odonata) at the global and regional levels. The experts’ field knowledge on the species’ distribution, local threats, population status and distribution was of key importance to assessing the species extinction against the IUCN Red List Criteria and agreement on the final Red List Category. Maps were also produced for each species.

The workshop included a presentation on the Arabian Peninsula Biodiversity Assessment project, and a training session aimed at building capacity on the IUCN Red Listing process and the application of the criteria at regional level. In addition, a final session was carried out on the last day to report back the preliminary results and findings for each working group, including a summary of the outcomes, comments on the experience and discussion of future steps and recommendations.

Post-workshop and publication of data on the Red List

In October 2012, the global assessments of all freshwater molluscs and endemic aquatic plants native to the region were published on the IUCN Red List (45 species in total) and are now available at www.iucnredlist.org.

The global assessments of all non-endemic aquatic plants and all species and subspecies of dragonflies and damselflies native to Arabia were submitted for publication to the Red List.
The assessments for freshwater fish are currently in final review by Friedhelm (Fareed) Krupp, (Director, Natural History Museum, Qatar Museums Authority) and Gary Feulner (Independent Expert Consultant).

**Data Analysis and generation of maps**

The results are used to estimate the number of species within each of the Red List Categories highlighting those that are listed threatened, as well as main threats to freshwater biodiversity within the region.

Maps for all plants, molluscs and dragonflies were digitized with the support of a GIS technician, Celia Navarro. These range maps were analyzed to generate maps of species richness, threatened species, endemic species and Data Deficient species.

![Figure 2. Preliminary map of threatened freshwater wetland-dependent plant species across the Arabian Peninsula region, mapped to river sub-catchments.](image)

**Report: Status and distribution of freshwater biodiversity of the Arabian Peninsula**

A summary report is being prepared for publication in English and Arabic and is expected to be ready in 2013. This publication will include the results of the assessments for all species at global and regional levels, and will present the results of the spatial analyses showing patterns of species richness, endemic species richness and threatened species richness, mapped to HydroSHEDS catchments. The report will also include information about current threats and recommendations for better conservation actions for the species in the region. All data and documents will also be available in digital format through a CD attached to the printed report.

**Contribution to future projects**

The data will complement upcoming assessments of freshwater biodiversity of the Levant being conducted by IUCN-FBU as part of the Mediterranean CEPF F+ process.
Wadi Baish in Saudi Arabia © B. Samraoui (top), the Arabian killifish Aphanius dispar (centre left) and the endemic crab Socotrapotamon socotrensis © F. Krupp (centre right) and Exacum aff. affine © A. Patzelt (bottom).
**Reptile Assessments for the Horn of Africa**

Philip Bowles, IUCN SSC Snake and Lizard Red List Authority Coordinator

Marcelo Tognelli, IUCN-CI Biodiversity Assessment Unit

Neil Cox, Manager, IUCN-CI Biodiversity Assessment Unit

**Key achievements**

- Data compilation completed and draft maps prepared for 337 reptiles found in the Horn of Africa, Sudan, and South Sudan;
- Preparation of a website to host a new reptile assessment forum ongoing, with assessments expected to be conducted from April 2013;
- Completion of forum-based remote assessment workshop and post-workshop review planned by the end of October 2013.
Summary

Draft assessments of the reptiles of the Horn of Africa were prepared by the IUCN-Conservation International Biodiversity Assessment Unit (BAU), together with accompanying distribution maps, in order to determine the conservation status of the reptile fauna of the Horn of Africa (comprising Somalia, Ethiopia, Eritrea and Djibouti, Figure 1) and the adjacent territories of Sudan and South Sudan. This region excludes the disputed Hala’ib Triangle, previously assessed for reptiles as part of a Mediterranean assessment workshop, and Ilemi Triangle; this does not imply any official IUCN opinion on the ownership of these territories. This will be the first IUCN reptile assessment project to be conducted as a remote, website-based workshop using a forum tool developed thanks to the generous financial support of the Environment Agency Abu Dhabi, whose support also permitted the collection and compilation of data to be used in the conservation assessments.

Figure 1: Map of northeastern Africa highlighting the territories covered by the assessments. The politically disputed Hala’ib and Ilemi Triangles are excluded, as is Bir Tawil (which is not claimed by any state).

Background

The Horn of Africa and the two Sudans consist of mainly arid, moderate to high-elevation habitats with a high human population density: Ethiopia is the second most populous country in Africa. Within this wide area, 337 species of lizards, snakes and turtles have been recorded. This combination of high species richness and high human population densities makes this area important for understanding the conservation needs of dryland areas.

Many species are endemic to this region, particularly in Ethiopia and/or Somalia (approximately 22% of reptiles known from the latter country appear to be endemic to Somalia). At the same time this area is a biogeographic transitional zone between Mediterranean faunas in the north and east and East African reptiles in the south, while the humid forests of South Sudan represent the western range margin for many Central African species. The Horn lies directly across the Red Sea from the Arabian Peninsula, and the two regions share 34 species (10% of the total known from the Horn, and 19.8% of the Arabian reptile fauna).

Data Collection

Following work to develop a preliminary species list and obtain initial reference material, from October 2012 species accounts were prepared in IUCN’s Species Information Service (SIS) database for 337 species of reptiles recorded from the Horn of Africa, Sudan and South Sudan (representing all known lizards – including amphisbaenians – snakes and
turtles presently recognized for this region). This data included available literature information on species’ distribution, population status, ecological requirements and possible threats. There is a comprehensive literature source for only Ethiopia and Eritrea, and this stage included an extensive review of the available primary and secondary literature. Data compilation, and the preparation of associated distribution maps, was completed by the end of January 2013.

The Assessment Forum

The IUCN SSC Amphibian Specialist Group (ASG), with support from the BAU, has developed a tool for permitting IUCN Red List assessments to be conducted remotely. Development was completed and an amphibian assessment forum made available online in early March 2013. Development of the corresponding BAU website is underway, to be managed by unit staff. The resulting forum will be used to host the Horn of Africa draft reptile assessments. Herpetologists with expertise in the regions being assessed will be invited to review and amend the accounts and maps from April 2013, to provide additional data and to determine the appropriate conservation status of each species applying the IUCN Red List Categories and Criteria.

Future Activities and Final Products

The forum will enable contributors to comment on, provide data for and suggest amendments to the draft species accounts and maps. A subsequent “post-workshop” cleanup and review process by BAU staff will incorporate these changes into the SIS species accounts and will ensure that the application of the Red List Categories and Criteria is accurate and consistent. Completion of this process is planned by the end of October 2013, and it is likely that the final data will be presented in a published IUCN report. Red List accounts for species whose ranges have been fully assessed as a result of this process will be submitted early in 2014 for publication on the Red List website. A peer-reviewed paper may be prepared that will provide the first available reptile checklists for Sudan and the newly-recognized South Sudan.

Table 1: Provisional numbers of species for each country in northeastern Africa

<table>
<thead>
<tr>
<th>Country</th>
<th>Number of species</th>
<th>Endemic species</th>
</tr>
</thead>
<tbody>
<tr>
<td>Djibouti</td>
<td>47</td>
<td>1</td>
</tr>
<tr>
<td>Eritrea</td>
<td>83</td>
<td>3</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>195</td>
<td>15</td>
</tr>
<tr>
<td>Somalia</td>
<td>207</td>
<td>45</td>
</tr>
<tr>
<td>South Sudan</td>
<td>91</td>
<td>3</td>
</tr>
<tr>
<td>Sudan</td>
<td>104</td>
<td>3</td>
</tr>
</tbody>
</table>
The Sinai agama *Pseudotrapelus sinaitus* is found on the Arabian Peninsula and in adjacent Mediterranean countries. It reaches its southern range limit in Sudan and Eritrea.

© Philip Bowles
Activities of the Amphibian Red List Authority

Ariadne Angulo, IUCN SSC Amphibian Red List Authority Coordinator

Key achievements

- Development of a strategy for updating the IUCN Red List amphibian database
- Appointment of Ms Jennifer Luedtke as Deputy Amphibian RLA Coordinator
- 52 amphibian reassessments and new assessments published in the IUCN Red List of Threatened Species™ in 2012, including two re-discoveries of Extinct (EX) species
- Development of an amphibian assessment project portfolio
- Eastern Afromontane, Central and West African amphibian assessment workshop in Trento, Italy, June 2012
Key Activities

Development of a strategy for updating the IUCN Red List amphibian database

The assessments published as part of the 2004 Global Amphibian Assessment are due for reassessment by 2014. To that end, the Amphibian RLA has been working towards the reassessment all species currently listed, as well as creating assessments for new species. In 2012, a total of 52 amphibian reassessments and new assessments were published in the IUCN Red List of Threatened Species™, including two high profile re-discoveries, the Hula Painted Frog (*Discoglossus nigriventer*) of Israel and Costa Rica’s Holdridge’s Toad (*Incilius holdridgei*), both of which had been previously considered Extinct.

With the new quality control requirements implemented after the 2012 IUCN World Conservation Congress (i.e. the minimum number of external reviewers has been reduced from two to one) it will be possible to increase the number of amphibian assessments submitted to the Red List Unit (RLU) in the coming year. In fact, already 80 amphibian assessments have been submitted for consideration to the RLU for the Red List version 2013.1; these include some high-profile rediscoveries of species previously thought to be possibly extinct. In addition, a group of nearly 300 Least Concern African amphibian assessments have been circulated among experts and determined that no assessment-relevant changes are needed, so these have been prioritized for inclusion in the Red List later in the year.

After the 2012 IUCN World Conservation Congress, the SSC Chair, Dr Simon Stuart, revised Specialist Group (SG), Task Force and RLA appointments. On being re-appointed as Amphibian RLA Coordinator, Ariadne Angulo took this opportunity to explore a different strategy to advance amphibian updates in view of continuing resource constraints and the significant volume of new assessment-relevant information (range extensions, population and threat reports, new species [about one new amphibian species described every two days], etc).

Prior to the current 2013-2016 quadrennium Amphibian RLA members acted primarily as assessment reviewers. However, together with limited resources and high quality control requirements, this level of involvement was insufficient to significantly advance amphibian updates. The new strategy involves the restructuring of the Amphibian RLA into regional/national Working Groups (WGs), where each such group agrees to take stewardship of a subset of the assessments in its respective geographical area. As a result, each WG spearheads the update process for the species in its area and is in a position to publish the results from its efforts.

The main objective of this strategy is to achieve a greater number of amphibian assessment updates, but in doing so it 1) de-centralizes the assessment process and empowers local/regional groups to build a community around their own assessment process and take ownership of their results, 2) builds local capacity, as Amphibian RLA WG members receive training in all of the three key components of the assessment process (Red List methodology, SIS and mapping) to enable them to conduct their own amphibian assessments and perhaps also assist with national assessment processes where these use the IUCN methodology, and 3) gives Amphibian RLA WGs the opportunity to publish the results, which could result in high profile publications in peer-reviewed journals.

The document “An Introduction to the Amphibian Red List Authority version 2.0 – November 2012” has been modified and updated to accommodate these changes. Most previous RLA members have agreed to the new terms and have signed on to continue assessment update efforts, and new RLA members for key regions have also been brought on board (Mesoamerica, Southeast Asia and Mainland South Asia). The Amphibian RLA will continue to seek potentially proactive RLA members for high priority (speciose and/or threatened) areas. These proactive RLA members (Tier I RLA members) have been asked to build their respective WGs with other proactive experts in their respective region/country (Tier II RLA members) and to put together a list of species to be prioritized for updates in 2013. We have received lists...
from two new Amphibian RLA members, Dr Uğur Kaya (West Asia) and Dr Jodi Rowley (Southeast Asia).

Further to advancing the Amphibian RLA’s remit, Jennifer Luedtke has now taken on the role of Deputy Coordinator for the Amphibian RLA, and will be supporting RLA WGs in the “Old World”. For more details on the current Amphibian RLA membership please refer to http://www.amphibians.org/redlist/rla/.

Finally, to help promote the work of the Amphibian RLA, give Amphibian RLA members a sense of belonging and ownership, and to help engage the general herpetological community, the Amphibian RLA has developed a logo with the support of the Amphibian Specialist Group (ASG) Secretariat. The ASG Secretariat is also helping the Amphibian RLA develop a promotional video, and a first draft script has already been produced to this end.

Workshops

A reassessment workshop of the threatened amphibians of the Eastern Afromontane, Central and West African regions was undertaken from 1-4 June 2012 at the Museo Tridentino di Scienze Naturali in Trento, Italy. This took place following the 15th African Amphibian Working Group (AAWG) meeting and with the generous support of a Mohamed bin Zayed Species Conservation Fund grant to Dr Simon Loader (AAWG and workshop co-organizer), with complementary funds from EAD, the IUCN-CI Biodiversity Assessment Unit (BAU), and the Deutsche Gesellschaft fur Herpetologie Terrarienkunde.

The result of the workshop was the preliminary assessment or reassessment of 165 Threatened and selected Data Defi-

*Leptopelis barbouri* (Vulnerable) is endemic to the rainforests of eastern and southern Tanzania. © Tim Davenport & WCS
African Amphibian Working Group 2012 and IUCN Red List assessment of Threatened African Amphibians

By Simon Loader, Michele Menegon, Fabio Pupin, Ariadne Angulo & John Measey

Regional Insight

O n May 28 th at Museo delle Scienze in Trento, Italy, over 80 people gathered for the 15th meeting of the African Amphibian Working Group (AAWG). This meeting had the highest number of participants in the thirty-year history of the AAWG. People from all over Africa, Europe, and North America attended to present research on a range of topics. Highlights included talks on the current status of Afromontane species and two new species and the status of African frogs (David Blackburn, David Gower, Johannes Fransen and Chi Weldon) and the limited African caecilian biology (Mark Wilkinson), and a history of Madagascar (Franco Andreone), South African Batrachology (Louis du Toit), and Che Weldon) and its likely origin in Africa (David Blackburn). Ecological and conservation studies conducted across East (Patrick Malinin, and James Voss) and West (Lara Stoesser, and Marcello Hinchcliff) Africa were also covered. Thematic issues were outlined for a range of groups (Rachel M. de Al, El Gewehm, Michael Bond, Victor Yeung, and Elizabeth Scott-Prendini), and broader evolutionary studies on African amphibians were addressed (Rayna Bell, Lucinda Law, and Elizabeth Scott-Prendini), and broader evolutionary studies on African amphibians were addressed (Rayna Bell, Lucinda Law, and Elizabeth Scott-Prendini), and broader evolutionary studies on African amphibians were addressed (Rayna Bell, Lucinda Law, and Elizabeth Scott-Prendini), and broader evolutionary studies on African amphibians were addressed (Rayna Bell, Lucinda Law, and Elizabeth Scott-Prendini), and broader evolutionary studies on African amphibians were addressed (Rayna Bell, Lucinda Law, and Elizabeth Scott-Prendini), and broader evolutionary studies on African amphibians were addressed (Rayna Bell, Lucinda Law, and Elizabeth Scott-Prendini), and broader evolutionary studies on African amphibians were addressed (Rayna Bell, Lucinda Law, and Elizabeth Scott-Prendini), and broader evolutionary studies on African amphibians were addressed (Rayna Bell, Lucinda Law, and Elizabeth Scott-Prendini), and broader evolutionary studies on African amphibians were addressed (Rayna Bell, Lucinda Law, and Elizabeth Scott-Prendini), and broader evolutionary studies on African amphibians were addressed (Rayna Bell, Lucinda Law, and Elizabeth Scott-Prendini), and broader evolutionary studies on African amphibians were addressed (Rayna Bell, Lucinda Law, and Elizabeth Scott-Prendini), and broader evolutionary studies on African amphibians were addressed (Rayna Bell, Lucinda Law, and Elizabeth Scott-Prendini), and broader evolutionary studies on African amphibians were addressed (Rayna Bell, Lucinda Law, and Elizabeth Scott-Prendini), and broader evolutionary studies on African amphibians were addressed (Rayna Bell, Lucinda Law, and Elizabeth Scott-Prendini), and broader evolutionary studies on African amphibians were addressed (Rayna Bell, Lucinda Law, and Elizabeth Scott-Prendini), and broader evolutionary studies on African amphibians were addressed (Rayna Bell, Lucinda Law, and Elizabeth Scott-Prendini), and broader evolutionary studies on African amphibians were addressed (Rayna Bell, Lucinda Law, and Elizabeth Scott-Prendini), and broader evolutionary studies on African amphibians were addressed (Rayna Bell, Lucinda Law, and Elizabeth Scott-Prendini), and broader evolutionary studies on African amphibians were addressed (Rayna Bell, Lucinda Law, and Elizabeth Scott-Prendini), and broader evolutionary studies on African amphibians were addressed (Rayna Bell, Lucinda Law, and Elizabeth Scott-Prendini), and broader evolutionary studies on African amphibians were addressed (Rayna Bell, Lucinda Law, and Elizabeth Scott-Prendini), and broader evolutionary studies on African amphibians were addressed (Rayna Bell, Lucinda Law, and Elizabeth Scott-Prendini), and broader evolutionary studies on African amphibians were addressed (Rayna Bell, Lucinda Law, and Elizabeth Scott-Prendini), and broader evolutionary studies on African amphibians were addressed (Rayna Bell, Lucinda Law, and Elizabeth Scott-Prendini), and broader evolutionary studies on African amphibians were addressed (Rayna Bell, Lucinda Law, and Elizabeth Scott-Prendini), and broader evolutionary studies on African amphibians were addressed (Rayna Bell, Lucinda Law, and Elizabeth Scott-Prendini), and broader evolutionary studies on African amphibians were addressed (Rayna Bell, Lucinda Law, and Elizabeth Scott-Prendini), and broader evolutionary studies on African amphibians were addressed (Rayna Bell, Lucinda Law, and Elizabeth Scott-Prendini), and broader evolutionary studies on African amphibians were addressed (Rayna Bell, Lucinda Law, and Elizabeth Scott-Prendini), and broader evolutionary studies on African amphibians were addressed (Rayna Bell, Lucinda Law, and Elizabeth Scott-Prendini), and broader evolutionary studies on African amphibians were addressed (Rayna Bell, Lucinda Law, and Elizabeth Scott-Prendini), and broader evolutionary studies on African amphibians were addressed (Rayna Bell, Lucinda Law, and Elizabeth Scott-Prendini), and broader evolutionary studies on African amphibians were addressed (Rayna Bell, Lucinda Law, and Elizabeth Scott-Prendini), and broader evolutionary studies on African amphibians were addressed (Rayna Bell, Lucinda Law, and Elizabeth Scott-Prendini), and broader evolutionary studies on African amphibians were addressed (Rayna Bell, Lucinda Law, and Elizabeth Scott-Prendini), and broader evolutionary studies on African amphibia...

In addition, the Amphibian RLA has been involved in a collaboration (co-authorship) led by Dr Francesco Ficetola (University of Milano Bicocca, Italy) on a manuscript on IUCN amphibian range maps which has been submitted to the Journal of Biogeography.

*Plethodon welleri* (Endangered) is found in the Great Smokey Mountains and Blue Ridge Mountains of the eastern United States. © Arnaud Jamin
Media

Ariadne Angulo gave a BBC interview on March 12, 2012 on revealing type localities of potentially sensitive species. The resulting article was published on the BBC News Magazine on March 20, 2012 and can be accessed at http://www.bbc.co.uk/news/magazine-17386764.

Training

Four highly qualified professionals have received training in the three basic components of the Red List assessment process in 2012: the IUCN Red List Categories and Criteria, IUCN’s Species Information Service (SIS) database system, and how to use ESRI’s ArcGIS spatial software to create and modify species ranges. Of these four professionals, three (Jennifer Luedtke, Dr Laurence Jarvis and Dr Jeanne Tarrant) were trained as part of their internship projects; the fourth professional, Dr Rachunliu Kamei, was trained to spearhead the update of a subset of Indian amphibian assessments.

![Image](http://www.amphibians.org/redlist/rla/membership)

Jennifer Luedtke  Dr Laurence Jarvis  Dr Jeanne Tarrant  Dr Rachunliu Kamei

Other Activities

The Amphibian RLA has been involved in various other activities over the course of 2012. It has played a supporting role to the Amphibian Survival Alliance (ASA), assisting the ASA in the development of its business plan, website and Affiliates Council. At the request of the ASA’s Executive Director, Dr Jaime Garcia Moreno, the Amphibian RLA Coordinator developed an Amphibian assessment project portfolio, detailing the Amphibian RLA’s projects, broadly divided into assessment update and capacity building projects, and providing a breakdown of resource needs and number of assessments/reassessments involved in each assessment update project.

The Amphibian RLA has also played a supporting role to the ASG in the development of various documents (survey questionnaire for ASG membership for the 2013-2016 quadrennium, FrogLog [writing notes and revision of final proofs], ASG project endorsement framework) and in assisting the ASG with the re-appointments of some of its Latin American Regional Chairs. It has also been involved in an ASG, RLA and iNaturalist (http://www.inaturalist.org/) partnership to re-design the online Amphibian Assessment Forum to make it more efficient and streamlined (for further details please see http://www.amphibians.org/redlist/forum/).

