



Presentation: IUCN Species Survival Commission (SSC)

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Presentation of the commission

IUCN Species Survival Commission

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About us

The IUCN Species Survival Commission (SSC) is a science-based network of more than 8,000 volunteer experts from almost every country of the world. SSC members include experts on plants, fungi, birds, mammals, fish, amphibians, reptiles, and invertebrates. The major role of the SSC is to provide information, advice and policy guidance to IUCN on biodiversity conservation and sustainable use, the inherent value of species, their role in ecosystem health and functioning, the provision of ecosystem services, and their support to human livelihoods. SSC members also provide scientific information and advice to conservation organisations, government agencies and other IUCN members, and to the private sector, as well as supporting the implementation of multilateral environmental agreements (MEAs). A major function of the SSC is to catalyze conservation action among these external actors.



SSC members collectively form a highly-regarded and influential network of species experts that is able to influence conservation outcomes at all levels worldwide, through engaging with each other and collaborating in IUCN's and SSC's name.

BACKGROUND AND MISSION

The SSC has its origins in the 'Survival Service' set up by IUCN in 1949 under the leadership of Harold J. Coolidge to answer the call made at an UNESCO conference for "Emergency Action for Preserving Vanishing Species of Flora and Fauna." The mission of this new service was "for the assembling, evaluation, and dissemination of information on and the study of, all species of fauna and flora that appear to be threatened with extinction, in order to assist governments and appropriate agencies in assuring their survival".

The Survival Service was formalized as the Survival Service Commission in 1956, and the name was changed to the Species Survival Commission in 1980. Today it has the following Mission, Vision, Goal and Objectives:

MISSION

Over the next four years, the SSC will continue to play a leading role in enabling IUCN to be the world's most authoritative voice on behalf of global biodiversity conservation and the sustainability of natural resource use. In particular, the SSC and its worldwide network are uniquely placed to enable IUCN to influence, encourage and assist societies throughout the world to conserve the integrity of biodiversity, and to ensure that the use of species is both equitable and sustainable, through the provision of knowledge on biodiversity status and trends, undertaking analyses of threats and facilitating action on the ground.

VISION

A just world that values and conserves nature through positive action to reduce the loss of diversity of life on earth.

GOAL

The species extinction crisis and massive loss of biodiversity are universally adopted as a shared responsibility and addressed by all sectors of society taking positive conservation action and avoiding negative impacts worldwide.

OBJECTIVES

For the intersessional period 2013–2016 the SSC, working in collaboration with members, national and regional committees, other Commissions and the Secretariat, will pursue the following key objectives in helping to deliver IUCN's "One Programme"¹ commitment:

Assessing and monitoring biodiversity

To assess and monitor biodiversity and inform the world about the status and trends of biodiversity, especially at the species level, thus providing measures for the health of our one and only biosphere;

Analysing the threats to biodiversity

To analyse and communicate the threats to biodiversity and disseminate information on appropriate global conservation actions;

Facilitating and undertaking conservation action

To facilitate and undertake action to deliver biodiversity-based solutions for halting biodiversity decline and catalyse measures to manage biodiversity sustainably and prevent species' extinctions both in terms of policy change and action on the ground;

Convening expertise for biodiversity conservation

To provide a forum for gathering and integrating the knowledge and experience of the world's leading experts on species science and management, and promoting the active involvement of subsequent generations of species conservationists.

This mission is achieved in part through The IUCN Red List of Threatened Species^{TM2} which is the world's most accurate, up-to-date information source on species, their distribution and their conservation status. The IUCN Red List is managed through a joint effort between SSC members who provide the data via an assessment process and IUCN's Global Species Programme staff and The IUCN Red List Partner organizations who provide the tools, infrastructure and coordination required to publish the data consistently. All of these together agree The IUCN Red List standards and processes.

The IUCN Red List is not just a register of names and associated threat categories. It is a rich compendium of information on the threats to the species, their ecological requirements, where they live, their uses, and on conservation actions needed. Thus, the SSC plays a leading role in enabling IUCN to be the world's most authoritative voice on behalf of global biodiversity conservation and the sustainability of natural resource use.

ACHIEVEMENTS TO DATE

THE IUCN RED LIST

Back in 1949, a resolution of the UNESCO conference listed 13 birds and 14 mammals as "threatened animals of international importance". By the end of 2011, The IUCN Red List included data for 61,914 species (of which 20,435 are Threatened, Extinct in the Wild, or Extinct); data collected, assessed and verified through the SSC network.

The building of The IUCN Red List in recent years has often been around large projects completing the assessment of every species in a taxonomic group, such as the Global Amphibian Assessment³ (completed in 2004) and the Global Mammal Assessment⁴ (completed in 2008).

Thanks to the knowledge and dedication of the SSC's volunteer members, coverage is now complete for a number of other major taxonomic groups including, birds (due to the long-term partnership with BirdLife International), horseshoe crabs, conifers, cycads, freshwater crabs and crayfish, lobsters, mangroves, reef-building corals, seagrasses, groupers, wrasses, sturgeons, and sharks and rays.