Additional activities include preparing regular calls for RLA internships and conducting the selection process for these internships, the continued supervision of Amphibian RLA interns Drs Laurence Jarvis and Jeanne Tarrant, the continued development and revision of amphibian draft assessments, maps and taxonomic updates in SIS, and coordination and solicitation of review of these and existing pending assessments, moderation of the Amphibian Assessment Forum, maintenance and update of the amphibian and reptile expert database and entry of users into SIS, and management of ArcGIS licenses for Amphibian RLA members.
Towards a Global Red List of Bumblebees: Assessing the Bumblebees of the Americas

Nieves Garcia, IUCN-CI Biodiversity Assessment Unit (BAU)

**Key achievements**

Between October-December 2012, the BAU coordinated the initial stages of assessing the Bumblebees of the Americas. Liaising with the members of the SSC Bumblebee Specialist Group (BBSG), we provided training, technical support and guidance to ensure that the IUCN Red List standards were met and all the required information was consistently documented and prepared for review and publication on the IUCN Red List of Threatened Species™.
Building the experts' network

The objective of this project is to assess the conservation status of all 256 described bumblebee species worldwide. To that end, a regional prioritization strategy was defined between the BBSG Chair (Dr Paul Williams, Natural History Museum, UK) and Deputy Chair (Sarina Jepsen, Xerces Society) and IUCN Programme officer (Nieves García, Biodiversity Assessment Unit). It was agreed that the project would start with the species of the Americas, prioritizing the South American and Mesoamerican subregions to optimize resources and available expertise.

Key BBSG members were engaged in the initial assessment process: the regional focal points for South America (Dr Carolina Morales, CONICET, Argentina) and Mesoamerica (Dr Remy Vandame, ECOSUR, Mexico) joined the project and took leadership of their corresponding regions. Thanks to their involvement in this project, the global network of bumblebee experts has expanded, with 21 scientists now involved in the Mesoamerican and South American process to date.

The list of species to be assessed for this project was agreed upon and is available at www.iucn.org/bumblebees, and all the members of the IUCN SSC BBSG were informed about the resources available to support the Bumblebees Red List Assessment.

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![Bumblebee distribution regions of the world (bumblebees are absent from regions in grey). © IUCN SSC Bumblebee Specialist Group](image)

Capacity building

Building capacity amongst the regional experts is an important component of this project. Two remote training sessions on the application of the Red List Categories and Criteria (and supporting distributional data/maps) were given to the South and Mesoamerican members and regional focal points (3 and 5 attendees respectively for each of the sessions).
In addition, ongoing technical support is being provided to the experts, including following up on questions related to the red listing process and the application of the Red List Criteria. For this purpose, we initiated a consultation in close communication with the IUCN SSC Standard and Petitions Sub-Committee to support the standardized use of bumblebee data in the application of Criteria.

Data Compilation

The regional expert for each species was asked to lead the data compilation process, which included gathering all the available information in published papers, unpublished reports, specimen databases, personal records, and observations.

For South America, data was gathered by Carolina Morales (Argentina), Aline Martins (Brazil), Nieves Garcia (USA/Spain) in close collaboration with Claus Rasmussen (Peru), and a consultant, Yamila, who was hired based on her valuable experience in both bumblebee ecology, and database and online searches.

For Mesoamerica, Esteban Pineda and Remy Vandame led this process, working in partnership with Oscar Martinez, Jorge Merida and Carlos Vergara, among other regional scientists.

At present, all the gathered information is being entered into SIS (Species Information Service) and standardized digital distribution maps are being produced.

By the end of December 2012, data compilation and entry into SIS was completed for six species (currently under revision in view of publication in 2013), and an additional 38 species were in compilation stage.

Image: Creation of distribution maps for each bumblebee species.

Conclusions

The primary lesson learned is that the initial stages of such a project requires a major input of resources in order to train a solid network of experts and collaborators who will see it through to completion. We expect that this initial investment
will have a direct positive impact on the remainder of the assessment process, speeding it up once all parties involved feel sufficiently comfortable with the Red List methodology.

In addition, we are actively searching for matching funding opportunities for the continuation of this project, particularly with the objective of organizing 1-2 review workshops. To that end, we are working together with Xerces Society for Invertebrate Conservation and Conservation International to submit joint proposals to potential donors. A concept document was produced to support this process.

**Next steps for 2013 and expected outcomes**

In 2013, we expect to finalize the data compilation for all species of the Americas, and organize a review workshop to bring together all the key regional experts in order to agree on the final Red List Categories and Criteria for these species. The expected outcome is that all 81 species will have global assessments published on the Red List.

Subsequently, the same process will be carried out for other regions (Asia, Europe, Africa) in order to complete the global assessments of all known bumblebees worldwide, including experts’ training and review workshops (or equivalent process through online platform). The anticipated outcome will be to have all 256 species of bumblebees published on the Red List by 2014.

**Additional outcomes of this project are:**

- The building of regional expertise in the Red List Categories and Criteria and its application to bumblebees;
- The expansion and strengthening of the global network of bumblebee experts and encouraging their collaboration;
- The provision of tools to influence policy and raise public awareness on bumblebee conservation.

**Global Red List of Bumblebees**

Establishment of a global red list of bumblebees (pollinators)

**Background**

Pollination is essential to food security and human well-being. Pollinators’ services are economically important for agricultural production destined for human consumption, and an increasing decline in pollination services is expected to contribute to the impoverishment of our diets both nutritionally and culturally, since approximately 80% of the most important staple crops are pollinated by insects. In particular, the main crop that bumblebees pollinate is greenhouse tomatoes (lycopersicon esculentum), which worldwide, involves about 95% of all bumblebee sales and was estimated to represent a value €12,000 million per year in 2008, although they are also important pollinators of many other crops and wild flowering plants.

Among all services provided by nature, pollination is a source of growing concern. Bumblebees play an essential role in the functioning of both natural and agricultural ecosystems, being among the most important pollinators of high-value crops such as blueberries, cranberries, bell pepper, and clover (such as for dairy production) and are essential to the reproduction of countless native wildflowers - creating the seeds and fruits that feed wildlife as diverse as songbirds and grizzly bears.

However, they also face a variety of threats that are not well understood, such as loss or degradation of habitat due to urbanization and agricultural intensification) and despite the observed and inferred declines in multiple species of bumblebees in Europe, North America, South America and Asia, their overall conservation status remains relatively unknown at present.

A preliminary global analysis highlighted the impact of extinction of bumblebee species in North and South America, Europe, Asia, and South America. This study suggests that some species may qualify to be listed in one of the threatened categories (two as Critically Endangered, two as Endangered and five as Vulnerable, and an additional 10 as Near Threatened).

Conservation action has proven to be effective for some species that were regionally extinct, as in the short-haired bumblebee (Bombus huntii) native to the UK, which was declared extinct in the country in 2000 has made its way back as a result of a successful three year reintroduction project.

**Image Concept notes document (front page) created to promote the bumblebee project and help find resources for its development.**

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2012 Annual Report
Summary of achievements

This project has successfully achieved the goal of transferring and updating data for all taxa in the Magnoliaceae family from The Red List of Magnoliaceae into IUCN’s Red List data management system, SIS (Species Information Service). Data originally collected for The Red List of Magnoliaceae was not recorded in SIS and the inclusion of these taxa on the Red List required, where possible, the supplementation of new data in order to meet the documentation standards.
Background

The Red List of Magnoliaceae was published in 2007 by Fauna & Flora International. The collection of information for the assessments included in the publication was a collaborative effort involving botanists worldwide. A major component of the assessments was the analysis of species distributions using information compiled from a variety of sources including regional and monographic floras, national Red Data Books, online herbarium specimen databases and the taxonomic and ecological scientific literature. Species mapping to support the assessments was undertaken by Daniele Cicuzza at the University of Bournemouth.

Review and verification of nomenclature

The process of transferring data from hardcopy to SIS has involved the review and verification of nomenclature of species, subspecies and varieties using various published checklists of Magnoliaceae, together with the online sources: Plant List and Tropicos. This was undertaken by Douglas Gibbs, the Secretary of the SSC Global Tree Specialist Group and Conservation Initiatives Manager at BGCI and Sonia Khela, Conservation Intern and subsequently Conservation Officer at BGCI. The reviewed list now contains the completed assessments. A full list of synonyms was also added for each species assessment in SIS.

Following name checking, it was decided to leave the subspecies and varieties and to focus on species level assessments. There were 282 species assessments in this working group of which 264 were verified as accepted species and assessed and 14 have been deleted from the working group in SIS.

Data entry to SIS

The first step was to enter all the information from The Red List of Magnoliaceae hardcopy report into SIS for each species. The same was done for Libro Rojo de plantas de Colombia, 2007 for which Sonia Khela translated all the information for the 32 species from Spanish to English. Information from The Red List of Mexican Cloud Forest Trees, 2011 was also entered, cross referred and analysed where there were discrepancies with the Red List category or criteria. It was found that the majority of these were down to taxonomic issues and species were discarded or added following taxonomic verification.

A complete literature search was carried out on all the species for further information covering all parts of the assessment by searching for information on distribution, habitats and ecology, population, threats and conservation action. This was done through Internet searches, species lists from reserves and protected areas and publications. There were papers relevant to this research which could not be accessed (see list below).

The conservation aspect of the assessment also indicated whether the species existed in ex situ collections (based on BGCI data), national parks or other protected areas. Magnolias have been a particular focus of attention for the Global Trees Campaign www.globaltrees.org, a joint initiative of Botanic Gardens Conservation International (BGCI) and Fauna & Flora International with activities including field survey, ex situ propagation, restoration and public awareness raising (see below). For information on threats, the rates of deforestation in each country and region were determined or inferred where information was lacking. Publications in the Kew Library were consulted, mainly providing descriptions and information on taxonomy. Where further information was available the assessments were updated and modified accordingly. Information was available, for example, from survey work supported by Fauna & Flora International China Programme in the border region of China and Vietnam (Surveying Report for Threatened trees in North Viet Nam, 2010); from Colombia where BGCI has supported conservation projects for species of concern; and from the papers in the Proceedings of the Second International Symposium of the Family Magnoliaceae held in Guangzhou, China in May 2009. In general for Magnoliaceae there is very little up-to-date information available in the literature. This is a serious
concern as many species have been classified as Data Deficient and Critically Endangered and there is an urgent call for research into these species. There is generally very limited information on populations, although the decline is known or can be inferred through deforestation rates within range states.

The data sources which were of value included reports published on national parks and reserves by conservation organizations working in those regions, such as Pro Aves, Birdlife International and National Park Authorities. Sonia Khela for example contacted La Visite National Park in Haiti by email to request information on the Magnolia species found within the National Park. The response was that there is an increasing commitment to develop a viable conservation plan for La Visite National Park and verified there were no Magnolia species found within the park.

**Assessments**

Once the information had been gathered and entered the assessments were edited in order to meet the IUCN consistency standards. The majority of the threat categories and criteria assigned to each species in SIS have been generated automatically depending on the information entered and the boxes ticked. For some the category and criteria were entered manually where information was provided by the specialist working group. Rapid assessments were done on species listed in the *Red List of Magnoliaceae* as Not Evaluated and were entered into SIS as Data Deficient (DD) if insufficient information was available.

Further to the above we carried out new assessments of accepted taxa, which had not yet been evaluated under a parallel process. This proved very difficult due to the lack of research and information around these taxa and most were categorized as DD. The species which occur in China were assessed and evaluated according to the assessments undertaken at the Hanoi workshop of the CEPF Indo-China project.

Dates of the assessments where significant updates or modifications have been made are recorded as 2012, the assessments with no change have been dated 2007 as in *The Red List of Magnoliaceae*. 

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The fruit of *Magnolia longipedunculata*, a Critically Endangered species endemic to China. © Zeng Qingwen
The creation of ArcMap formatted files for all evaluated taxa

A total of 136 maps have been created in the form of shapefiles in Arc GIS (102 complete maps, 38 incomplete, 48 not possible for Data Deficient species). These include the conversion of maps from The Red List of Magnoliaceae and the creation of new maps for all other evaluated taxa. Douglas Gibbs used the maps published in the Atlas of Woody Plants in China to create 91 maps for Asia.

It should be noted that the maps for all species which have a distribution in Asia, including China, are incomplete and only include the distribution in China, taken from the Atlas of Woody Plants (Fang, J., Wang, Z. and Tang, Z. 2000). Many of the assessments for species endemic to China and listed as Not Evaluated were assessed against the distribution based on the maps digitized from the Atlas of Woody Plants. A number of these species were assessed as Vulnerable D2 based on small or restricted distributions. Sonia created 45 maps for Mexico, Central, South America and North America.

The mapping for each species in Arc GIS was done using point locality data, occurrence information in states and national parks overlaid with existing forest type (e.g. pine-oak forest) and elevation. It is accepted that the maps may be an over representation of the actual species range. For species where locality data were limited, the range was clipped to forest type and/or state using Arc GIS. There is no information to determine what the original range and distribution of each species was before disturbance by humans and other threat factors came into play. Therefore it is impossible to determine the range retraction or decline in distribution from the original undisturbed states. Satellite imagery and remote sensing data of forest cover could be a possibility to further develop the mapping and distribution for this species in the future.

The maps show the extent of occurrence primarily based on data points derived from the data points. The polygon may include unsuitable habitat, bearing in mind that many species do occur in disturbed and urban areas, and that they only occur at particular elevations within these polygons. However, this can be offset or compensated for through sampling efforts as areas not included in polygons may contain a species but it has been either misidentified, taxonomical issues of synonymy, or the data is reliant on areas which have been explored specifically for this species.

The maps and distribution data were created using GeoCat and Arc GIS. Douglas had downloaded data points from various sources such as the Global Biodiversity Information Facility (GBIF) which were converted and imported into GeoCAT to obtain the Area of Occupancy (AOO) and Extent of Occurrence (EOO). These are only estimates and not used for all species depending on the accuracy of the data points and the distribution of the polygon generated. Douglas obtained, cleaned up and converted data points and Sonia used GeoCAT to calculate the AOO and EOO. After analysing these data it was found that the data figures given for the AOO and EOO submitted in The Red List of Magnoliaceae relating to estimated forest extent were incorrect for many species. It was confirmed by email between Sonia and Danielle Cicuzza who created the maps that Criterion B had been applied incorrectly in some of the assessments in The Red List of Magnoliaceae as the suitable forest extent was applied to both the AOO and EOO. Therefore once the maps were

![Graph](image)

Categories into which 261 species of Magnolia were listed

2012 Annual Report
and data for AOO and EOO were calculated the categories and criteria were re-assessed resulting in changes from the original ones given in The Red List of Magnoliaceae and were updated in SIS.

Summary of exploitation

Furthermore, 113 species were listed as being exploited for timber or medicinal use. Of these listed species, 73 have been confirmed as being valued and utilised for their timber or wood and 6 species thought to be utilised but not confirmed. For many of these species the exploitation of timber is considered to be a significant threat (where criteria B(v) has been applied). However, for others, it is not a threat as they are cultivated or grown ornamentally. Twenty-one species are utilised for medicinal purposes and 13 species are valued for both the timber and medicinal properties.

Summary Results of Red List Assessments

These results suggest that around 53% of Magnolia species are threatened with extinction, 14% are not threatened and relatively widespread and abundant, but 28% require further research and information. The Critically Endangered species occur in the following countries China (6); Colombia (12), Cuba (2), Haiti and Dominican Republic (3), India (1), Mexico (1). Through the review and update of these assessments we can now identify regions where the most significant declines have occurred, identify which species are facing extinction and which threats require urgent action. It has been recognized that many of these species are currently absent from ex situ collections and, given the level of present and future decline from disturbance, may require seed collection. It must be noted that many of the species categorized as Critically Endangered are faced with extinction as they are fragmented and cannot maintain a viable population for the future. The generation length is expected to be around 200 years for certain species; these require urgent conservation action and habitat protection through collaboration with international organizations and protected area management.

Next steps

1. In the final checking process a few additional data sources will be obtained including:


2. Once the assessments have been accepted the shapefiles for the maps can be incorporated. Shapefiles have been received from Danielle Cicuzza who created the maps and provided data for the assessments published in the Red List of Magnoliaceae.

3. BGCI will strive to obtain additional information for species considered to be Data Deficient working through its botanic garden network and experts in the IUCN SSC Global Tree Specialist Group. A considerable number of species classified as Data Deficient occur in Indonesia, for example. BGCI is currently working with local experts in Indonesia and Malaysia to plan a Red List of trees of Borneo that will include a number of Magnolia spp.
Fragmented rainforest of the Guamuhaya massif, habitat of *Magnolia cubensis* (Endangered)
Results of the Second Global Conifer Assessment

Aljos Farjon, Chair IUCN SSC Conifer Specialist Group
Background

The status of the world’s conifers was first assessed in 1998 using the 1994 Red List Criteria version 2.3. Following that assessment, approximately 80 species remained Data Deficient (DD); these were subsequently assessed in 2006 using the 2001 Red List Criteria version 3.1, leaving 12 species still as DD and six Not Evaluated (NE). Together these two efforts constitute the first assessment. In 2010-2013, a complete re-assessment was undertaken, using the 2001 criteria version 3.1, this time leaving seven species DD and eight NE. This constitutes the second global assessment of conifers. The results of the second assessment are given in below Table 1.

Table 1. The present status of all conifer species on the IUCN Red List of Threatened Species™.

The three categories of threat are CR, EN and VU and, together, 211 species or 34% fall under these categories. This means that more than a third of all conifer species in the world are in various degrees threatened with extinction. Comparing these results with the first assessment we can observe the following changes in Figure 1:
The trend is clearly towards higher numbers in threatened categories (Figure 2), with 38 species moving to a lesser category of threat, but 138 moving upwards to a higher category. Between the two assessments, 58 species moved out of Least Concern (LC) to a higher category. Vulnerable (VU) species decreased by 14, but 45 more species moved to Endangered (EN) and 8 more to Critically Endangered (CR). Several species moved from VU up to EN. In the first assessment, 172 species (28%) were in the three categories of threat VU, EN and CR. In the second assessment, this figure has risen to 211 (34%), representing a rise of 6% in about 12 years.

The protocols now followed for Red List assessments are more structured, making sure that answers are sought to the same questions for all species. Technologies of mapping and calculating Extent of Occurrence (EOO) and Area of Occupancy (AOO) have improved, replacing best guesses with more accurate estimates. The great amount of information now searchable online means that additional information can be more easily found. This has led to better assessments and the conviction that often changes in status are due to better information and not necessarily due to real changes in conservation status on the ground.

Despite the improved quality of assessments, it is undoubtedly true that at least some proportion of the trend towards greater threat to conifers is genuine, and examples of this can be easily given. More than one third of all conifer species in the world are now threatened with extinction and 28 species are likely to become extinct in the foreseeable future if this trend continues.

**Major causes of decline**

The great majority of species in threatened categories are assessed as decreasing, i.e. their populations are estimated to decline in terms of their Extent of Occurrence (EOO) (sometimes), Area of Occupancy (AOO) and/or numbers of mature individuals (usually trees). The causes of this decline are varied, but for conifers are primarily deforestation in tropical countries and exploitation for timber in temperate countries. Deforestation is often preceded by exploitation, whereby the valuable timber is first extracted, followed by conversion to agriculture, plantation forestry or pasture (the latter applies mostly to mountainous areas). Exploitation for timber leads to decline particularly in cases where slow-growing conifer species are taken and replaced by faster growing conifers or other trees. Many species of conifer on the Red List fall in this category: the logging takes place in ‘old growth’ natural forest and management of the forest afterwards for timber occurs on much shorter cycles that do not allow growth of these species to maturity. Other threats are significant, but on a more local scale. One example of localised threats is overgrazing, especially on marginal lands that cannot be turned into pasture so that less demanding animals such as goats are used, which effectively prevent plant regeneration. In other areas, open pit mining is the main destructive force, e.g. for the araucarias of New Caledonia, which happen to grow on the metal-rich ultramafic rock targeted by nickel mines. A threat that has become significant more recently is infestation by alien pathogens, ranging from micro-organisms such as Phytophthora to insects. Greatly increased intercontinental human travel and trade introduces these pathogens to conifer populations that have not previously had cause to develop resistance.
**Distribution of threatened conifers**

Conifer species threatened with extinction appear to be concentrated in specific parts of the world. This can be shown on a map, in which taxa (species, subspecies and varieties) in the three threatened Red List categories are summed and shown by country, state or province (Figure 3).

![Figure 3. Map of the world with TDWG Standard World Geographical Scheme for Recording Plant Distributions Level-4 units (countries, provinces and states) showing the distribution per unit of taxa listed under IUCN Red List threatened categories (VU, EN, CR).](image)

The colours from pink to red indicate an increase in Red List significance according to the calculation $\sum (n_{VU1} + n_{EN2} + n_{CR3})$ in each Level-4 unit, whereby $n$ = number of taxa and categories of threat are progressively weighted. Geographical units with neutral colour do not contain taxa in a threatened category.

The areas with the darkest red are those with the greatest number of threatened taxa in the highest categories of threat. In the Americas, California in the USA and Nuevo León and Chiapas in Mexico fall in this category. In Asia these are large parts of China, Taiwan, Viet Nam, Japan, Luzon and Mindanao in the Philippines, Sabah and Sarawak in Borneo. In the Southwest Pacific, New Caledonia and Fiji are the areas with highest threat to conifers. Naturally, there is a correlation between areas of high threat and the distribution of species diversity: almost all these areas have high numbers of species, many endemic to the area.

**The Critically Endangered species**

The 28 conifer species now assessed as Critically Endangered (CR) deserve priority attention through conservation efforts because their Red List Status implies an imminent threat of extinction should current trends of decline continue. Several of these species are already the subjects of conservation planning or action, but others still await this attention. One follow-up project to this second global Red List assessment could be the prioritization of certain species for action planning and ultimately conservation action.
Veitch’s Spruce or Hubei Spruce is a very rare species with a limited range in China. It is known from northwest Hubei, south Gansu, Henan, south Shaanxi, and possibly also in Chongqing. Records of atypical trees are thought to be hybrids, but assessment of DNA samples could solve this issue.

The site at Shijiagou has a good number of seedlings but is not in a protected area and vulnerable to fire, illegal logging and clearance for agriculture. The Gansu population of 6 trees, some up to 350 years old, has no regeneration and the trees occur in scattered heavily farmed situations. The state of this Gansu population seems to have deteriorated since the first assessment, but there are few trees in ex-situ conservation projects. Clearly, the locality at Shijiagou should be declared a protected area and ex-situ projects should be set up to propagate trees for re-introduction at the Gansu site and possibly elsewhere.
**Pinus rzedowskii**

Status 1998: EN
Status 2011: VU

Rzedowski’s Pine is a very rare species endemic to the state of Michoacán in Mexico. For a considerable time following its discovery in 1968, it was known from only three localities in the mountains of western Michoacán, but intensive surveys have now revealed seven other small subpopulations. All are in the municipality of Coalcomán. The population is small and consists of 12 more or less separate localities, each ranging from 1 to 3,500 individuals, and totalling 6,000-6,500 individuals. Regeneration is relatively abundant at some sites. So, from this data, it is inferred that the total global number of mature trees is probably around 1,000.

The greatest threat to this species seems to be forest fires, as it is not a fire-adapted pine. Its occurrence amidst extensive pine forests makes it vulnerable to this hazard and there is evidence in several of the scattered stands that ground fires have occurred. Furthermore, none of the subpopulations occur in a protected area. Finally, despite these threats to the species, the new discoveries have enlarged the known AOO and since there are no signs of past or continuing decline, this species has been downlisted one category from EN to VU.

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**Widdringtonia whytei**

Status 1998: EN
Status 2011: CR

The Mulanje Cedar (*Widdringtonia whytei*) is endemic to Mt. Mulanje in Malawi. A survey in 2004 has concluded that only 845 ha of Cedar forest remained on Mt. Mulanje. This implies a considerable decrease in the population since the previous assessment, for which the data were over a decade old when drafted.

The species is now officially protected on Mt. Mulanje, but enforcement proves to be difficult as the timber fetches high prices. Population increase in villages surrounding the mountain massif indirectly affects the remaining trees through increased grazing of livestock and the incidence of fires. Illegal timber extraction continues to be a problem. Another potential threat is the invasive non-native pine *Pinus patula*, which is now being found in both grassland and forest on the mountain.

A more proactive strategy, involving the protection of natural regeneration and perhaps planting, is urgently needed to save this species from extinction.
Completing the Global Cactus Red List Assessment

Bárbara Goettsch, IUCN SSC Cactus Red List Authority Coordinator

Summary of achievements

Thanks to the kind support of the EAD, the Global Cactus Assessment (GCA) will be finalized in 2013. After over three years of data compilation, organizing and running workshops, assessing species and undertaking the review process required for their publication on the Red List, the largest global plant assessment will reach completion.
Workshops

The last workshops of the GCA were carried out in 2011 and 2012, and are detailed below.

Andean region

This workshop took place 2-6 May 2011 and was hosted by the Instituto de Ecología y Biodiversidad, Universidad de Chile, Santiago, Chile. A total of 213 cactus species from Chile, Ecuador and Peru were assessed by nine experts. The workshop was facilitated with the help from members of the IUCN SSC Anteater, Sloth and Armadillo Specialist Group, Mariella Superina (Chair), Agustín Abba (Red List Authority Coordinator) and IUCN SSC Cactus and Succulent Specialist Group, Bárbara Goettsch (Red List Authority Coordinator).

Andean region workshop participants

Funding for this workshop came from The North of England Zoological Society and the Jardin Exotique de Monaco. Post workshop activities such as map processing and assessment revision process was funded by EAD.

Caribbean region and southeastern US

This workshop took place in Miami, Florida, USA 25-28 July 2011 and was hosted by Fairchild Tropical Botanic Garden. Nine experts assessed a total 110 species. When compared to other GCA workshops, the number of species assessed was relatively small. The challenge, however, lay in the fact that most species had already been assessed in previous workshops that covered different portions of their ranges. Therefore, it was not straightforward to put the evaluation information together and to reach a global category.

Facilitators Marcelo Tognelli and Nieves García from IUCN-Conservation International Biodiversity Assessment Unit, and Anne Frances from NatureServe made a success of this workshop, which was featured in an article in Fairchild Tropical Botanic Garden’s magazine.

Caribbean region and southeastern USA workshop participants
The National Fish and Wildlife Foundation (NFWF) provided funding for this event. Post workshop follow up work was funded by EAD and NFWF.

**Southern Baja California, Mexico**

This mini workshop ran in Mexico City, 6-7 February 2012 to evaluate cacti mainly from Southern Baja California, Mexico. Dr Héctor Hernández, Chair of the IUCN SSC Cactus and Succulent Specialist Group hosted the workshop in the Institute of Biology, UNAM. Three participants and one facilitator assessed a total of 39 species.

Keidanren Nature Conservation Fund sponsored the workshop and EAD funded post-workshop data processing.

**Assessment review process**

The primary task during this final phase of the GCA is the review of all information compiled in IUCN’s Species Information Service database to ensure that the standards for publication on the Red List are met.

We are very near to finalizing the review process and present the preliminary results of the GCA in Figure 1.

![Graph](image)

**Figure 1. Number of cactus species and the corresponding percentage in relation to the total number of species in the different IUCN Red List Categories.**

The initial results suggest that a high proportion of cactus species (28%) are threatened, while 6.5% are listed as Critically Endangered, 5% are Near Threatened, 58% are not threatened and 9% need further research in order to be evaluated against the criteria (Data Deficient). No species have been assessed as Extinct.

These preliminary results indicate that the conservation challenge we have ahead is not trivial. However, thanks to the help of experts, facilitators, volunteers, partners and sponsors such as EAD, we have gathered the most complete wealth of information on the Cactaceae family. We are in the process of analysing the data generated through this exercise in order to identify the location of the major centres where threatened cactus species are found, as well as to determine the main threats to this plant family and how these threats are distributed. This effort will hopefully deliver the tools that will support effective conservation planning for this extraordinary and enigmatic plant group.
Lophophora williamsii (Vulnerable) in flower in the Mexican part of its range.

Its listing required several discussions before a consensus was reached as it is wide ranging, but highly threatened in many parts of its range. An additional threat is that it is widely used for religious purposes both in Mexico and USA.

© Bárbara Goettsch

Melocactus ferreophillus is a Critically Endangered species from Brazil. Its small range is mainly threatened by mining.

© Bárbara Goettsch
Key achievements

2012 comprised the planning stage of this project. In this initial phase we have already:

- Contacted more than 30 colleagues in 15 countries to establish interest in collaboration;
- Entered into detailed discussions with colleagues in China, USA, Canada, Mexico, India, Malaysia and Europe regarding preparation of global assessments for different groups of species;
- Collated information from the literature and from herbaria for Cypripedium and Paphiopedilum;
- Prepared assessments for 12 Cypripedium spp. (now awaiting review).
Background

There are approximately 160 species of slipper orchids worldwide – they are instantly recognisable because of their slipper-like flowers. They receive much interest due to their fascinating flowers and the environments in which they grow. Furthermore, hybrids derived from the wild species are becoming increasingly affordable and intriguing gifts.

There are five genera of slipper orchids: *Cypripedium* with about 50 species distributed across the northern temperate regions, *Paphiopedilum* with about 80 species in Southeast Asia, *Phragmipedium* with about 20 species in Central and South America, *Selenipedium* with five species in Central and South America, and *Mexipedium* with a single species that is endemic to Mexico and may already be extinct in the wild. Some species are widespread (e.g. *Cypripedium acaule*), whereas others (e.g. *Phragmipedium kovachii*) have relatively narrow distributions.

Many slipper orchids are severely threatened by habitat destruction and over-collection by plant collectors and growers. Although habitat destruction affects all species, over-collecting is a particularly serious threat to those species that are important in trade and can lead to the near extinction of a species in the wild within a few years of discovery. Slipper orchids are traded in large numbers, mainly as living plants of species and man-made hybrids. The illegal export of the recently discovered *Phragmipedium kovachii* from Peru to the USA resulted in an infamous court case, illustrating how the fascination with these orchids can lead people to commit illegal acts, further endangering the wild populations.

All species of *Paphiopedilum* and *Phragmipedium* are listed on Appendix I of CITES, and all species of the other three genera are listed on Appendix II. Despite the threats to these species and their high profile for conservation, however, assessments for only 20 species have been published in the IUCN Red List of Threatened Species™ database (Table 1). All these are Asian species and most are due for reassessment. No species from the other three genera are on the global Red List, but some other species have national, regional or preliminary assessments. For example, *Cypripedium calceolus* has been assessed as Least Concern for Europe.

![Cypripedium acaule, North America](Image 333x404 to 596x782) © Maarten Christenhusz

<table>
<thead>
<tr>
<th>Table 1. Number of Slipper orchids species which have already been included on the IUCN Red List of Threatened Species™.</th>
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<tr>
<td>Critically Endangered</td>
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<td>Endangered</td>
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Project Description

The main aim of this project is to complete a Red List of Slipper Orchids and publish global assessments on the IUCN Red List. In this first stage (lasting until the end of 2013), we will be collecting data and incorporating new research findings (including some regional assessments) necessary for the creation of the assessments for 100 species. Importantly, this project is fostering collaboration between the Orchid Red List Authority Coordinator and colleagues from all over the world – notably in Southeast Asia and South, Central and North America – and reinforcing links between members of the Orchid Specialist Group.
In the first stages of the project, we have already:

- Contacted more than 30 colleagues in 15 countries to establish interest in collaboration;
- Entered into detailed discussions with colleagues in China, USA, Canada, Mexico, India, Malaysia and Europe regarding preparation of global assessments for different groups of species;
- Collated information from the literature and from herbaria for *Cypripedium* and *Paphiopedilum*;
- Prepared assessments for 12 *Cypripedium* spp. (now awaiting review).

The focal taxa of this first stage are presented in Figure 1. The aim is to focus on areas of the world that are rich in slipper orchid diversity at the species level (Canada, USA, China, India) or genus level (Mexico), noting that some of the taxa involved also occur in other countries. Stage 2 of the project (2014 onwards) will aim at completing assessments for the remaining species of slipper orchids.

![Figure 1. Focal taxa for the first stage of this project. (Phragmipedium is the subject of a revision by Phillip Cribb and colleagues to be published in late 2013. For this reason, this genus is not a focus of the first stage of this project.)](image)

After completion of accounts for all slipper orchids, we intend to publish the results as a book, highlighting the plight of these charismatic and threatened plants. (Such a manuscript falls outside the scope of this project).
Carnivorous Plant Specialist Group

Robert Cantley, Chair IUCN SSC Carnivorous Plant Specialist Group
A Message from our Patron

Carnivorous plants fascinate a wide public. And understandably so. They seem to defy all conventional preconceptions about plants in the way they move, the organs they develop, and the way they sustain themselves. One consequence, however, is that many of the species are now seriously threatened by poaching. A number have such localised distribution that a single unscrupulous collector could exterminate them in the wild. Some species inhabit only the most fragile of ecosystems, such as a single mossy ridge or a mountain summit. So ongoing degradation of habitat is also a major threat.

The cumulative result of all these factors has been an alarming decline in populations of many carnivorous plants. Some species are at risk of extinction, even as they are being recorded for the very first time. Yet there is much still to learn about them – about how many species exist, the physiological processes on which they depend, and the relationships they have with animals – not only their insect prey but even mammals, with which they sometimes have unique relationships.

It is thus excellent news that the IUCN Species Survival Commission has now set up a Specialist Group to study and help preserve these amazing plants, not only in the wild but also in cultivation. The work of this new Specialist Group in providing accurate and up-to-date IUCN Red List conservation assessments for all carnivorous plants will be an invaluable tool for research scientists and conservationists around the globe. It will also co-ordinate ongoing conservation initiatives and facilitate partnerships between in-situ and ex-situ conservation projects. This will even include investigating such exciting possibilities as taking ex-situ stock of species that have become extinct in the wild and reintroducing them into their original habitat. It will also aim to encourage everyone to understand and enjoy these unique plants.

The Carnivorous Plant Specialist Group consists of a worldwide group of experts who volunteer their time and knowledge to attain these goals. I am proud indeed to become its Patron.

Sir David Attenborough
Naturalist and Broadcaster
**Summary of Project**

The Carnivorous Plant Specialist Group (CPSG) was formally established in November 2011 with Robert Cantley as Chair and Dr Charles Clarke as Red List Authority Focal Point. The geographical scope of the group is global, whilst the biological scope encompasses all genera of carnivorous plants, with the sole exception of *Utricularia* (bladder-worts).

A significant early milestone in the development of the CPSG was the appointment of Sir David Attenborough as the group’s Patron. Sir David has maintained a strong interest in carnivorous plants throughout his extraordinary career and we are greatly honoured to have his active support.

**Online Presence & Membership**

The CPSG website is currently under the final stages professional development under the direction of Dr Alastair Robinson, who is one the CPSG’s early Core Specialist Members. This development is funded by the University of Monash. The website will have separate sections for each genus of carnivorous plants and feature a sophisticated content management system to enable appointed Specialist Members to maintain each section, whilst retaining a unified overall appearance. The website, still under development, can be seen here: [http://184.154.64.182](http://184.154.64.182).

Active Membership is currently limited to people engaged in formative CPSG work and include:

Robert Cantley – Chair  
Dr. Charles Clarke – Red List Authority Coordinator  
Dr. Alastair Robinson – Website development and carnivorous plant specialist  
Ch’ien C Lee – *Nepenthes* specialist, currently undertaking field surveys  
Stewart McPherson – Carnivorous plant specialist and sponsor of Dr. Alastair Robinson

At the point of launching the CPSG website, which is expected in May 2013, the CPSG will establish a General Membership and newsletter. Specialist Members are already identified for each genus of carnivorous plants and will handle the raw data input to the Red List Authority Coordinator, whilst maintaining the relevant sections of the website and newsletters.

**IUCN Red List**

The most urgent immediate goal of the CPSG is the compilation and maintenance of an accurate Red List for all known species of carnivorous plants. The current Red List for carnivorous plants was compiled in the late 1990s and has not been significantly updated since. Thus this urgently needed update will make changes to the Red List status of many species, particularly within the genus *Nepenthes*. Furthermore, many of the newly described species are currently listed as Data Deficient and will require field surveys in order for them to be more accurately assessed.

In view of achieving this Red List update, the CPSG Chair, Robert Cantley, received Red List training in 2012 from the Red List Unit based in Cambridge. Furthermore, the CPSG Red List Authority Coordinator, Dr Charles Clarke, has familiarised himself with the IUCN Species Information Service (SIS) and the process of polygonal mapping – two skills required for assessing species for the Red List.

As a result of these efforts, the first new Red List assessment has been submitted to the Red List Unit and is under review. Once this first species is accepted for publication in the first 2013 Red List update, the CPSG will be poised to submit more assessments in quick succession.

**Red List Work Achieved to Date**

Necessary groundwork for compiling Red List assessments of carnivorous plants has been undertaken, commencing with the important genus *Nepenthes*. Achievements to date include:

a) A complete list of currently accepted, validly described species for *Nepenthes* has been compiled and will be submitted to the IUCN Red List Unit in early April for addition to the IUCN Species Information Service (SIS) taxonomic archive.
This compilation was a massive effort and involved examining the taxonomic status of each species, incorporating all published taxonomic changes between 1999, when the earlier Red List was compiled, and the present.

b) Using currently known data, polygonal maps compatible with GeoCat or ArcGIS have been created for approximately 80 species of *Nepenthes*, describing their global geographical distributions. If necessary, these polygons will be revised once field surveys are completed (see next section) and will be incorporated into new Red List assessments over the 2013/14 period.

c) The list resulting from activity a) above was used to identify species that are of high priority for Red List assessment. In particular, this includes species that are Data Deficient or Not Evaluated, and those species that were previously assessed as Endangered or Critically Endangered but now require re-assessment due to perceived changes in risk factors, or because new information about their geographical ranges has since come to light.

d) This 2012 list of priority species for red listing supported a funding proposal for field surveys in 2013, which will assess or re-assess as many of these species as possible. This upcoming activity is addressed in more detail in the next section.

**Field Surveys for Red List Data**

As described above, many species of the genus *Nepenthes* are either Data Deficient, are Not Evaluated, or were classified as Endangered or Critically Endangered when they were last assessed in the late 1990s, and require resurveying to establish their current conservation status.

Funding has been obtained through the EAD to make the necessary field trips, the schedule of which is given in the table below. The deliverable of these surveys is the submission of Red List assessments for each listed species for publication, complete with all supporting documentation in conformance with the requirements of Annex I of the IUCN Red List Assessment Process 2013-2016. This activity is to be completed by 31st Dec 2013.
The first of these field expeditions to Sulawesi was successfully undertaken in February 2013 with all five target species being surveyed. The results are now being collated in preparation for entry into SIS. Of the five species, two (*Nepenthes nigra* and *Nepenthes pitopangii*) are recently discovered taxa which have never been properly surveyed before. Thanks to this expedition, their Extent of Occurrence (EOO) and Area of Occurrence (AOO) have been documented for the first time.

**Other Achievements to Date**

**ZSL & IUCN SSC’s ‘Priceless or Worthless’ Project**

The CPSG’s nomination of the recently discovered *Nepenthes attenboroughii* for the ZSL and IUCN SSC’s ‘Priceless or Worthless’ project was accepted and also endorsed by Sir David Attenborough, in whose honour the plant was named. The book has now been published and assists in raising public awareness of the endangered status of many species, including carnivorous plants.

**Successful Nomination for David Given Award**

The CPSG successfully nominated Stewart McPherson for the David Given Award for excellence in plant conservation. Stewart is an active core member of the CPSG.

**Contributions to Amazing Species Website**

Several species of carnivorous plants have been submitted for publication on the IUCN SSC’s ‘Amazing Species’ website, which increases awareness of the enormous variety of life on our planet, and raises the profile of threatened species (http://www.iucnredlist.org/amazing-species).

**Future Goals**

- Continue with Red List assessments
- Establish online presence and membership
- Continue to raise the public profile of carnivorous plants
- Help Co-ordinate conservation efforts

The CPSG is in the process of preparing a short list of carnivorous plant conservation projects that are either already underway, or in the process of being developed. The primary goal of this list is to accelerate and enhance these projects, helping them obtain financial and any other support needed to help them succeed. The CPSG is already corresponding with the prime movers in several candidate projects and we hope to deliver assistance by aligning them with IUCN guidelines.
Nepenthes hamata and a new map showing known localities (red points) and estimated range (shaded area).

Nepenthes glabrata and a new map showing its known localities (red points) and estimated range (shaded area).
Nepenthes nigra and the first ever map showing its known localities for (red points) and estimated range (shaded area).
Consolidating the criteria for identifying sites of significance for biodiversity

Annabelle Cuttelod, IUCN Global Species Programme

Diego Juffe, IUCN Global Biodiversity Conservation Group

Highlights

• A high-level “Framing Workshop”, organized in Cambridge (UK), 5 - 8 June 2012 involved 66 participants representing 19 countries and 52 organizations including conservation organizations, government agencies, academics, private and financial sectors. This major milestone yielded consensus recommendations and highlighted key questions for subsequent scientific and technical deliberation, on five high-level issues: 1) Definition of the new IUCN global standard; 2) The end users of this standard; 3) The scope and scale of the standard; 4) The relationships and synergies between systematic conservation planning and the new IUCN standard; 5) The governance of the process (see section 2.2);

• Three Background Technical papers finalised to inform the 2013 technical workshops (see section 2.3);

• Eight regional consultations, involving more than 300 participants in total, were conducted in Europe, Asia, Australasia, and North America and the consultation process was presented in relevant international conservation meetings (see section 2.4);

• End-users consultations were organised through a workshop during the IUCN World Conservation Congress, in Jeju (Korea), and several face-to-face discussions with the financial sectors, foundations, conservation organisations and governmental agencies (see section 2.5);

• A clear road map for completing the KBA standard outlined (see section 4).
Executive summary

1. A global consultation process
   2. Progress to date
      2.1. Engaging with stakeholders
      2.2. Framing workshop: Consolidating the standards for identifying sites that contribute significantly to the global persistence of biodiversity
      2.3. Consultancies to produce background papers
      2.4. Regional consultations
      2.5. The many applications of Key Biodiversity Areas: an end user focus
      2.6. Journal of Threatened Taxa special issue
      2.7. IUCN Resolution at the 2012 World Conservation Congress
      2.8. Factsheets and information documents

3. Road map for 2013-2014
   3.1. Yearly plan
   3.2. Upcoming events and documents

Executive Summary

Over the last three decades, various programmes to identify specific sites of global significance for biodiversity have been developed. These inventories, called Key biodiversity Areas (KBAs), have informed the selection of sites for protection under national and international legislation, are considered in international sustainability performance standards, and are included under multi-lateral environmental agreements. While the identification of KBAs to date has delivered substantial benefits, it is neither complete nor unified in assessment criteria. This has resulted in some confusion among decision-makers as well as duplication of efforts.

IUCN is leading a global consultation process involving stakeholders within and beyond the conservation community and building on existing work, to develop a globally agreed standard on KBAs. The consultation is led by the IUCN World Commission on Protected Areas and Species Survival Commission Joint Task Force on Biodiversity and Protected Areas, and activities for 2012-2014 include: i) organizing of regional consultations in relevant regional fora; ii) convening technical working groups and reviews to address main issues identified through the process; and iii) publishing a set of guidelines, methods and recommendations that national constituencies can follow to identify KBAs in their respective regions or countries; iv) developing an online spatial tool and a consolidated KBA data system building. The final goal of this process is to provide an objective, scientifically rigorous methodology that is easy to apply, to identify KBAs across terrestrial, freshwater, and marine biomes. This new IUCN standard will guide decision-makers on areas that require safeguarding and will help a range of end users to define their conservation priorities, achieve their international commitments, and comply with their environmental policies. The new KBA standard will become an IUCN Knowledge Product as the well-established IUCN Red List of Threatened Species™ and the World Database on Protected Areas are already.

This report summarises the activities and progress of this IUCN led global consultation, building on 2011 achievements and focusing on the year 2012. First we start with a summary of the motivations for IUCN to convene this global consultation to develop a global standard on KBAs. Section 2 describes activities carried out since the consultation started, and in section 3 we report on the documents produced to date. The last two sections of this report discuss conclusions driven for this consultation phase and outline the plans for the future.

Acknowledgements

The funds provided by Abu Dhabi Environment Agency allowed us to raise further co-funding by the MAVA Foundation, Shell, Rio Tinto, and the Integrated Biodiversity Assessment Tool (IBAT).
1. A global consultation process

Biodiversity is facing a crisis of loss at genetic, species, and ecosystem levels, and across terrestrial, marine, and freshwater biomes, with serious negative consequences for the delivery of ecosystem services and human well-being. Given that biodiversity is not distributed evenly and that many drivers of biodiversity loss take effect at the site level, it is critical to offer solutions that are area-based, to guide decision-makers both within and beyond the conservation community on where area safeguard is necessary.

Over the last three decades, various programmes to identify specific sites of biodiversity significance have been developed, including Important Bird Areas, Important Plant Areas, the Alliance for Zero Extinction, and others. These inventories, called Key biodiversity Areas (KBAs), have informed the selection of sites for protection under national and international legislation, are considered in international performance finance standards (e.g. International Finance Corporation (IFC) Performance Standard 6 on Environmental and Social Sustainability), and are included under multi-lateral environmental agreements. While they have delivered substantial benefits, they are neither sufficient nor unified, and have also resulted in some confusion among decision-makers and duplication of efforts. Addressing the need for a consolidation of the criteria for identifying KBAs is one of the objectives of the IUCN World Commission on Protected Areas (WCPA) and Species Survival Commission (SSC) Joint Task Force on Biodiversity and Protected Areas, convened in 2009 following members’ resolutions during IUCN Congresses in 2004 and 2012. More information on this IUCN task-force can be found at http://www.iucn.org/biodiversity_and_protected_areas_taskforce.

The aim of the current IUCN-convened process is to develop a new globally agreed standard to identify Key Biodiversity Areas that draws and builds on existing approaches in a way that best advances the biodiversity conservation agenda, while responding to end-users needs for a scientifically rigorous yet pragmatic methodology for practitioners. The final goal is to provide a methodology to enable stakeholders to identify KBAs across terrestrial, freshwater, and marine biomes priorities, achieve their international commitments and environmental policies.

The new KBA standard will become one of the six IUCN Knowledge Products. Two operative and well known examples of IUCN Knowledge products are the IUCN Red List of Threatened Species™ (www.iucnredlist.org) and the World Database on Protected Areas the visible face of which is the Protected Planet website (www.protectedplanet.net).

2. Progress to date

2.1 Engaging with stakeholders

We identified and mobilised key experts and organizations, including IUCN Commissions, academics, practitioners, resources managers, conservation organisations and national decision-makers, to be involved in the consultation process, including formally inviting them to join the process and one-to-one discussions with some of the main stakeholders. We also identified the Chairs of the technical working groups

2.2 Framing workshop: Consolidating the standards for identifying sites that contribute significantly to the global persistence of biodiversity

Held in June 2012 in Cambridge, UK, the Framing workshop was a major milestone in the development of the new KBA standard. Leading thinkers and practitioners from across the conservation community and related sectors were invited to contribute to this strategic exercise. sixty-six participants involving individuals from four IUCN Commissions, more

Figure 1. Framing workshop, 5-8 June, Cambridge UK
The Framing workshop yielded consensus on the overarching vision and mission of the standard and purpose of the criteria:

**Vision:**  A world where decisions impacting nature are guided by knowledge of areas of significance for biodiversity in order to maintain and enhance biodiversity and thereby contribute to human well being.

**Mission:** Building on existing approaches, to develop a global standard and system for identifying and documenting areas of significance for biodiversity across multiple scales and implemented by stakeholders.

**Purpose of the criteria:** Identify areas contributing significantly to the global persistence of biodiversity.

The Framing workshop outlined the main issues that needed to be dealt with and it set the road map for the rest of the year. The original composition of the technical working groups was revised and five technical working groups were proposed: 1) Thresholds; 2) End users and application; 3) Criteria and delineation; 4) Governance of the process; 5) Joint Global Ocean Biodiversity Initiative (GOBI) and Taskforce group. For more details on upcoming activities of working groups see section 4.

A full report of 74 pages was produced after this successful meeting.

### 2.3 Consultancies to produce background papers

Based on the results of the Framing workshop, consultants were contracted to produce several position or options papers. These papers will lay out the key questions to be resolved in each working group and serve as the primary advance reading material for the technical workshops (see section 5). Three options papers have been produced to date. In the next sections we describe them briefly. Each options paper aims to:

- Begin with an overview of why the issue is important for the identification of key biodiversity areas as sites of global biodiversity conservation significance;
- Provide a comparative review of how the issue has been tackled in the various practical and theoretical approaches proposed to date, for terrestrial, freshwater and marine biomes;
- Lay out the advantages and disadvantages of the different approaches to each option to date.

#### 2.3.1 Background options paper for the Criteria and Thresholds Working Group of the Joint Task Force on Biodiversity and Protected Areas, by John Pilgrim

This paper was produced by The Biodiversity Consultancy based in Cambridge. The paper is now completed and will be part of the background reading for the Criteria and Delineation workshop which will be held in Washington DC on 11-15 March 2013.

The core questions lying at the heart of this options paper, and which are aimed support the Criteria and Delineation workshop, include, but are not necessarily limited to, the following: a) Should the criteria utilize absolute or percentage thresholds; b) Could there be a rationale for incorporating criteria for biodiversity below the species level; c) Should/How should the vulnerability criterion be applied above the species level; d) What should be the units for application of the habitats/ecosystems/biomes sub-criterion; and e) At what level should thresholds be set? All of these questions should be addressed for terrestrial, freshwater and marine systems and for all the macroscopic groups (such as vertebrates, plants, fungi or invertebrates).

#### 2.3.2 Background options paper for delineating boundaries for sites identified using the new Key Biodiversity Areas standard, by Naamal De Silva, Penny Langhammer, Amy Upgren, Matthew N. Foster, and Kellee Koenig

This paper was produced by professionals with extensive experience on Key Biodiversity Areas identification and delineation, and in consultation with several other experts on different disciplines. The paper is now completed and will be part of the background reading for the Criteria and Delineation workshop which will be held in Washington DC on 11-15 March 2013.

The identification of sites which “are actually or could potentially be managed for conservation” necessarily requires delineation, which opens often lengthy debates as to whether – or under what circumstances – sites should be delineated following natural features (e.g., watersheds), anthropogenic ones (e.g., existing protected areas), or, indeed, sites...
already identified (e.g., IBAs). Rather than providing options to a series of (relatively) discreet individual questions, this options paper works with existing experience, such as those from CI, BirdLife International, Plantlife, AZE sites and key biodiversity areas in general, to suggest options for an overall framework for delineation.

2.3.3 Review of and options for processes of documentation, validation and endorsement (DVE) of sites of global significance for biodiversity, by Nonie Coulthard

This paper was prepared by Logical Cobwebs consultancy based in Canada in consultation with several experts and will serve as background reading material for the Governance workshop which date and place had not been confirmed when this report was prepared.

The subject matter for this working group moves from scientific and technical issues into questions of process necessary to ensure rigor and transparency. This is important given the policy importance of IUCN knowledge products, and the requirement that their data and processes are beyond reproach. Extensive experience has been developed through existing IUCN processes such as the ones that make possible the IUCN Red List of Threatened Species™ (www.iucnredlist.org) and the World Database of Protected (WDPA) areas including its online version Protected Planet (www.protectedplanet.net). Specific questions to be addressed in this options paper include but are not limited to: a) What are the minimum standards of documentation necessary to identify and delineate a key biodiversity area; b) What process should be established for validating that sites do indeed meet the criteria; c) What should be the process for reflecting changes over time (e.g., such as taxonomic change, global population estimates change, species categories change, land conversion progresses, the establishment of new protected areas, etc); d) What process should be established for resolving disputes as to how and whether a site meets the criteria; e) Where should data be held, and how are they made available; f) What process should be established to steward, update and disseminate the global standards; and g) How should documented site identification be branded?

2.4 Regional consultation

In order to achieve a globally agreed standard IUCN has led a number of activities across the world in seek of consensus, stakeholder buy-in and encouraging collaborative work. Relevant stakeholders, within and beyond the conservation community, have participated actively in our events (see Figure 4). Reports and list of participants are available for all the regional workshops.

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**Figure 2. Species Survival Commission Chairs’ Meeting – 27 February 2012, Abu Dhabi, UAE**

- Species Survival Commission (SSC) Plants Sub-Committee: Abu Dhabi (UAE), 20 Feb 2012 – 15 participants
- SSC Invertebrates Sub-Committee: Abu Dhabi (UAE), 21 Feb 2012 - 12 participants
- SSC Chairs Meeting: Abu Dhabi (UAE), 27 Feb 2012 – 120 participants (see Figure 2)
- North America: “Biodiversity without Boundaries”, Portland (USA), 24 April 2012 – 20 participants
- South Asia: Biodiversity Asia 2012 SCB Regional Congress, Bangalore (India), 7 Aug 2012 – 50 participants
- Europe: European Congress for conservation Biology (ECCB 2012), Glasgow (UK), 29 Aug 2012 – 30 participants
2.5 The many applications of Key Biodiversity Areas: an end user focus

The new standard on Key Biodiversity Areas has the potential to be useful to many sectors of society and at different scales. For this reason one of the key elements of this global consultation should be to address end user needs.

In the Framing workshop, two groups of end-users were identified:

- **Primary end-users** are those who lead or influence decision-making processes linked to mechanisms that secure biodiversity or that avoid biodiversity loss.
- **Secondary end-users** are those who use information, such as maps or site lists, for additional purposes including research and communication. Secondary end-users may not be decision-makers but the new approach will provide solutions to achieve their biodiversity assessment or conservation planning goals.

Once identified, KBAs will help decision makers (resource managers, government agencies, private sector, donors, local communities, etc) to define conservation priorities, comply with environmental safeguard policies, and allow countries and to achieve their international commitments (such as the CBD’s Aichi Targets). They also provide the basis for national and regional gap analysis, to expand and reinforce existing protected area network. Therefore a special effort was made to engage with various stakeholders, such as the financial sector, the private sector (mining, oil, tourism and biofuels/bioenergies), NGOs and foundations, national agencies, etc, to raise awareness on the process and to seek
detailed description of their needs and potential use of the new standard, through both specific workshops and face-to-face interviews.

- IUCN 2012 World Conservation Congress (WCC 2012), Jeju (South Korea), 8 September 2012, end-users workshop – 50 participants;
- Multilateral Financial Institutions (MFI) meeting – Working Group on Environment Sub-Group on Biodiversity, Washington (USA), November 2012;
- Face-to-face end-users interviews, Washington (USA), December 2012.

Through these contacts, we also participated in various processes and reviews relevant to the identification of sites of significance for biodiversity, such as the review of the World Bank safeguards.

Synergies were also developed with other criteria framework, such as the High Conservation Value (HCV), the World Heritage Convention sites (WHC) or the Ecologically and Biologically Significant Areas (EBSA) in the marine world, and with existing biodiversity assessment and reporting tools, such as the IUCN Red List of Threatened Species™, the Red List of Ecosystems or the Integrated Biodiversity Assessment Tool (IBAT).

2.6 Journal Of Threatened Taxa Special Issue

A special issue of the Journal of Threatened Taxa on Key Biodiversity Areas was produced and published in August 2012. The issue focuses on the overarching concept of sites of global significance for biodiversity or Key Biodiversity Areas (KBAs) and, in particular, on issues associated with the application of the criteria used to identify them in seven countries or regions around the world. The aim of this special issue was to provide examples of how sound, data-driven, transparent processes can be used to draw attention to those areas on ground (or water) that are most significant targets for safeguarding biodiversity. This issue is available online at http://www.threatenedtaxa.org/index.asp?jid=86.

2.7 IUCN Resolution at the 2012 World conservation Congress

The Task Force sponsored a motion at the IUCN Members Assembly during the IUCN 2012 World Conservation Congress (WCC 2012), calling for parties to participate in and contribute to global conservation data sets. This was successfully adopted as Resolution 036 (attached at the end of this report).

2.8 Factsheets and information documents

Several documents have been developed to inform relevant stakeholders about KBAs and the development of a new globally agreed standard. Perhaps the most relevant one is the one completed for the second session of the plenary meeting to determine modalities and institutional arrangements for an Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), held in Panama in April 2012. KBAs were included in this publication as the standard, when completed, will become one of the six IUCN Flagship Knowledge Products. This publication is available at http://data.iucn.org/dbtw-wpd/edocs/2012-015.pdf.

The Task Force is involved in activities related to a project called BIO-PAMA. BIO-PAMA is a European Union funded project that aims to deliver capacity for protected areas in Africa, Caribbean and the Pacific. Organizations and professionals involved in BIO-PAMA are one of the key end users of the new standard. More information about BIO-PAMA is available at http://www.iucn.org/about/work/programmes/gpap_home/gpap_capacity2/gpap_biopama/.
3. Road map for 2013-2014

The successful completion of this road map is linked to sufficient access to funding. We are still fund-raising for some of the planned activities, in particular the publication and launch of the methodology.

3.1 Yearly Plan

2012: The main goal for 2012 was to achieve consensus on what this standard should do and be, convening a wide consultation process within, but also beyond, the wider conservation community, involving academia, NGOs, private and financial sectors, and local communities. This was achieved during the 2011-2012 period but should continue in the following years.

2013: Technical workshops will address a number of issues identified through the consultation process. Following the recommendations of the workshops, a first draft of the IUCN KBA standard shall be developed by the end of the year. The structure and operational details of the database that will hold the data generated by this Knowledge Product will also be outlined this year.

2014: The goal is to finalise the methodology and put in place an appropriate structure to consolidate and disseminate the data. We aim to present the results of the technical and consultative process will be presented at the IUCN World Parks Congress in October 2014. Outputs at the end of the development of this Knowledge Product should include:

- A set of guidelines, methods and recommendations that stakeholders can follow to identify KBAs in their respective regions or countries. We envision documents for assessors, primary and secondary end users.
- An online spatial tool, building from existing efforts in the Integrated Biodiversity Assessment Tool (IBAT), the World Bird DataBase (WBDB), and the interface between the IUCN Red List and the World Database on Protected Areas, where end-users are able to see where these areas are, and how they relate to designated protected areas, known species and ecosystems distributions, and other relevant spatial data.
- A consolidated KBA data system which will feed into the online spatial tool.

3.2 Upcoming events

- 4-6 February 2013, BIOPAMA Regional Workshop for the Caribbean, Barbados – regional consultation;
- 5-7 February 2013, BIOPAMA Regional Workshop for central and Western Africa, Dakar (Senegal) – regional consultation;
- 7-8 February 2013, International Association for Impact Assessment (IAIA) Symposium on Biodiversity and Ecosystem Services. Washington DC(USA) – end-users workshop;
- 11-15 March 2013, Technical workshop on KBAs Criteria and Delineation Washington DC (USA);
- 17 April 2013, “Biodiversity without Boundaries”, Baltimore (USA) – regional consultation;
- 23 July 2013, International Congress for Conservation Biology 2013, Baltimore (USA) – scientific consultation;
- TBC – Thresholds technical workshop;
- TBC – Governance technical workshop.
Activities of the Invasive Species Specialist Group

Piero Genovesi, Chair IUCN SSC Invasive Species Specialist Group

Key achievements

• Considerable progress in mainstreaming the issue of invasive alien species and raising awareness through participation in numerous international conferences and fora;
• The Global Invasive Species Database is under redesign and due to be launched in late 2013;
• The integration of the Global Invasive Species Database and the IUCN Red List of Threatened Species™ is continuing.
**Background**

The Invasive Species Specialist Group (ISSG) has almost 200 active members from 40 countries, and a network of over 1000 experts and practitioners supporting its activities. The aim of the specialist group is to reduce threats to natural ecosystems and the native species they contain by increasing awareness of invasive alien species (IAS) and the ways to prevent, control or eradicate them.

The ISSG promotes and facilitates the exchange of invasive species information and knowledge across the globe and ensures the linkage between knowledge, practice and policy with the goal of informing decision makers.

The two core activity areas of the ISSG are:

- Policy, technical advice and advocacy;
- Information exchange through online resources and tools and through networking.

**Summary of Activities**

The 2012-2013 period saw ISSG make considerable progress in mainstreaming the invasive alien species issue in international fora, contributing and working with the IUCN Secretariat in raising awareness of the impact of IAS, and highlighting the need for better policies and their enforcement.

The ISSG’s flagship product – the Global Invasive Species Database (GISD) – is under redesign and restructure. This is to improve the search functionality, and the presentation of data and information to stakeholders. The latter improvement will facilitate links between the datasheets in the IUCN Red List of Threatened Species™ and those in the GISD (i.e. between the native species under threat (Red List) and the invasive species that is the threat (GISD)). The revised GID is due to be launched in late 2013.

ISSG has committed to work toward better integration with other IUCN Knowledge Products including the World Database of Protected Areas, IUCN Red List of Ecosystems, and Key Biodiversity Areas.

The integration of the GID and the Red List will help to prioritize work on invasive species, supporting the implementation of the Aichi Target 9 of the Convention on Biological Diversity, which calls countries to prioritize the management of invasive species. It must also be stressed that, because the GID has been widely recognized as a key IUCN Knowledge Product, it can support the functions and work programme of the new Intergovernmental Science-Policy Platform
**On-going Activities**

The ISSG continues to publish Aliens: the Invasive Species Bulletin, a newsletter distributed to over 800 experts from all regions of the world, as well as the most relevant international institutions. In the past year, the ISSG has published the issue 32 that included four sections with news, events and publications, plus a number of articles prepared by ISSG members and experts. The issue featured articles on management and control of various species, such as wild Hippos in Colombia, the California Kingsnake in the Canary Islands (Spain), rats in the Balearic Islands (Spain) and rats in Sardinia surrounding islets (Italy), plus an article on the development of some management tools for invasive plants in French Overseas Territories. It also included reviews of biological invasions in the Mediterranean Sea and in Nilgiri Biosphere Reserve, India.

Issue no. 33 is currently under preparation; most articles have already been received and are being reviewed. The issue will include articles on rodent and rabbit eradications in several South African islands, on goat eradication in Al-dabra, on the management of a plant pest in Switzerland and of a cactus in Spain, on the controversial control programme targeting feral camels in Australia and of some feral mammals in Argentina, plus the description of a recently discovered invasive plant in tropical Africa.

The ISSG continues to maintain the Aliens-L, an active and dynamic list service with over 1,170 members, focusing on invasive species that threaten biodiversity. It allows users to freely seek and share information on invasive species and related issues. In this way the ISSG engages with global practitioners and conservation managers, supporting them in their IAS information needs by making relevant information available and accessible.

The ISSG continues to provide support to the IUCN, its global programmes, its regional offices and the networks.

**Highlights of ISSG activities**

a) Planet Under Pressure 2012 (26-29 March 2012, London) was the largest gathering of global change scientists leading up to the United Nations Conference on Sustainable Development (Rio+20) with a total of 3,018 delegates at the conference venue and over 3,500 that attended virtually via live web-streaming. The first State Of The Planet Declaration was issued at the conference.

Following the conference, several ISSG members were concerned with the limited attention being paid to the issue of biological invasions and IAS in the Rio+20 processes. Members proposed the development and submission of a policy paper highlighting the growing threat of biological invasions to biodiversity, human health and food security for the Rio+20 process.

After extensive consultation with the membership, the ISSG with the IUCN’s Invasive Species Initiative (ISI) developed and submitted a policy brief (http://www.issg.org/pdf/RioPolicybrief.pdf) related to biological invasions and IAS to the IUCN. This brief was included in the IUCN documentation for Rio+20 and text reflected in the umbrella position paper (which formed the basis of IUCN’s statement to the Rio+20 conference). Also due to the ISSG efforts, invasive species were included in the message to the CBD Alliance to RIO+20 (http://www.cbdalliance.org/rio/).

b) ISSG participated in a World Trade Organization (WTO) Seminar on International Trade and Invasive Alien Species (http://www.standardsfacility.org/en/TAIAS.htm) that recommended a series of actions to control IAS more effectively, including improved coordination among relevant international organizations, and among national ministries and agencies, in implementing the WTO Agreement on Sanitary and Phytosanitary Measures (SPS). ISSG were invited to make
interventions during the seminar.

c) The Inter-agency liaison Group on Invasive Alien Species (http://www.cbd.int/invasive/lg/) was established in 2009 by invitation from the Convention of Biological Diversity (CBD) Executive Secretary pursuant to CBD decision IX/4. The ISSG Chair, Piero Genovesi, with the Global Coordinator of the IUCN’s Invasive Species Initiative, Geoffrey Howard, represent IUCN in the Inter-agency Liaison Group on Invasive Alien Species. The purpose of the Liaison Group is to facilitate cooperation among relevant organizations to support measures to “prevent the introduction of, control or eradicate those alien species which threaten ecosystems, habitats or species” (Article 8(h) of the Convention on Biological Diversity), consistent with relevant decisions of the Convention.

In the last year, ISSG participated in and contributed to the third meeting of the group in July 2012 in Geneva, and to the fourth meeting held in Rome in late February 2013.

d) The ISSG Chair, Programme Officer and several members attended the IUCN World Conservation Congress at Jeju, Korea in September 2012. A Knowledge Café was organized during which participants discussed the development of guidelines on the management of biological invasions in protected areas. This idea received approval and ISSG will be soon starting discussions on taking the idea forward, working with the IUCN World Commission on Protected Areas (WCPA). At the IUCN Congress, the ISSG also made a presentation on the linkages being developed between the IUCN Red List of Threatened Species™ and the Global Invasive Species Database. The ISSG also participated in the formal presentation of the revised IUCN Guidelines on Conservation Translocations that were formally approved by the IUCN SSC Steering Committee at the same occasion.

e) ISSG was instrumental in working with partners in the development presentation of the Motion 21 “Implementing the provisions on invasive alien species of the Strategic Plan for Biodiversity 2011–2020” (see Annex). The Motion was adopted by the IUCN Members’ Assembly on 12 September, and is now Resolution 21. The resolution calls on countries to identify priority invasive species for control through the enforcement of stringent regulatory measures to prevent introduction of invasives, encourage voluntary measures, and promote eradication campaigns. It also calls the IUCN Director General and Commissions to strengthen work on invasive species at the international level; improve invasive species knowledge products; improve collaboration between the SSC and the WCPA, and to strengthen support to invasive species work through the Secretariat and regional programmes. It was very encouraging that the motion was supported by 100% of Governments and 99% of NGOs, the highest score of all motions adopted at the Congress.

f) The ISSG participated in the 15th and 16th Meetings of the CBD Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) in Montreal in November 2011 and May 2012. ISSG supported the IUCN delegation in all areas that addressed the threat of invasive alien species on biodiversity and natural ecosystems. During SBSTTA 15, ISSG along with the IUCN Invasive Species Initiative signed a Memorandum of Cooperation (MoC) (http://www.cbd.int/doc/agreements/agmt-iucn-2011-11-07-moc-web-en.pdf) with the CBD Secretariat to continue collaboration on the activities and initiatives that contribute to the implementation of Aichi Target 9 on invasive species, and to provide the CBD
g) The ISSG Chair and Programme Officer attended the 10th Conference of Parties (COP11) of the CBD in India in November 2013 as part of the IUCN delegation. They worked closely with the IUCN team providing vital advice on interventions during discussions addressing the threat of biological invasions to biological diversity. The ISSG contribution to COP 11 resulted in a formal acknowledgement received with Decision XI/28. Invasive alien species: “welcomes the development of voluntary codes of conduct on these separate pathways, such as the ‘Code of conduct on zoological gardens and aquarium and invasive species’ developed by the Bern Convention, the IUCN Invasive Species Specialist Group and the European Association of Zoos and Aquariums, and requests the Executive Secretary to compile information and to work with experts to avoid and/or minimize the risks particular to these separate pathways”. On the same occasion the ISSG Chair gave a presentation at an event organised by the WCPA on guidelines for managing invasive alien species in protected areas. This will form the basis for the joint initiative of ISSG and WCPA to develop global guidelines on the issue, to be presented at next World Park Congress in 2014.

h) The ISSG has been particularly active at the European level providing support to regional institutions in developing more stringent policies on biological invasions. The Chair and Programme Officer continued to support the European Commission on its work for the development of an EC legislative instrument on invasive alien species, by providing qualitative and quantitative information on issues such as pathways, and the impact and management of invasives. ISSG worked with the IUCN office in Brussels to organize of the very successful meeting “Biodiversity’s Ticking Time Bomb: Understanding and Addressing the Problem of Invasive Species in Europe”, reported on in greater depth below.

i) The ISSG has continued with the long tradition of cooperation with the Bern Convention, with which it is collaborating in the development of several codes of conduct and guidelines focused on major pathways of introduction, as well as on other thematic issues, such as protected areas. In particular, on 30 November 2012 the European Code of Conduct for Zoological Gardens and Aquarium on Invasive Alien Species was formally approved at the Standing Committee meeting of the Bern Convention. At the same meeting, with the aim of ensuring responsible and proactive policies and applying these in a coherent manner across Europe, the Standing Committee praised the innovative approach of such voluntary instruments, and adopted the Recommendation No.161 (2012). The development and negotiation of the code entailed an extensive collaboration with the European Association of Zoos and Aquariums (EAZA), which has been explicitly acknowledged in a recent article in the EAZA newsletter: http://interactivepdf.uniflip.com/2/48142/298557/pub/document.pdf.

j) Another code of conduct is currently in progress on the topic of invasives and hunting (in cooperation with the European Federation of Hunting Associations). ISSG is also working to develop guidelines for the management of invasive species in protected areas in Europe, in cooperation with several organizations, including WCPA.

k) The ISSG also organized the Meeting of the Select Group of Experts on Invasive Alien of the Bern Convention, held in Rome, Italy, on 15-16 March 2012

l) The ISSG, in collaboration with a multinational team of experts, has contributed to two reports focusing on IAS impacts and relevant indicators published by the European Environment Agency (EEA): “The impacts of invasive alien species in Europe” and “Invasive alien species indicators in Europe - a review of Streamlining European Biodiversity (SEBI) Indicator 10”. A third EEA report has been also completed in 2012 by the same team, but not yet published: “Streamlining European Biodiversity Indicators (SEBI): Review and testing of methodological developments of SEBI indicator 10 — Invasive alien species in Europe”.

m) The ISSG contributed to the development of a COST action programme, together with over 100 experts in Europe,
aimed at increasing the interoperability of data on invasive species in Europe. The ISSG is supporting the development of the NatureWatch initiative, carried out by the European Environment Agency within the Eye-On-Earth initiative, by providing technical advices on IAS issues and facilitating networking.

n) ISSG provided continued support to the development of the East and South European Network for Invasive Alien Species (ESENIAS), initiated with the participation of all the countries in the region and with the support of the European Environment Agency. In 2012, an ISSG representative participated in a meeting in Belgrade (Serbia) aimed at launching the database (see http://www.esenias.org) and a dedicated volume with articles prepared by local and international experts (which are currently under review). The volume features updated reviews of the situation of invasive alien species in each specific ESENIAS country (the indicative geographical scope is Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Greece, Kosovo under UNSC Resolution 1244/99, FYR Macedonia, Montenegro, Serbia, Romania and Turkey).

Collaborations

Organization of the IUCN conference of IAS in urban areas

The ISSG is supporting IUCN in the organization of the conference on invasive species in urban areas in Europe, which will be held on the 5 September 2013 in the IUCN Headquarters in Switzerland (Gland).

Global Invasive Alien Species Information Partnership

During CBD COP11, the ISSG and IUCN's Invasive Species Initiative signed a Memorandum of Cooperation with the CBD Secretariat in support of the Global Invasive Alien Species Information Partnership (GIASIP) (http://www.cbd.int/doc/agreements/agmt-iucn-2012-10-10-moc-web-en.pdf). The GIASIP was formed to promote collaborative activities among the participating organizations and the CBD in order to facilitate the access, exchange and analyses of information on invasive alien species. As such, the GIASIP will support action by Parties to the CBD, other governments and by other organizations and stakeholders, to prevent, control and eradicate invasive alien species in line with Article 8(h) of the CBD and other relevant agreements, and to achieve Aichi Biodiversity Target 9 of the Strategic Plan of Biodiversity 2011-2020.

The GIASIP at the CBD COP 11, Hyderabad, India, 8-9 October 2012

Two key resources are being developed within the scope of the partnership, these being: a) the development of the Global Register ofIntroduced and Invasive Species (GRIIS) which is envisioned to serve as the global master list of known introduced species; and b) the development of a prototype 'Invasive Alien Species Pathway Management Toolbox'.

Invasive Species Indicators

ISSG has taken the lead role in developing selected invasive species indicators as part of a larger initiative (the Biodiversity Indicators Partnership, coordinated by the UNEP World Conservation Monitoring Centre) on the development
and use of biodiversity indicators. ISSG is working with partners to identify which invasive alien species indicators are priorities, and what protocols need to be put in place for data collection, analysis, storage and maintenance.

Selected indicators include measuring: a) trends in the numbers of introduced and invasive species; b) trends in the numbers of outbreaks of wildlife disease caused by invasive alien species; and c) trends in the numbers of legal instruments that have been enacted by countries related to the management of invasive alien species.

Collaboration in Oceania

In the Oceania region, ISSG is an active partner in the Pacific Invasive Partnership (PIP), a regional body that is the working group of the Roundtable for Nature Conservation in the Pacific. The ISSG office in the University of Auckland also serves as the focal point for invasive alien species the region.

Revised Guidelines for Reintroductions and Other Conservation Translocations

The IUCN SSC Reintroduction Specialist Group (RSG) and the ISSG have published revised Guidelines for Reintroductions and Other Conservation Translocations (http://www.issg.org/pdf/publications/Translocation-Guidelines-2012.pdf). These were formally approved by the SSC Steering Committee in September 2012.

European Code of Conduct for Zoological Gardens and Aquaria on Invasive Alien Species

The Bern Convention and ISSG, in collaboration with the European Association of Zoos and Aquaria (EAZA), have developed the European Code of Conduct for Zoological Gardens and Aquaria on Invasive Alien Species (IAS) (https://wcd.coe.int/com.instranet.InstraServlet?command=com.instranet.CmdBlobGet&InstranetImage=2176840&SecMode=1&DocId=1943806&Usage=2). The code was formally approved at the last Standing Committee meeting of the Bern Convention on 30 November 2012. At the same meeting the Standing Committee also adopted the Recommendation No.161 (2012) to invite all contracting parties to implement the code. The development of this code was also formally acknowledged at CBD COP11 at Hyderabad.

Key events

Biodiversity’s Ticking Time Bomb: Understanding and Addressing the Problem of Invasive Species in Europe

On 21 February 2013, IUCN and BirdLife, with the support of the European Habitats Forum, organized a high-level debate at the European Parliament in Brussels to discuss the issue of invasive alien species in Europe and the development of an EU policy instrument to tackle them (http://iucn.org/about/union/secretariat/offices/europe/?11772/Biodiversity-Ticking-Time-Bomb). The event was hosted by MEP Pavel Poc, Group of the Progressive Alliance of Socialists & Democrats (S&D).
Intervening at the event, amongst others were Julia Marton-Lefèvre, Director General of IUCN and Dr Piero Genovesi, Chair of the ISSG. The event coincided with the launch of a report finalized in 2011 for the European Environment Agency: Scalera, R., Genovesi, P., Essl, F. and Rabitsch, W. 2012. The impacts of invasive alien species in Europe. EEA technical report No. 15/2012. The report received excellent media coverage in the first 24 hours: over 430 articles including the online coverage (especially the German and UK coverage as DPA and the Press Association published articles about the report). Many other important sources published articles, such as the BBC, The Guardian, Reuters, EFE, EuropaPress, Público, ANSA, Irish Independent, Die Welt, EurActiv, Delo and Scientific American.
Activities of the Species Conservation Planning Subcommittee

Mark Stanley Price, Chair IUCN SSC Species Conservation Planning Subcommittee
Introduction

The SSC Species Conservation Planning Sub-Committee (SCPSC) has been running since 2010, and is gearing up for a highly active and effective 2013-2016 quadrennium.

Its impacts to date have been largely due to the flexible funding provided by the Environment Agency Abu Dhabi (EAD), though the SSC Chair’s Office. This funding has been used to provide what is usually the first show of financial support to proponents of species planning processes or events, with the intention that IUCN support will be an indication of confidence and competence, and can be used to leverage further support.

This report highlights these instances where EAD funding has been applied in 2012, but also describes more fully the activities and, especially, the ambitions of the SCPSC through 2013.

EAD-supported planning events

1) Review of the Golden Mantella frog conservation plan, Madagascar (£2,000)


In late 2012, SCPSC funding supported a workshop organised jointly by the Government of Madagascar and Madagasikara Voakajy, a Malagasy NGO, and funded the travel of a sub-committee member to attend the event. The Golden Mantella Species Conservation Strategy has been in place since 2011 but, because of a rapidly changing situation on the ground (caused by illegal gold mining), all stakeholders felt it was necessary to review progress in implementing the strategy. A steering committee was established and representatives from the Government of Madagascar, Ambatovy Minerals, IUCN SSC Amphibian SG, and Madagasikara Voakajy coordinated the workshop.

Key activities in the run up to the workshop included a field visit by the steering committee to meet stakeholders and a detailed technical update of the conservation status of the species was prepared. The workshop was held in Moramanga, on 30th October 2012.

The final report of the workshop, which includes comments on progress and revised indicators and objectives, is now awaiting government sign-off.
2) Seven species of sawfish: IUCN SSC Shark Specialist Group (SSG) (£3,000)

The SCPSC funding was the first in support of the development of a global conservation strategy for these seven species, all of which are Critically Endangered. The SCPSC Chair joined the planning meeting at Zoological Society of London (ZSL) in May 2012 for one day. This is an example of a very professional and dynamic approach to planning for this species, with excellent outreach and marketing, for an urgent situation. A variety of products have emerged:

1. Sawfish brochure – already completed (http://www.iucnssg.org/tl_files/Assets/pdf/Sawfish/COFI_sawfish_brochure_English_small.pdf) to target higher level policy people (CITES, CMS, RFMOs, FAO delegates);
2. Conservation Strategy to include status of sawfish species and action plan;
3. Manuscript highlighting research actions for scientific community;
4. Eight-page hand-out (to accompany a memory stick with the report and other sawfish and SSG-related documents on it) to target the people that will actually implement the actions or lead more regional focused workshops. This would be created by a science communicator and would be translated into sawfish related languages including French, Spanish, Portuguese, Hindi, Urdu, Mandarin, Arabic for example.

Culturally and economically valued

Sawfishes were revered for millennia by societies along the tropical and subtropical coasts of the Atlantic and Indo-Pacific Oceans. They were found to be used on coinage 5,000 years ago. Art, bas-relief, and mythology are almost all that is left today to remind us of how widespread and abundant these fishes once were.

Despite their rarity, sawfish fins are still a highly prized ingredient of shark fin soup and their rostra or ‘saw’ is a valuable and traded curio. Their livers were traditionally valued for the high-vitamin A content; their meat is still consumed today. Sawfish are also an increasingly popular attraction in public aquaria.

SECURING A SAFE FUTURE FOR SAWFISHES: Conservation and Management Recommendations

Further Information
iucnshark@gmail.com
www.iucn.org/index.php/sawfish
www.facebook.com/iucnshark
@IUCNShark
www.twitter.com/iucnshark

ZSL • IUCN • SSC • SCF • SOG • SFU

3) Djibouti (£3,000)

At the instigation of Zoo Beauval, France, the Government of Djibouti asked the SSC Conservation Breeding Specialist Group to organise the first planning for its priority species. The Chair of SCPSC was involved over many months liaising with diverse parties to design a meeting that met all needs. The meeting took place in March 2012, attended by, amongst others the Chairs of the SSC Specialist Groups for Antelopes and Equids, with Phil McGowan of the Galliform SG also present. The IUCN Regional Office for Eastern and Southern Africa (ESARO) was present and the meeting provided an opportunity for ESARO to become re-engaged with Djibouti’s conservation. The species considered were: Djibouti francolin, Somali wild ass, Grey zebra, gerenuk, beira, beisa oryx, Soemmering’s and Pelzeln’s gazelles, Salt’s dik-dik, leopard and cheetah.

The event attracted great interest in-country, with the President attending the opening, and with Ministers at the closing ceremony.
The participation and commitment of Djiboutians in the meeting was remarkable, not only concerning funding for several activities, but also concerning the provision of necessary logistics, and notably the presence of four ministers at the opening ceremony, and two ministers at the closing session. The workshop was attended by more than 60 people (35 of them from Djibouti) and the preceding seminar was attended by around 150 people.

The SSC planning process was used throughout, and it was felt that Djibouti had taken the first steps towards the workshop vision “Djibouti’s rich natural heritage, particularly species of global, regional and national importance and their ecosystems, are conserved and their resilience enhanced, thus serving as a model for sustainable development in the Horn of Africa”. The meeting ended with statements that planning for Djibouti’s marine biodiversity should take place soon.

SCPSC is pleased to have been involved in the first systematic approach to conservation planning to be done by a country.

The final report is now available.

CONSERVING DJIBOUTI’S PRIORITY LAND ANIMALS
A SEMINAR AND CONSERVATION WORKSHOP
CERD, DJIBOUTI, 25-29 March 2012

Final Report

4) Humphead wrasse (£2,100)

This fish species has a very wide range in tropical waters. With sufficient time to mature, the Humphead wrasse has the potential to be a very large fish. Unfortunately this growth is prevented by the severe threat of over-fishing in its heartland around Malaysia, the Philippines and Indonesia.

The Humphead wrasse has been subject of increasing attention within the CITES process since it was listed on Appendix II in 2004. The latest action was the creation of a Working Group of the Standing Committee and at the last (the 62nd) meeting of the Committee (http://www.cites.org/eng/com/SC/62/E62-51.pdf), it was directed to continue its work until the next Conference of the Parties, the 16th, Bangkok, March 2013 (see http://www.cites.org/eng/com/SC/62/sum/E62-ExSum09.pdf). At the last Standing Committee meeting, IUCN offered to help facilitate a meeting in September 2012 (http://www.iisd.ca/download/pdf/enb2172e.pdf, page 17).

The IUCN meeting was instigated by Yvonne Sadovy, Co-Chair of the SSC Marine Conservation Sub-committee and Co-Chair of the SSC Grouper and Wrasse Specialist Group. It took place in September 2012 in Indonesia, with representatives from the other two main range states. SCPSC provided member Phil McGowan as facilitator.

As the meeting started with a report on the Illegal, Unregulated and Unreported (IUU) fishing for the species, the threats were clear to all, thus the issue was how to plan to improve the situation. This was an interesting workshop as participants’ previous planning experience had almost all been about trade issues. Careful facilitation showed them that effective planning should be placed in a broader, ecological context. The meeting ended with a draft outline conservation plan for the wrasse, which will need further work.
An unexpected outcome of the meeting came following a presentation given by Phil McGowan on the SSC planning process. It was here that the SCPSC learnt that the Indonesian government is considering planning for 12 priority species within the Ministry of Forestry Decree (57/2008: Direction for National Species Conservation Strategy 2008-2018), and a further set of marine species. SCPSC will keep track of this and hopes to be able to assist. The species known to need plans are the Bali starling, the Maleo, Moluccan Scrubfowl, and Caerulean paradise fly-catcher.

5) Wild Asian Buffalo (c. £3,000)

The SSC Asian Wild Cattle Specialist Group identified this species in its central Indian range as a priority for conservation action. The presence of Kishor Rithe, President of the Satpuda Foundation, in Oxford in 2011 enabled the Chair of SCPSC and the Chair of the Asian Wild Cattle SG to collaborate to promote a planning meeting. Negotiations took many months as an effective meeting required the willing presence and participation of representatives of the state governments of Maharashtra and Chhattisgarh, plus representatives from Assam where the buffalo population is thriving. The Satpuda Foundation did much of the ground logistics in Nagpur, while the Wildlife Trust of India provided financial support.

The meeting was held in November 2012, with EAD support for the Chair of SCPSC and Chair of the Asian Wild Cattle SG, and Dr Helen Senn of Wildgenes Laboratory, Scotland, to attend.

The meeting followed the SSC planning process closely and a plan is now in final edit. The meeting was notable for (i) the comprehensive attendance by Indian government officers of many levels, the presence of the Central Zoo Authority etc, and (ii) the fact that this was the first time the two states had collaborated over conservation issues.

The plan contains fairly obvious, but technically challenging, actions around improved survey and security on the ground, and with importation of buffalo from Assam to central India.

There has been debate and doubt over many years as to the genetic purity of the remnant 'wild' buffalo and it is generally assumed that there has been long-term introgression of domestic genes into the wild animals. The meeting was structured to allow Dr Senn and Dr Ajay Gaur from the Laboratory for Conservation of Endangered Species, Centre for Cellular and Molecular Biology, Hyderabad, to explore and assist on what it meant to be 'wild' genetically. The report
will include consideration of ‘acceptable genetic composition’. India is fortunate in having expertise and experience in selective breeding and assisted reproduction in domestic water buffalo.

6) Western Derby Eland (c. £2,400)

This antelope is highly endangered in the far western portion of its range, in Niokolo-Koba National Park, Senegal, with estimates of its remaining number as low as 200. Conservation efforts started in 2000 with the capture of 1 male and 5 female animals in this park. The Derbianus Czech Society for African Wildlife, and the Czech University of Life Sciences, Prague, have been instrumental in supporting the resultant captive herds since 2000, which by 2012 numbered 80 individuals.

Given the small number of captive herd founders and consequent inbreeding (carefully documented), the Czech Society planned a Population and Habitat Viability Assessment (PHVA) meeting with an aim of seeing how best to get further animals from the wild. Working with them, the SCPSC and SSC Antelope SG suggested that improving the conservation status of the species should be the objective, in support of which the captive herd was a resource.

The suggested approach was accepted and the Chair of the Antelope SG helped design and facilitate the meeting, held in Senegal in January 2013 with visits to the captive herds and Niokolo Koba NP. A meeting report has been received, and a full plan awaited.

7) Brown howler monkey, Argentina (£3,000)

The planning workshop for the species was postponed in 2012, but took place in late March 2013. It will be named ‘Status Review and Population Viability Assessment (PVA): A first step in building a Species Conservation Strategy’ and organised by Asociación Civil Centro de Investigaciones del Bosque Atlántico (CelBA), Argentina, and Instituto de Biología Subtropical – sede Iguazú, Facultad de Ciencias Forestales, Univ. Nacional de Misiones. These bodies have been researching the Brown Howler (Alouatta guariba clamitans) and the sympatric Alouatta caraya. In 2008 and 2009, yellow fever struck, knocking the Brown Howler almost to extinction in Misiones, Argentina.

The expected outcomes of this workshop are: (1) to detect serious gaps in current knowledge on the species, (2) to evaluate the most important threats to the persistence of the population in Misiones, (3) to guide selection of the most effective management option, and (4) to define target recovery objectives and goals that should be reached. Finally, another outcome expected from this workshop is the enhancement of public awareness about the conservation status of Brown howlers in Misiones. This awareness will provide a solid basis for further steps towards developing, in the near future, a broader participatory process for the development of a conservation strategy for the species in Argentina.

The workshop has been designed by SCPSC member Arnaud Desbiez, who will facilitate and prepare the report; he is also Coordinator of CBSG Brazil.

8) Mentoring a Specialist Group (£5,000)

A key objective of the SCPSC is to promote species planning within SSC. Recognising that many SG’s have had no experience of planning, and may not indeed see the need or merit in it, it was decided to mentor a ‘naïve’ SG to plan. Phil McGowan was funded to design and work with a targeted SG, which was identified as the SSC Freshwater Crab and Crayfish SG because of its high number of highly endangered species and its desire to develop a strategic planning capability.
Working with the Chair of the SG:

- A strategic approach was taken to narrowing down the large number of candidate species, which were those listed on the IUCN Red List as Endangered and Critically Endangered; the process by which this happened is detailed in the ‘How to’ guide under development, and near to completion;
- The species for which planning is underway is a suite of freshwater crayfish on the Cumberland Plateau in Kentucky and Tennessee, USA. These are:
  - Obed crayfish Cambarus obeyens, which is Critically Endangered;
  - Big South Fork crayfish Cambarus bouchardi, which is Near Threatened; and
  - Emory River crayfish (undescribed) restricted to 1 small tributary and a short reach of the Emory River. This is currently listed as Not Evaluated on the IUCN Red List as it is a recently discovered species not yet formally described. It is thought likely to meet the criteria for listing as Threatened;
- Two Critically Endangered freshwater crabs from Singapore, are still being explored with local SG members and action is likely later in 2013; a visit to Singapore to meet the SG members to explore options is probably necessary to talk through the process;
- The logistics and budget for the Tennessee crayfish meeting are now clear and a small contribution secured from a Tennessee wildlife agency; if the remaining funds can be raised, the meeting will be held in mid-2013;
- The ‘How to’ guide is near completion; the finalisation has been delayed in order to include lessons learnt from other planning processes (including Green peafowl, Djibouti, Humphead wrasse) that Phil McGowan was involved in. This provides the opportunity to bring all experience of the practicalities of setting up and creating a planning process. It will be completed shortly and circulated to the SCPSC for comments, additions and improvement with a view finalising this guide by the end of May 2013.

**SCPSC activities not funded by EAD**

1) David Mallon facilitated a planning meeting for the Pygmy hippo in Liberia in late 2012, following on from the range-wide plan he led with ZSL in 2011.

2) The SSC Steering Committee approved a process by which the SCPSC can endorse species plans as meeting the principles of an SSC species conservation strategy. We have a small number of plans submitted by CBSG and others for review. The final pro forma for assessment is almost finalised, having been reviewed extensively by SCPSC members.

3) The Chair of SCPSC has designed a form to capture key information about any planning process or event, and this has been exhaustively reviewed by committee members. The object is to have a standardised means of description that will be capable of analysis in due course to identify key success factors or obstacles to successful planning. It has to be designed to hold information in a searchable database. At a recent meeting with the Chair of CBSG, it emerged that they have also contemplated doing the same but never done so, so there is the prospect of synergy between our two groups on this.

4) SCPSC membership: the SSC Sub-Committees for Marine Conservation, Plant Conservation and Invertebrate Conservation each now has a representative on the SCPSC; Freshwater Conservation is outstanding, but pending; a member of the SSC Iguana SG (Lee Pagni) has also joined through his particular interest in assessing uptake and impact of species plans; Amielle De Wan of RARE has joined because of her expertise in Miradi software and in project design.

5) The Marine Conservation Sub-Committee member, Ken Lindeman (also Chair of the SSC Seabream, Snappers and Grunts SG) brings an interest in climate change to SCPSC, which will be expanded (see below). His SG is also contemplating Red Listing on a bulk species scale in the Persian Gulf and off the West African coast in 2014 (the Snappers, Seabream and Grunt comprise 540 species of reef and estuarine fishes from 8 families).
We have already started to explore whether or how Red Listing can be combined under certain circumstances with conservation planning. This is likely to be a significant issue over the coming years. This exploration in planning for multiple species of fish simultaneously may learn from the exercise for freshwater fish in Brazil, which, led by Arnaud Desbiez, seems to be a model of effective planning and implementation (second implementation review report awaited) http://www.cbsg.org/cbsg/workshopreports/26/pan-paraibadosul-web.pdf.

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6) The Chair of SCPSC is on the Steering Committee of the new SSC Climate Change SG, which is fast developing an ambitious work programme, in which influencing species planning under changing climates is included. SCPSC will use this opportunity to bring in further climate expertise for it is an aspect notably missing from the present planning approach.

7) The CBSG-SCPSC Tool Development Working Group has produced a final version of the ‘Abruzzi table’, a Tools Matrix which identifies which planning tools to use under diverse conditions. The Chairs of SCPSC and CBSG are moving towards defining which body is best placed for specific aspects of planning across SSC and beyond.

8) The SSC Cat Specialist Group had developed its own compendium for cat conservation planning. Due to exposure to the Abruzzi tables at the SCPSC Meeting in Abu Dhabi in February 2012 its Co-Chairs, both members of the SCPSC, have adapted the flow chart for strategic planning to the proposed Conservation Planning Cycle Diagram. This adaptation to the Cat Conservation Compendium has greatly helped to better visualize and illustrate the planning process and thus allow for easier understanding for partners, stakeholders and students of the Cat Conservation Course that the Cat SG runs annually.

9) Following on from the development of the Tools Matrix, a selection of tools were identified for testing, with the aiming of assessing their suitability for incorporation into SSC planning processes. In 2012, a combination of the “Conservation Scorecard” and a cost-benefit analysis was tested at a Scimitar-horned Oryx conservation planning meeting in Chad, at which the Chair SCPSC also participated.

One of the tool-related targets for CBSG has been to learn more about the application of the emerging field of Structured Decision Making (SDM) to conservation planning problems. Staff attended training courses in the USA and in Australia on this topic and began planning the incorporation of this discipline into SSC workshops, one of which, on Javan rhinos, is scheduled for 2013. A workshop was held on SDM during the CBSG Annual Conference in Melbourne, Australia.

Virtual tools enable collaborators to meet in real time and share ideas, images and documents from remote locations through a web-based platform, were tested in a variety of applications ranging from remote participation in international conferences to small group discussions on selected topics. This increased experience will help streamline and expand
the use of this technology in SSC conservation planning processes.

**Activities for 2013**

A full meeting of the SCPSC is intended for mid-2013 in Oxford. This event will develop a strategic approach to activities of the Sub-committee for at least two years. In the meantime, other activities are underway:

1) The Chair of SCPSC will take part in the Sumatran Rhino Summit Meeting in Singapore in April 2013.

2) David Mallon is scheduled to facilitate a meeting for the Okapi in the Democratic Republic of Congo, which will both Red List the species and plan for its conservation.

5) The Chair has been working with the Chair of the SSC Grasshopper SG regarding the Crau grasshopper, a flightless species with very restricted range in southern France. It is agreed that two students will conduct field work through the summer of 2013, with an intention to hold a planning workshop in about November 2013.

6) The Chair has been corresponding about conservation planning for various Nepenthes pitcher plant species in Thailand, on the introduction of the Chair of the SSC Carnivorous Plant SG.

7) There should be a planning meeting for freshwater crayfish in the USA following Phil McGowan’s project (described above).

8) The Brazilian authorities have very ambitious plans for Red Listing and planning for their country’s plants; we will be encouraging and assisting where we can.

**Conclusion**

The SCPSC now has an enlarged and effective membership and with an ambitious outline plan for its activities over this IUCN quadrennium, which will be expanded at a full committee meeting in mid-2013. An interest in planning is increasing amongst Specialist Groups, and SCPSC expects to enhance this with a proactive marketing approach, which the mentoring project has shown can be effective.

The value of SCPSC giving small grants at an early stage of developing planning events has been well-proven over the last two years. This capability has been entirely due to the flexible funding from the EAD. SCPSC remains hugely grateful for this support, and looks forward to demonstrating and reporting great progress over 2013.
Okapi Okapia johnstoni (Near Threatened)
© Bob Jenkins
Moving Action Asia Forward

William Duckworth, Technical Coordinator, Action Asia
Background

Action Asia is an interagency action coalition with the goal of reversing the declines in the wild of Critically Endangered freshwater and terrestrial vertebrates in South-east Asia. During 2012 and in the early months of 2013, Action Asia has moved from concept stage to concrete existence.

The idea for Action Asia arose out of a crisis discussion between some of the major international NGOs following the results of the Global Mammal Assessment. Thus far, meetings in 2012–2013 have demonstrated strong support for the idea across the breadth of organisations responsible for species conservation in South-east Asia.

Establishing Action Asia’s form and function

Goal and Objectives

Thanks to the diversity of strengths present in its constituent bodies, Action Asia is uniquely equipped to address pressing conservation issues in the region. However, it is neither a direct implementing body, nor a direct donor, as it relies on the guidance and proactive support of its constituents. Thus the role of Action Asia is to provide the assistance its constituents require to achieve the following objectives:

- Encourage the collection and distribution of information essential to conservation action for AA-eligible species;
- Identify and catalyse urgent actions to reduce immediate threats causing the decline of AA species;
- Improve the enabling environment for effective conservation of AA-eligible species by raising their profile;
- Catalyse a range of recovery activities for AA-eligible species by strengthening ongoing conservation action and promoting new initiatives.

Action Asia’s name is not yet finalised. Action Asia is unsuitable because it is already used by a Thai outdoor magazine; it also suggests a misleadingly broad remit. The current suggestion under consideration (notably, investigation of potential for confusion of the acronym) is ‘Asian Species Action Partnership’, the acronym of which indicates the need for urgency.

Governance and Structure

The last 15 months have been packed with dialogue to establish this basic form and function of Action Asia. Introductory discussions were held at two meetings of EAZA (the European Association of Zoos and Aquariums) during 2011 and at the IUCN SSC Chairs’ meeting in Abu Dhabi in February 2012. To make the best use of available resources, Action Asia built upon the outcomes of the introductory discussions by hosting both large events and small side meetings at the many pre-existing international meetings and congresses.

A Steering Committee constituted of member institutions will be formed with the role of representing the primary decision-making body and setting strategic priorities in relation to AA’s goal and objectives. The SSC Chair (presently Simon Stuart) will chair this Steering Committee. The majority of member institutions will be non-governmental implementing bodies, currently defined as those present at either the Jeju or the Bangkok meetings. Steering Committee members will also include a representative of (and elected by) the IUCN SSC Specialist Groups and Red List Authorities which contain AA-eligible species, and the donors that were present at the Jeju meeting.

A Scientific Advisory Committee will be comprised of IUCN SSC Specialist Group representatives with one or more Action Asia-eligible species in their remit and other specialist associations as appropriate. These will advise on methodologies, updates to the AA species list, core programmatic priorities, emerging issues, and other aspects of technical guidance as appropriate.

A Friends of Action Asia group that is primarily involved in implementing conservation action for AA species. Membership to this group will be open to NGOs, government agencies, academic institutions, zoos and all others (for example corporate entities) who wish to be eligible for assistance. Prospective Friends, notably from the corporate sector, will be subject to screening in order to qualify for membership and will have no direct voice in the Steering Committee’s decisions.

The position of Development Coordinator was created in March 2013 to ensure the coalition maintained the necessary momentum. It is supported by a substantial financial contribution from EAZA and the secondment of WCS staff person Madhu Rao, who now works half-time for Action Asia.
The AA Secretariat will comprise the following positions (current individuals): Technical Coordinator (Will Duckworth), Development Coordinator (Madhu Rao) and Operational Support (Rachel Roberts).

Programme Areas of Work

The report on the Action Asia meeting in Bangkok in March 2013, plus subsequent consultations over the next six weeks in Sumatra, Vietnam and Singapore, is presently being compiled and reviewed by the partners. This report will essentially form the briefing book for Action Asia’s early operation.

At present, the main Programme Areas of Work for Action Asia have been identified as follows:

1. Develop, in consultation with IUCN Specialist Groups, Species Action Checklists that address the most critically urgent activities for each AA-eligible species;
2. Identify opportunities for synergistic actions for groups of species based on agreed upon criteria, such as site-specific habitat protection, securing critical sites, conducting surveys, enhancing high-level political will, capacity building for enforcement and species identification, mitigation of threats and ex situ action;
3. Broker AA-eligible species’ needs with opportunities. An important activity for Action Asia is to represent a ‘match-making’ entity to ensure linkages of AA-eligible species needs with sources of financial and technical support. AA will play a key supporting role rather than a competing role with members;
4. Generate a monitoring/report card on the status of AA species providing focused, concrete information every two years;
5. Develop an internal and external communications strategy to clarify communication mechanisms internally across the AA governance structure and externally to raise awareness with NGOs, donors, academic research institutions, making links to relevant Multilateral Environmental Agreements (such as the CBD through the National Biodiversity Strategies and Action Plans (NBSAP) revision process). The communications strategy will outline the messages, the recipients of each, and mechanisms of transmission;
6. Develop web-based access to all relevant written information (including Red List accounts, survey reports) on AA-eligible species, and assisting in directing interested parties to unwritten information.

Key Deliverables for AA in first year of operation:

- Development of Species Action Checklists for all AA-eligible species;
- Identification of synergistic priority actions for groups of AA species;
- Plans to match species’ needs with technical, financial and political opportunities;
- Accessible collation of all relevant written information on AA eligible species;
- Development of a communications strategy;
- Install paid programme officers in each Specialist Group without one so far, but containing AA-eligible species: Deer SG, Asian Wild Cattle SG, Pig SG, Bat SG, Small Mammal SG.

The eligible species: patterns of threat

Presently, there are 154 species on The IUCN Red List of Threatened Species™ that meet the Action Asia criteria: (1) Critically Endangered, (2) vertebrates occurring regularly throughout their lifecycle in, (3) South-east Asia in, (4) land or freshwater habitats. Three additional species are already Extinct; none are presently listed as Extinct in the Wild (Figure 1). An additional 18 species are identified by their respective Red List Authority as warranting listing as Critically Endangered (CR) but not yet being so listed, and as fitting the other three eligibility criteria. These 18 are surely a large underestimate of the total number that would, in a world of perfect knowledge, be categorised as CR. Four of the Red List Authorities with the most species felt unable to produce even an indicative figure of the number of such species: freshwater fish; snakes and lizards; amphibians; and bats. The first two of these groups have never had a full Red List assessment of South-east Asian species, meaning they are particularly likely to hold large numbers CR species ‘waiting in the wings’.

The 154 Action Asia-eligible species are not split evenly across classes (Table 1). The high number of fish is noteworthy given that species from large areas in South-east Asia have not yet been evaluated against Red List criteria, and that in the only region that has had a systematic evaluation – Indo-Burma (Vietnam, Lao PDR, Cambodia, Thailand and Mya-
Most of the 154 Action Asia-eligible species are confined to South-east Asia (125 species naturally so, a further four by recent extinction of all extralimital populations) and therefore their extinction can be averted only by action in the region. A further 21 of the 154 species also occur elsewhere, but have an important part of their global population in South-east Asia; and four are presently of only marginal occurrence in South-east Asia.
There is great variation between South-east Asian countries in the numbers of Action Asia-eligible species recorded (Figure 1). Indonesia and the Philippines support startlingly more Action Asia-eligible species than does any other country. These are the two great archipelago countries, with their large number of islands being home to many more restricted-range species than do continental countries. Moreover, Figure 1 surely underestimates Indonesia and the Philippines’ outstanding relevance to Action Asia: neither has had a comprehensive Red List assessment of fish, unlike most of the continental countries; of the latter, Vietnam supports the most Action Asia-eligible species, with almost a third more than the countries with the next highest total, Lao PDR and Thailand. Should Action Asia need to prioritize its activities by country, as has been suggested, there would be strong arguments to start with Indonesia, the Philippines and Vietnam.

Extraordinarily, most of these 154 species are not presently the subject of any directed conservation action. Very few are high-profile species: Sumatran Rhinoceros Dicerorhinus sumatrensis, Javan Rhinoceros Rhinoceros sondaicus, Tamaraw Bubalus mindorensis, several turtles, Philippine Crocodile Crocodylus mindorensis, Siamese Crocodile C. siamensis, Mekong Giant Catfish Pangasianodon gigas, the three gibbon species Nomascus concolor, N. leucogenys and N. nasutus, Sumatran Orang-utan Pongo abelii, Delacour’s Langur Trachypithecus delacouri, Cat Ba Langur T. poliocephalus, Saola Pseudoryx nghetinhensis (reflecting a recent major surge in activity), and many bird species are about the only Action Asia-eligible species with multiple organisations paying serious attention to them. The birds represent a special case because of the existence of BirdLife International. No comparable network and partner-based organisation exists for any of the other vertebrate classes.

A vital starting point for species conservation activities is knowledge of where the potentially conservable populations of each species occur. The pace at which new species are discovered in South-east Asia, particularly among the fish and herpetofauna, highlights how much remains to be understood about species’ distributions there. However, based on current information (Figure 2), over a third of the 154 Action Asia-eligible species are too poorly known to even determine an effective site within which interventions can be encouraged and facilitated. For only slightly less than half of the species, there is one site that is clearly the priority for action. Action Asia needs to determine how to balance action for the known-site species (which can begin immediately) against supporting knowledge improvement for the others (meaning that actions to improve their conservation status can only start in the future). According to the interim Steering

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**Figure 2.** Site conservation options for Critically Endangered non-marine vertebrates of South-east Asia, based on current knowledge of their occurrence.
Committee, the current priority should in fact be the identification of a large number of unknown species which have not yet been categorized as Critically Endangered.

Past, present and anticipated activities

Action Asia has several main fields of activity, some of which have begun already. Other fields are likely to be added as Action Asia develops. Essentially, the mandate of Action Asia is to encourage and support important actions for a species’s conservation when these become more effective or practicable using the resources of the coalition partners.

Matching projects with supporters: Saola

The biennial EAZA Conservation Forum is explicitly a venue to bring ex situ and in situ conservation practitioners together. Action Asia recommended several people from projects and programmes involving Action Asia-eligible species to attend. This was extremely successful, with all the in situ people making promising contacts for significant support (additional to that presently coming from EAZA through the EAZA – IUCN SSC South-east Asia Campaign).

While some agreements were financial, zoos can support conservation in multiple ways. Perhaps the most important was the formation of an EAZA-based advisory team to identify and propose guidance for the issues surrounding intensive management of Saola. Intensive management has not yet occurred, but the desperate situation with Saola indicates that it may well be needed; the advisory team underlined just how much preparation was needed. They are

Figure 3. Saola Pseudoryx nghetinhensis (Critically Endangered)

This adult was illegally caught by villagers in Bolikhamxai province, Lao PDR, in late 2010. This was the first absolute confirmation of the species’s survival for a decade. In common with those Saolas brought into captivity in the 1990s, it died soon after capture.

© WCS Lao PDR / Integrated Ecosystem and Wildlife Management Project.
producing a guidance document for a controlled process, but also guidance notes for emergency action if a Saola is caught by local people; and they have guaranteed the availability of emergency funds and technical personnel should this latter happen. The last Saola caught by villagers (in 2010) died and no Saola has lived more than a few weeks in captivity. There are too few Saolas left to allow any more haphazard trial-and-error responses to incidental captures.

**Adding global perspective to project-specific needs: The Cat Ba Langur**

Cat Ba Langur is one of the rarest mammals in the world. When found to be in steep decline in the 1990s, its inevitable extinction was averted by the rapid response of the Allwetterzoo Münster and the Zoological Society for the Conservation of Species and Populations (ZGAP), both German, leading to the launch of the Cat Ba Langur Conservation Project in 2000. This project resulted in the rapid removal of the threat from hunting. Despite this intervention, the langur population has not undergone the sort of rapid expansion that would be expected with removal of the threat and the fact that it now exists in an area of habitat able to support 10 times (perhaps many more) as many animals as currently exist. There is now concern that small population effects (genetic and/or social) are slowing population resurgence. As of mid 2012, there remained two remnant pockets of female-only langurs isolated from the main two populations; if these animals’ genes are to enter future generations, they need to be moved to the protected zone as soon as possible. One isolated group, consisting of two langurs, was successfully moved in November 2012 to the strictly protected core zone within Cat Ba National Park. The remaining such group is of five females. At the request (and resources) of the Cat Ba Langur Conservation Project, Action Asia attended a planning meeting of the project with local government to discuss the measures required to save the species, notably the project’s proposal to translocate these animals. The project felt it important to have outside perspective to underline the importance of the proposal, to show the positive view of the global conservation community of the Cat Ba Langur Conservation Project and its local government partners, and to emphasise the standard-setting role it is playing. Indeed, few other initiatives in South-east Asia have succeeded in stemming the decline of a species so close to extinction. The meeting was perfectly planned: it successfully secured government permission for the next proposed translocation.

**Figure 4. Cat Ba Langur Trachypithecus poliocephalus (Critically Endangered)**

Two isolated females just before translocation in November 2012. The animals’ simple-minded acceptance of major changes around their sleeping caves facilitates their translocation and was exploited by hunters in the past.

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High-level diplomacy: The Javan and Sumatran Rhinoceros

With the loss of the last individual in Vietnam in 2010, Indonesia now holds the only population of Javan Rhinoceros, and the overwhelming majority of Sumatran Rhinoceroses. Globally, these are among most sought-after species by poachers and their survival is precarious.

A direct approach was therefore made to the President of Indonesia to discuss the specific risks to rhinoceros survival in Indonesia. This has resulted in a multi-point action plan for Government of Indonesia’s role. The process was driven by bodies active in rhinoceros conservation in Indonesia, which have the vital on-ground feel for what is needed and how to achieve it, using Action Asia to show the global importance of the issue. The delegation was led by Simon Stuart, Chair of IUCN SSC. Given that under-awareness and under-commitment by government is among the main impediments for averting extinction of the most of the Action Asia-eligible species, this process for rhinos warrants being replicated with other species.

Figure 5. Sumatran Rhinoceros Dicerorhinus sumatrensis (Critically Endangered)

This image shows Ratu and her four-day old offspring Andatu - the first Sumatran Rhino to be born at the Sumatran Rhino Sanctuary, Indonesia. Andatu means “Gift from God” in Bahasa.

© Susie Ellis
Situation Analysis on East and Southeast Asian Intertidal Habitats, with Particular Reference to the Yellow Sea (including the Bohai Sea)

Mike Hoffmann, IUCN SSC Senior Scientific Officer
Introduction

In mid-2011, a number of IUCN Members made known their intention to submit a motion to the 5th IUCN World Conservation Congress (WCC) in Jeju, Republic of Korea, in September 2012, on the urgent need for conservation actions and improved sustainable management approaches for the inter-tidal wetlands around the Yellow Sea region of East Asia. In response, the IUCN Species Survival Commission and IUCN Asia Regional Office commissioned an independent situation analysis to assess the state and condition of intertidal habitats along the East Asian-Australasian Flyway (hereafter EAAF) – one of the eight major flyways of the world – with a particular focus on the Yellow Sea (including the Bohai Sea). The purpose of the study was to inform discussion on the motion with the relevant governments and other key stakeholders in the run up to, during, and following the WCC. The study was generously funded by the Swiss Federal Office of the Environment (FOEN) and EAD.

Findings

The situation analysis, published as SSC Occasional Paper No. 47, makes use of the status and population trends of key species of waterbirds as indicators of the environmental health of intertidal habitats. The EAAF supports more migratory waterbird species, and a higher proportion of which are globally threatened (as listed on the IUCN Red List of Threatened Species™), than any other flyway in the world (Figure 1). Globally threatened species entirely dependent on inter-tidal wetlands in the EAAF include the Critically Endangered Spoon-billed Sandpiper (Eurynorhynchus pygmeus) and two Endangered species: Spotted Greenshank (Tringa guttifer) and Black-faced Spoonbill (Platalea minor).

The situation analysis – which involved extensive consultation with individual experts, IUCN Members, Ramsar country focal points, and participants of the 6th Meeting of Parties of the EAAF Partnership held in Palembang, Indonesia, from 19-22 March 2012 – presents as clear a picture of the status of the intertidal zone in the EAAF as the data allow. Based on a detailed analysis of 395 sites with tidal flats used by waterbirds of the EAAF, the report identified 16 key areas along the flyway that support an overwhelming majority of shorebirds migrating through the EAAF (Figure 2). Six of these key areas are in the Yellow Sea, with two (“Yellow Sea Coast of South Korea” and “Nadong-Gang Estuary”) in the Republic of Korea. The most pressing threat in these key areas is the fast pace of coastal land reclamation (defined as conversion of natural wetland into dry land and artificial wetland by mechanical means); between 2000 and 2010 alone, data suggest that more than 41% of the tidal flat area was reclaimed within the six key areas in the Yellow Sea. Overall, East Asian intertidal habitats (including beaches, marshes, mudflats, mangroves and seagrass beds) are being lost at a rate unprecedented for the coastal zone elsewhere in the world; some countries, including the Republic of Korea, have lost more than half of their coastal wetland area to land reclamation since 1980 (Figure 3).

Evidence suggests that these regradations, especially in the crucial staging area of the Yellow Sea (including the Bohai Sea), are the key drivers of the observed waterbird declines and related environmental problems. Migratory waterbird species along the flyway are showing exceptionally rapid declines (as much as 26% per annum in the Spoon-billed Sandpiper, which if left unchecked would result in the species’ extinction within a decade). These declines are linked mainly to the disappearance and degradation of migratory staging posts, rather than problems on the breeding or wintering grounds.

The declines in waterbird populations are signals of wider deterioration in the quality of intertidal ecosystems. The situation analysis highlights that fisheries and vital ecological services are collapsing and ecological disasters increasing (with resulting impacts on human livelihoods). Healthy tidal flats provide many services of direct economic benefit to the lives and livelihoods of millions of people in local communities and beyond. Such services include fisheries worth billions of US dollars per year and coastal defences, which if lost expose coastal cities, towns and lands to economically devastating damage. Marine mammals, fish, invertebrates and plants associated with tidal ecosystems are also in sharp decline and areas of the Yellow and Bohai Seas are becoming ‘dead’ seas. Meanwhile, there has been a significant
Figure 1. Total number and proportion of globally threatened and Near Threatened waterbirds in the flyways of the world (source: Kirby 2010).

Figure 2. The 16 key areas for intertidal waterbird biodiversity in the East Asian-Australasian Flyway

Key intertidal areas as identified by biodiversity of waterbirds depending on tidal flats. Birds, top trophic predators, were used as a convenient indicator of tidal flat biodiversity given the relative availability of data on bird numbers.

To select key areas the ornithological importance of 395 sites with significant tidal flats for all coastal East and Southeast Asian countries was assessed using three parameters:

a) globally threatened and Near Threatened wader species and other waterbirds using tidal flats at the site;
b) overall wader abundance;
c) wader populations of international importance (1% of their biogeographical population).
increase in ecological disasters including floods, salination of coastal areas, outbreaks of harmful algal blooms, and death of fish and mariculture stocks.

**Policy and the Analysis**

Countries along the EAAF have made commitments to global biodiversity targets under several key multilateral environmental agreements. Ramsar Convention Contracting Parties previously made commitments to intertidal wetland conservation in Resolutions VII.21 and VIII.4 and in Goal 2 of the Strategic Plan 2009–2015. The Republic of Korea, at the 10th Conference of the Parties to the Ramsar Convention in 2008 (paragraph 22, Ramsar Resolution X.22), specifically committed that “…intertidal mudflats should be preserved and that no large-scale reclamation projects are now being approved in the Republic of Korea”. Further, all countries along the EAAF are Parties to the Convention on Biological Diversity (CBD) and have adopted the Strategic Plan for Biodiversity 2011–2020 and the Aichi Targets. Clearly, it will not be possible for countries to meet these international commitments without halting the declining trends in species populations (and deteriorating habitat availability and quality) by addressing the underlying drivers and threats identified in the situation analysis.

Although the situation analysis is intentionally silent on explicit recommendations, the report notes that current planning processes for the coastal zone along the EAAF should carefully and adequately take into account the existing and future values and ecosystem services provided by intertidal wetlands in relation to benefits arising from conversion. This would ensure the well-being of coastal-dwelling people, as well as enable countries along the EAAF to meet their commitments to global biodiversity targets and key multilateral environmental agreements. These sentiments are further expressed and elaborated upon in the motion that was eventually sponsored by 26 IUCN member organizations to the IUCN World Conservation Congress in Jeju. Following much useful discussion with, in particular, representatives of China and the Republic of Korea, an amended and agreed text was adopted with 100% support from the government house and 97.9% from the NGO house.
Next steps

Since the adoption of what has since become WCC Resolution 28, there have been a number of very positive steps forward. First, plans are progressing well to advance national government-led workshops to discuss possible ways forward to implement the Resolution nationally, with a meeting in Beijing first up in May; plans for a meeting in Pyongyang in April (where, among others, it is also hoped to encourage DPRK to join the Ramsar Convention and East Asia Australasia Flyway Partnership) have been postponed due to ongoing political tensions in the region. It is further hoped that a national meeting in the Republic of Korea can be arranged with the new ministerial leadership, and further that the Republic of Korea would take the lead in supporting follow-up of a CBD CoP11 decision on ecosystem restoration.

Meanwhile, Princeton University has initiated a two-year post-doc study focused on providing an economic perspective of where costs are borne and where benefits accrue resulting from land-use change (with study sites in study sites in Thailand, China and potentially South Korea). This provides a possible platform on which IUCN could piggy-back the ecosystem services study called for in Resolution 28 (operative paragraph 1a) to investigate “…the benefits of ecosystem services provided by intertidal wetlands, especially tidal flats and associated habitats, in East Asia with particular reference to the Yellow Sea, in relation to the benefits arising from the reclamation (land claim) or conversion of such habitats”.

Finally, plans are advanced to develop a Cambridge Conservation Initiative Collaborative Fund project, involving the Coastal Research Unit in the Cambridge Geography Department, with the objective of demonstrating the potential for incorporating ecological and ecosystem services values into coastal zone planning through field work at one or two study sites located within the five Chinese Yellow Sea key areas identified by the IUCN Situation Analysis.

Please see IUCN Resolution 28 in the Annex. For copies of the situation analysis (in English, Chinese and Korean) and a link to IUCN Resolution 28, please visit: www.iucn.org/asiancoastalwetlands.
Case study: the Spoon-billed Sandpiper

The fastest declining migratory shorebirds in the East Asian-Australasian Flyway are the long-distance, Arctic-breeding migrants, such as the Spoon-billed Sandpiper *Eurynorhynchus pygmeus* and the Red Knot *Calidris canutus*.

Data from across the entire breeding range of the Spoon-billed Sandpiper (Chukotka and Koryakya in the Russian far north-east), and especially from the well-studied southern core breeding area at Meinypilgyno, evidence a strong decline. At four breeding sites, the decline was estimated at 26% per annum between 2002 and 2009, or an 88% decline over this period, roughly equivalent to a decline from a total population of approximately 1,000 breeding pairs in 2000 to 120–220 in 2009.

The main threats to the population are poorly known but lie along the migration route or in the wintering areas. In the wintering areas, hunting has been identified as a major mortality factor. Elsewhere, major loss of intertidal habitats, and collection of birds on the breeding areas by specimen collectors are key threats.

Concerted international conservation action is needed to, among others, improve understanding of the main wintering and staging areas and associated threats; address threats, such as hunting, that can be tackled immediately; continue long-term monitoring on the breeding areas; take appropriate action at all important stop-over and wintering sites along the flyway; and to establish a formal captive-breeding programme (now underway: see http://www.wwt.org.uk/conservation/saving-wildlife/science-and-action/globally-threatened-species/spoon-billed-sandpiper/).

![Spoon-billed Sandpiper](image)
Situation Analysis on Terrestrial and Freshwater Fauna in West and Central Africa

Mike Hoffmann, IUCN SSC Senior Scientific Officer
Introduction

Considerable evidence is available to suggest that the degradation of biodiversity has been taking place at an unprecedented rate in West Africa for some time, but there is now emerging information to suggest that a similar situation has quickly developed and may pertain through much of Central Africa, with significant impacts on human livelihoods. IUCN is growing increasingly concerned that the scale of the problem across West and Central Africa is not fully appreciated, with the result that the responses of both regional and international stakeholders have been wholly inadequate so far.

To date, the focus of the international community has tended to be compartmentalised, dealing with a number of specific issues in considerable detail. As a result, the problem may have been viewed locally as a parochial concern about declining ‘wildlife’ rather than one concerned with processes that are degrading the natural ecosystems that are fundamental to support human well-being in a number of biodiversity-rich developing countries.

Background

One recent study compared declines in large mammal populations in African protected areas across the continent, and found that while overall abundance declined on average 59% between the period 1970 and 2002, these declines were more severe in West Africa – a staggering 85% – than in any other region (Figure 1). At finer scale, the results of a long-term monitoring study of large rainforest mammals in the Tai National Park, Côte d’Ivoire, recorded declines of 90% over a period of two decades, largely due to illegal subsistence hunting. These examples illustrate the precipitous declines, but they do not necessarily go on to place this decline in the context of the local economy and livelihoods. On the other hand, numerous studies have presented evidence that current rates of extraction of wild meat sources for income or subsistence are entirely unsustainable. At least one compelling study using 30 years of data from Ghana has linked serious declines in wild mammal populations to corresponding trends in the over-exploitation of marine fish populations.

![Figure 1. Regional African Protected Area Population sub-indices for West Africa (based on 11 protected areas) showing decline in abundance of large mammal populations from an index value of 1 in 1970 to an index value of around 0.15 by 2002.
Source: Craigie et al. 2010 Biological Conservation 143: 2221-2228.](image)

The declining trends referred to above are by no means confined to large terrestrial mammals, but are playing out with other groups, potentially with considerable unforeseen financial and other consequences. Outside protected areas, for example, populations of large vultures have declined 98%, mainly due to a shortage of carcasses, poisoning for predator control or persecution for trade of meat and body parts. In South Asia, where similar declines have been recorded due mainly to the widespread use of non-steroidal anti-inflammatory drugs, the decline in vulture populations resulted in an increase in the population of domestic dogs, the main vector of rabies in humans in the region. The total impact on human health from vulture declines over the period 1992 to 2006 is estimated at between US$21.5 billion and 23.5 billion. Further, the consequences of increased and unsustainable wildlife utilization may extend to the emergence of novel viral diseases: West Africa and east-central Africa have both been identified as likely emerging disease hotspots due to zoonotic pathogens from wildlife and vector-borne pathogens.
The Analysis

Aware of, and alarmed by, these trends, in early 2013 IUCN (together with the United Nations Environment Programme, UNEP) initiated plans to undertake an independent evaluation of the current situation in West and Central Africa, focussing in particular on declines of large terrestrial and freshwater vertebrates. This “situation analysis” will provide an evidence base for responses to Resolution 22 on “Supporting regional initiatives to conserve mammal diversity in West and Central Africa” which was adopted by IUCN members at the 5th World Conservation Congress held in Jeju, Republic of Korea in September 2012 (see Annex). This Resolution “CALLS UPON all stakeholders to encourage and launch new initiatives in West and Central Africa for halting and reversing the declining trends of mammals, and biodiversity in general, in the region” and “…the Director General, SSC and the IUCN Commission on Ecosystem Management (CEM), to provide policy support to these new initiatives…”.

The idea behind such a report, modelled largely on IUCN’s experiences producing the recent IUCN situation analysis on East and Southeast Asian intertidal habitats, with particular reference to the Yellow Sea (including the Bohai Sea) has already received much support, and dove-tails with plans by the Critical Ecosystem Partnership Fund to reopen a new five-year investment strategy in the Guinean Forests of West Africa biodiversity hotspot. IUCN will contract an independent consultant/s to lead the study, to be overseen by the IUCN Species Survival Commission, UNEP and the Secretariat of the SaveOurSpecies fund (in collaboration with the IUCN Regional Office for West and Central Africa). A call for parties to tender their interest in leading the study will be disseminated widely by end March, and a final report (in French and English) is due to be completed by end 2013.

Figure 2. Percentage of illegally killed elephants per African sub-region based on data collected at MIKE sites in 2011.

Cross River gorilla *Gorilla gorilla diehli*, a subspecies of the Lowland gorilla (Critically Endangered) © Nicky Lankester
Conclusions

Dr Simon Stuart, Chair IUCN SSC

The SSC is very pleased with the progress made so far with the generous support that we have received from EAD. Any attempt to highlight issues inevitably runs the risk of ignoring some important ones. Nevertheless, the following jump out at me as significant achievements:

- The Sustainable Use and Livelihoods Specialist Group has moved from an idea just starting up 12 months ago, to a living, dynamic network with clear priorities and a strong work plan.
- A total of 265 people have been trained through 17 separate Red List training events, with 25 people now being certified Red List trainers.
- The first two modules of the online Red List training course are now complete, with the remainder ready for release later in 2013.
- The reptile assessment for the Arabian Peninsula is now completed, and most of the Arabian freshwater biodiversity assessment is also completed.
- Significant progress has been made on the Horn of Africa reptile assessment, the bumblebee assessment, and the update of the amphibian assessment.
- Major advances have been made in increasing the coverage of plants in the IUCN Red List, with cacti and conifers all but completed, and important progress being made on magnolias, slipper orchids and carnivorous plants.
- An important conceptual breakthrough has been made in the development of the new IUCN standard on Key Biodiversity Areas (KBAs). Although the agreement on the purpose of the KBA criteria ("to identify areas contributing significantly to the global persistence of biodiversity") might seem like a simple statement, it is a massive conceptual achievement which should now make it possible to complete the development of the standard.
- Important progress has been made on a number of fronts by the Invasive Species Specialist Group, including on the closer integration between the Red List and the Global Invasive Species Database.
- The work on species conservation planning is also most encouraging, with plans completed or in preparation for some fascinating species, including the golden mantella frog of Madagascar, all seven species of sawfish, western derby eland, and a national-level multi-species plan for Djibouti.
- The situation analysis for the East and Southeast Asian intertidal habitats had a major impact on negotiations on this controversial topic at the IUCN Congress in September 2012, and this is now being followed up with in-country consultations in China and the Republic of Korea, which we hope will lead to some serious measures to stem the rate of habitat loss in this critically important ecosystem (and which is causing massive declines in migratory waterbirds).

Once again, and on behalf of the entire IUCN Species Survival Commission, I would like to record our profound thanks to the Environment Agency - Abu Dhabi for making all of this possible.
Magnolia soulangeana 'Rustic Rubra'
Acanthodactylus schmidti (Least Concern)
© Phil Bowles
Annexes
Implementing the provisions on invasive alien species of the Strategic Plan for Biodiversity 2011–2020

RECALLING that Aichi Target 9 of the Strategic Plan for Biodiversity 2011–2020 states: “By 2020, invasive alien species and pathways are identified and prioritized, priority species are controlled or eradicated, and measures are in place to manage pathways to prevent their introduction and establishment”;

FURTHER RECALLING that the Convention on Biological Diversity (CBD) Programme of Work on Islands highlights the vulnerability of islands’ biodiversity to invasive alien species, coupled with the weak capacity to respond to this threat;

NOTING that, in regard to the role of biological invasions as a key driver of biodiversity loss, invasive alien species management in protected areas is highlighted as an issue that needs greater attention by Decision X/31 of the Conference of the Parties to the CBD;

ALARMED that biological invasions are constantly increasing among all taxonomic groups, and in all environments, from marine to freshwater and terrestrial, causing growing impacts on world biodiversity, affecting a high proportion of threatened species;

DEEPLY CONCERNED that many invasive alien species are pathogens, pests or weeds, costing the global economy many hundreds of billions of dollars each year;

EMPHASIZING that vast segments of the world’s population, especially in developing nations, suffer from vector-borne diseases, such as malaria, dengue, West Nile virus and others, many of which are spread by invasive vectors such as mosquitoes;

FURTHER EMPHASIZING that invasive alien species also affect world food security, as they can severely impact activities such as fisheries, and inflict huge pre- and post-harvest yield losses;

RECALLING that much of the growth in the number of invasive alien species is caused by human activities such as trade, tourism and travel, and that it is therefore crucial to involve all the relevant societal sectors in the prevention and control of invasive alien species;

NOTING that climate change is likely to further increase the magnitude of the problem and reduce the management options available to combat invasive alien species;

FURTHER NOTING that the Joint Work Programme to strengthen information services on invasive alien species, presented at the 15th meeting of the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) of the CBD and welcomed by the participants to the meeting, will indeed provide crucial information to improve the efficacy of prevention measures of invasions and the efforts aimed at mitigating the impacts caused by invasive alien species;

AWARE that through the IUCN Commissions, the Secretariat and many of its Members, IUCN has particular strengths and expertise in species conservation, in the involvement of societal sectors in conservation issues, and engagement with decision makers; and

ALSO RECALLING that Recommendation 2.67 Invasive alien species adopted by the 2nd IUCN World Conservation Congress (Amman, 2000) requested the Director General to take an active role to ensure that international trade and financial agreements, codes of practice, treaties and conventions took into account the threats posed by invasive alien species;

The World Conservation Congress, at its session in Jeju, Republic of Korea, 6–15 September 2012:

1. CALLS ON all countries to:

a. identify invasive alien species present in their territories for priority control intervention, and to identify potential and actual pathways of invasive alien species introduction for priority prevention measures;

b. enforce stringent regulatory measures to prevent the import and intentional or accidental release of invasive or po-
potentially invasive alien species, ensuring full consistency with the provisions of the World Trade Organization (WTO) Agreement on the Application of Sanitary and Phytosanitary Measures, and without hampering important conservation activities, such as ex situ breeding programmes conducted by zoos, botanic gardens and other institutions;

c. encourage voluntary measures to prevent the spread of invasive or potentially invasive alien species, such as the voluntary code of conduct for zoos under development by the Invasive Species Specialist Group (ISSG), the European Association of Zoos and Aquaria (EAZA), and the Bern Convention;

d. ensure that policies and measures in other fields – such as ecosystem restoration and climate change – take account of the risk of causing further invasions (e.g. biofuel species promotion, assisted colonization, use of potentially invasive alien species in habitat restoration programs, etc), balancing the short-term benefits with the long-term costs of invasions;

e. work at removing legal, financial and human resources constraints to rapid responses to address new incursions of invasive alien species, especially in developing countries;

f. promote eradication campaigns of priority invasive alien species, taking into account their potential or actual impact on biodiversity as well as on food security and human well-being, and giving priority to key areas such as islands, protected areas, and key points of entry, such as ports and airports; and

g. incorporate invasive alien species and biosecurity policy imperatives in water and land-use planning at all scales from local to global, including islands protected areas, river and lake basins, production landscapes and seascapes;

2. REQUESTS the Director General and IUCN Commissions to:

a. strengthen cooperation with the Liaison Group on Invasive Alien Species established by the CBD with the aim of improving international, national and regional trade regulatory processes for minimizing the spread of invasive alien species, and composed of IUCN and international standard setting organizations such as WTO, the International Plant Protection Convention (IPPC), the World Organization for Animal Health (OIE) and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES);

b. identify potential gaps in IUCN’s policy and programmatic coverage of invasive alien species, and propose specific actions to fill the gaps in consultation with Council;

c. improve interoperability between IUCN knowledge products with particular reference to the Global Invasive Species Database, the IUCN Red List of Threatened Species, the IUCN Red List of Ecosystems and the World Database on Protected Areas for supporting the identification of priority invasive alien species, and enhancing early warning systems and rapid responses to new invasions;

d. support collaboration between the IUCN Species Survival Commission (SSC) and IUCN World Commission on Protected Areas (WCPA) to promote the compilation and dissemination of best practice guidelines on invasive alien species management in protected areas, promote appropriate training to address this threat and enhance more effective management in protected areas; and

e. strengthen support through the IUCN Secretariat and regional programmes to promote action and capacity building to address invasive alien species issues, especially through the protected areas, water, forests and drylands programmes;

3. CALLS ON the global scientific community worldwide to initiate and promote research on effective and novel methods to control invasive alien species, such as rapid taxonomic identification, improved border surveillance biological control, chemical control, mechanical methods, as well as on restoration indicators, risk assessment and bio-economics, and social and cultural engagement; and

4. CALLS ON funding agencies, including in the public and private sectors and civil society to:

a. provide greatly increased support to capacity building and public awareness of key issues, involvement of local communities, and the establishment of appropriate frameworks to enable early detection and management of new incursions, especially on islands and in developing countries;

b. support the Joint Work Programme to strengthen information services on invasive alien species, presented at SB-STTA 15 and aimed at contributing to achieving Aichi Biodiversity Target 9; and

c. support prevention, eradication and control campaigns, especially on islands and in key biodiversity areas, protected areas and ecosystems threatened by invasive alien species.
WCC-2012-Res-022-EN
Supporting regional initiatives to conserve mammal diversity in West and Central Africa

RECOGNIZING the mission of IUCN in promoting the conservation of biological diversity since its inception;

ALARMED at the increasing loss of forest and savannah habitats in West and Central Africa;

AWARE that large mammal populations in protected areas in West and Central Africa have declined by 85% between the period 1970 and 2005, a decline which appears overall greater than in Eastern and Southern Africa;

DISMAYED that the Western Black Rhinoceros (Diceros bicornis longipes) has recently been categorized as Extinct on the IUCN Red List of Threatened Species and that Miss Waldron’s Red Colobus (Colobus Procolobus badius waldroni) has not been observed for over 25 years despite surveys;

ALARMED that large carnivores like the African Wild Dog (Lycaon pictus), the Cheetah (Acinonyx jubatus) and the Lion (Panthera leo) are now extirpated from many former range states in West and Central Africa, with evidence for only a few reproducing populations in the region;

AWARE ALSO that many other species, including Jentink’s Duiker (Cephalophus jentinki) and Niger River Red Colobus (Procolobus pennantii epieni), are now severely threatened due to illegal killing and continuing loss of habitat;

CONCERNED that the illegal killing of African Elephants (Loxodonta africana) has become a widespread threat across the African continent more than ever, with the highest level in West and Central Africa as evidenced by the recent massacre of hundreds of elephants in Bouba Ndjida National Park in Cameroon and the confirmed population crash in Northern Central African Republic;

FURTHER AWARE that the decline of the mammalian prey base is having a detrimental impact on other species and being implicated as one of the drivers of the severe declines observed in large vultures in West and Central Africa, with some species having declined by 98% in the region;

NOTING studies that have revealed that populations of a number of large mammal species occurring in the region, including Lion, Roan Antelope (Hippotragus equinus) and Giraffe (Giraffa camelopardalis), are genetically distinct from those occurring elsewhere in Africa, making this region very important for conserving the maximum diversity present within a species;

RECALLING that most countries in the region have adopted the Strategic Plan for Biodiversity 2011–2020 and the Aichi Targets, including Target 12, which requires that “By 2020 the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained”; and


The World Conservation Congress, at its session in Jeju, Republic of Korea, 6–15 September 2012:

1. APPLAUDS the establishment of regional conservation initiatives in West and Central Africa, as mentioned above;

2. CALLS UPON all IUCN Members worldwide to support these initiatives;

3. CALLS UPON range States in the region to develop national action plans for Lion, Cheetah and African Wild Dog and their prey as part of a strategy for long-term conservation and to invest in implementation of these national action plans;
4. CALLS UPON all stakeholders to encourage and launch new initiatives in West and Central Africa for halting and reversing the declining trends of mammals, and biodiversity in general, in the region; and

5. REQUESTS the Director General, SSC and the IUCN Commission on Ecosystem Management (CEM), to provide policy support to these new initiatives and to bring them to the attention of range States and international donors, like the United Nations Environment Programme (UNEP), the African Development Bank, the World Bank and the Global Environment Facility (GEF).
WCC-2012-Res-028-EN

Conservation of the East Asian-Australasian Flyway and its threatened waterbirds, with particular reference to the Yellow Sea

NOTING that the East Asian-Australasian Flyway (hereafter EAAF) supports more migratory waterbird species and a higher proportion that are globally threatened than any other flyway in the world especially the Yellow Sea region which is of critical importance;

ALARMED that 24 waterbird species dependent on intertidal wetlands are listed as globally threatened or Near Threatened on the IUCN Red List of Threatened Species, including the Critically Endangered Spoon-billed Sandpiper (Eurynorhynchus pygmeus); the Endangered Red-crowned Crane (Grus japonensis) and the Black-faced Spoonbill (Platalea minor); and the Vulnerable Swan Goose (Anser cygnoides), the White-naped Crane (Grus vipio), the Hooded Crane (Grus monacha) and Saunders’s Gull (Larus saundersi);

CONCERNED that the situation is deteriorating rapidly with an additional nine species under review for classification as threatened or Near Threatened, apparently linked to the unprecedentedly rapid rate of conversion of intertidal wetlands to other forms of land use in the EAAF (faster than the rate of tropical forest loss), thus generating an urgent need for specific research and cooperation for the restoration and management of the habitats;

NOTING that the rate of loss of intertidal wetlands is particularly severe around the Yellow Sea (as much as 50% in the last 30 years) and is continuing in key areas across the flyway;

FURTHER NOTING that less than 5% of intertidal areas of most EAAF countries are Ramsar sites or protected areas;

ACKNOWLEDGING the ongoing efforts of INGOs such as BirdLife International, the International Crane Foundation, the World Wide Fund for Nature, and Wetlands International to conserve these endangered birds and their habitats in the region;

RECALLING previous commitments to intertidal wetland conservation made by Ramsar Convention Contracting Parties in Resolutions VII.21 and VIII.4 and in Goal 2 of the Strategic Plan 2009–2015;

NOTING the commitment of the Republic of Korea to the 10th Conference of the Parties to the Ramsar Convention in 2008 (paragraph 22, Ramsar Resolution X.22) that “intertidal mudflats should be preserved and that no large-scale reclamation projects are now being approved in the Republic of Korea”;

RECOGNIZING the activities of the EAAF Partnership, an endorsed regional initiative within the framework of the Ramsar Convention, which provides an international framework for the conservation of migratory waterbirds and their habitats;

AWARE that the decline in biodiversity along the EAAF is a clear indication of the decreasing availability of productive intertidal ecosystems and a warning of potential future ecological disasters, including irreversible impacts on fisheries, that could adversely affect human health and livelihoods, and undermine investments;

RECALLING that all countries along the EAAF are Parties to the Convention on Biological Diversity (CBD) and have adopted the Strategic Plan for Biodiversity 2011–2020 and the Aichi Targets, of which Targets 5, 12 and 14 are particularly relevant;

DEEPLY CONCERNED that if urgent action is not taken to address the loss of intertidal wetlands, the ability to meet the Aichi Targets will be seriously impaired; and

NOTING the independent report “IUCN situation analysis on East and Southeast Asian intertidal habitats, with particular reference to the Yellow Sea (including the Bohai Sea)” produced in August 2012 by the IUCN Species Survival Commission (SSC) with the Asia Regional Office, as context for this motion;

The World Conservation Congress, at its session in Jeju, Republic of Korea, 6–15 September 2012:

1. REQUESTS the Director General, IUCN Commissions and Members to undertake an in-depth study that:
   a. investigates the benefits of ecosystem services provided by intertidal wetlands, especially tidal flats and associated
habitats, in East Asia with particular reference to the Yellow Sea, in relation to the benefits arising from the reclamation (land claim) or conversion of such habitats;

b. includes case studies focused on endangered birds and their habitats and develops habitat mapping as a tool and knowledge basis for selection, conservation and restoration of key sites for endangered birds;

c. provides a list of the key migratory waterbird sites and the experts’ network to share experiences in the conservation and restoration of rice paddies, estuaries and intertidal wetlands as important habitats of endangered birds in the region; and

d. evaluates the status of the endangered birds and their habitats and suggests the prioritized sites requiring urgent conservation and restoration;

2. ENCOURAGES governments along the EAAF to recognize the international importance of their intertidal wetlands for biodiversity and ecosystem services, halting further approval of intertidal mudflat reclamation (land claim) at priority sites for biodiversity, irrespective of protection status, until a full assessment of the economics of ecological services and identification of biodiversity needs can be completed;

3. FURTHER ENCOURAGES governments along the EAAF, in view of the importance of cooperation between countries, to achieve effective management, to develop international and national action plans by 2014 to secure the future of this fundamentally important resource, focusing on:

a. agreeing on the key sites for endangered birds that require urgent conservation and restoration, leading to the conservation, before 2020, of at least 10% of the intertidal zone as sustainably managed protected areas;

b. strengthening the Ramsar Convention (including encouraging ratification by the Democratic People’s Republic of Korea) to highlight the importance of key sites and improve funding and capacity to manage them;

c. strengthening protected area legislation and management, including increasing flexibility regarding the integration and control of human activities, to ensure achievement of conservation objectives;

d. ensuring that enhanced coastal zone planning results in stability of the biodiversity of the intertidal zone by embracing the principles of sustainable development and specifically by fully considering the ecological services and dependent biodiversity of tidal flats and associated habitats in integrated planning that incorporates appropriate Strategic Environmental Assessment and Environmental Impact Assessment processes, including appropriate site selection that considers alternatives, design to reduce impacts, compensation for unavoidable residual damage, and monitoring to assess mitigation effectiveness and trigger adaptive management;

e. restoring impounded internationally important intertidal wetlands through increasing tidal exchange to such sites;

f. strengthening levels of awareness, transparency and public participation as regards the importance, values and benefits of tidal flats and associated habitats;

g. improving understanding of bird conservation needs via increased population monitoring and research on migratory bird patterns and ecological requirements; and

h. using the EAAF Partnership, a Ramsar Regional Initiative, as a mechanism for implementing a clear strategy to guide investments, programmes and activities for strengthening habitat and species protection along the EAAF; and

4. FURTHER REQUESTS the Director General and IUCN Commissions (to the extent possible within available resources) to:

a. provide assistance to governments along the EAAF, and particularly those around the Yellow Sea, to find sustainable means of managing intertidal wetlands that meet the needs of economic development and biodiversity conservation, and to provide support to the proposed or existing national and international action plans as required;

b. provide assistance to IUCN Members to provide technical advice, contribute to awareness raising, capacity building and management action; and

c. report to the next IUCN World Conservation Congress on progress achieved.
WCC-2012-Res-036-EN
Biodiversity, protected areas and Key Biodiversity Areas

DISMAYED that the destruction and conversion of natural habitats continues to be the primary driver of biodiversity loss;

UNDERSTANDING therefore that the primary conservation response must be to safeguard places of biodiversity conservation significance within protected areas;

CELEBRATING that protected areas of all classes and governance types have long been successful as the cornerstone of biodiversity conservation action;

RECOGNIZING IUCN’s leadership role in guiding such responses through the establishment of conservation standards and maintenance of data systems that allow publication by the global conservation community of data meeting these standards, and specifically the roles of:

a. the IUCN Species Survival Commission (SSC) in facilitating measurement of species extinction risk through the 2001 IUCN Red List Categories and Criteria and publication of the data through the IUCN Red List of Threatened Species; and

b. the IUCN World Commission on Protected Areas (WCPA) in facilitating documentation of protected area management objectives through the Guidelines for applying protected area management categories and publication of data, in partnership with the United Nations Environment Programme World Conservation Monitoring Centre (UNEP-WCMC), through the World Database on Protected Areas, and further to Decision IX/18 of the Conference of the Parties (COP) of the Convention on Biological Diversity (CBD);

WELCOMING the efforts of the WCPA/SSC Joint Task Force on Biodiversity and Protected Areas, in collaboration with IUCN Members including WWF and the Zoological Society of London, partner organizations such as UNEP-WCMC, the University of Copenhagen, and the University of Queensland, and many others, to better understand how biodiversity is changing inside protected areas, determine the linkages between these biodiversity trends and protected area management, compare this with changes outside protected areas, and thereby inform adaptive management and policy decisions for conservation success;

FURTHER WELCOMING the efforts of the same WCPA/SSC Joint Task Force in consolidating standards for the identification of Key biodiversity areas as sites of global biodiversity conservation significance in fulfilment of Resolution 3.013 The uses of the IUCN Red List of Threatened Species adopted by the 3rd IUCN World Conservation Congress (Bangkok, 2004), providing an umbrella for existing efforts from numerous IUCN Member institutions, and supporting, inter alia, Aichi Target 11 of the Strategic Plan for Biodiversity 2011–2020, Programme Element 1 of the CBD’s Programme of Work on Protected Areas and Target 5 of its Global Strategy for Plant Conservation, as well as the Global Ocean Biodiversity Initiative, the Ramsar Convention on Wetlands, the UNESCO Convention Concerning the Protection of the World Cultural and Natural Heritage, the HCV Resource Network, the Alliance for Zero Extinction, and regional intergovernmental organizations such as the ASEAN Centre for Biodiversity; and

CONCERNED, however, that the conservation community has as yet no system into which to publish either data on population trends of species inside and outside protected areas, the effectiveness of reserve management at delivering positive biodiversity outcomes, or the global significance and protected area coverage of important areas for biodiversity;

The World Conservation Congress, at its session in Jeju, Republic of Korea, 6–15 September 2012:

1. REQUESTS the IUCN Species Survival Commission (SSC), the IUCN World Commission on Protected Areas (WCPA), and the Director General to:

a. support the development of a data system for collection and publication of data linking biodiversity and protected areas, specifically:

i. standards for data quality and quantity;
ii. trends in the distribution and abundance of species inside and outside protected areas, and the linkage between species trends and protected area management inputs; and

iii. documentation of the global significance and protected area coverage of key biodiversity areas;

b. implement such data system development in ways which build from, strengthen, and collaborate with, not duplicate, complementary initiatives such as the:

i. Living Planet Index

ii. Tropical Ecosystem Assessment and Monitoring programme;

iii. World Biodiversity Database;

iv. Integrated Biodiversity Assessment Tool; and

v. Global Biodiversity Information Facility;

c. undertake such data system development in ways which draw from and link to the IUCN Red List of Threatened Species (and related systems such as the Global Invasive Species Database), the World Database on Protected Areas, including the associated management effectiveness data and emerging Green List of Protected Areas, and, at such a time as it becomes operational, the IUCN Red List of Ecosystems;

2. ENCOURAGES national IUCN Member institutions and other national conservation institutions in the public sector, civil society and academia to:

a. utilize the standards established through the scientific stakeholder consultation process established by the WCPA/SSC Joint Task Force on Biodiversity and Protected Areas in guiding their efforts in monitoring species populations inside and outside protected areas, assessing the linkages between protected area management and biodiversity outcomes, and documenting the global significance and protected area coverage of key biodiversity areas within their jurisdictions;

b. collect, manage and publish biodiversity and protected area data not only in nationally-specific systems but also in data systems to be developed for this purpose at the global scale by IUCN and others, with those institutions responsible for data collection retaining the ownership of, and rights to, these data in accordance with the Principles of the Conservation Commons; and

c. ensure that these data are readily available and accessible in support of decision making at all jurisdictional levels;

3. REQUESTS the Director General to mobilize the IUCN Regional Offices and global programme in support of these national efforts to collect, compile and publish data following global standards on biodiversity and protected areas; and

4. INVITES the scientific bodies of the Multilateral Environmental Agreements to recognize the value of these standards for monitoring species populations inside and outside protected areas, and for documenting the global significance and conservation coverage of key biodiversity areas, in support of their respective processes, and to utilize the data maintained and published through the IUCN data systems accordingly, further to Decision X/20 of the CBD’s Conference of the Parties.