The process of collecting species data was standardized in 1994 when the new IUCN Red List Categories and Criteria were introduced. Information management tools have been developed to support the assessment process enabling assessors and experts to collect, manage, process, and report on species data in a consistent manner.

SPECIES CONSERVATION STRATEGIES (FORMERLY ACTION PLANS)

The SSC Conservation Action Plan series has been one of the world's most respected sources of information on species and their conservation needs. Developed by the SSC's Specialist Groups, more than 60 Action Plans were created between 1986 and 2008, documents which identified threats to groups of species and the actions required at all levels to reduce or eliminate those threats. In 2008, new *Strategic Planning for Species Conservation* guidelines were produced, outlining a multi-stakeholder approach to conservation planning for species. Two new conservation plans have already appeared, on

1 The IUCN One Programme Charter, established at the 76th Council meeting in 2011, calls upon the Secretariat, Commissions, and National and Regional Committees to work together to develop and implement the IUCN Programme collaboratively. The full description of the Charter may be downloaded from: http://cmsdata.iucn.org/downloads/iucn_one_programme_charter.pdf

2 www.iucnredlist.org/

3 www.iucnredlist.org/initiatives/amphibians

4 www.iucnredlist.org/initiatives/mammals

the Critically Endangered Golden Mantella, a frog known from a single site in Madagascar, and on the Ethiopian Wolf. In both cases these plans were developed with the local communities and, critically, endorsed by the government. We now expect to see a number of new SSC-endorsed conservation plans appearing in coming years

POLICIES AND GUIDELINES⁵

Various policies and guidelines are produced by the SSC. Used widely by governments and the conservation community, these guidelines cover issues such as sustainable use of species, captive breeding, re-introducing species into their former ranges, handling confiscated specimens, and halting the spread of invasive species.

SUPPORTING THE IMPLEMENTATION OF MEAS

The advice and knowledge of the SSC network members is being called upon increasingly in support of international conventions. The IUCN Red List provides quality data on biodiversity against which conservation targets set by the **Convention on Biological Diversity (CBD)** can be measured. For many years, the SSC has worked as the objective, trusted scientific advisor to the **Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)**, collaborating closely with TRAFFIC (the wildlife trade monitoring network of IUCN and WWF). The SSC also participates in the **Convention on the Conservation of Migratory Species of Wild Animals (CMS)** as well as contributing to the work of the **Ramsar Convention on Wetlands**. This has covered the value of wetlands to livelihoods and discussions on the selection of sites of importance for freshwater biodiversity. The SSC also participates in the annual meetings of the **International Whaling Commission (IWC) Scientific Committee**, and in numerous other policy fora.

CURRENT INITIATIVES

INTERDISCIPLINARY ACTION

A very important aspect of the SSC's work is implemented through five specialist groups, all of which conduct a very large amount of work linking the other components of the SSC. For example, the **Invasive Species Specialist Group** runs the online Global Invasive Species Database (GISD), and also the *Aliens* list serve, through which people from around the globe bring their problems and questions to the world's leading experts on controlling invasive species. An exciting new development currently under implementation is the linking of the GISD with The IUCN Red List. The **Re-introduction Specialist Group** runs a publication series, *Global Re-introduction Perspectives*, which brings together re-introduction case-studies from all over the world, covering invertebrates, fish, amphibians, reptiles, birds, mammals and plants. The

Conservation Breeding Specialist Group is the SSC's link with the zoo community, and plays a major role in advising on how to manage small populations of species, both in the wild and captivity, especially through the use of Population and Habitat Viability Assessments. The **Wildlife Health Specialist Group** has led the development of the Disease Risk Assessment guidelines, and actively promotes their use around the world. The **Sustainable Use and Livelihoods Specialist Group** has recently been re-launched, and is shared with the IUCN Commission on Environmental, Economic and Social Policy (CEESP). It is the SSC's main advisor, both on managing use to make it sustainable, but also on making use into a positive conservation tool.

THE USE OF THE IUCN RED LIST

The IUCN Red List Index has been adopted by the United Nations as one of the indicators for the 2015 Millennium Development Goal 7 on Environmental Sustainability, and as a result all countries of the world are being asked to develop their own national red lists in order to measure trends in the status of their species. The IUCN Global Species Programme and the SSC are involved in a proactive training initiative to help countries develop and enhance their national red listing programmes, and to develop improved means of incorporating data from national red lists into the global IUCN Red List.⁶ The IUCN Red List is also used by the Global Environment Facility (GEF) as on the data sources for the System on Transparent Allocation of Resources (STAR) which determines the GEF financial allocation for each eligible country.

INCREASING THE TAXONOMIC COVERAGE OF THE SSC

While marine, freshwater, plant and invertebrate species are under-represented on The IUCN Red List, fungi must be the most neglected of all the taxonomic groups in the conservation world. However, the SSC now has five fungi specialist groups to address this. There has been an increase in the number of well-documented plant Red List assessments coming through and good headway is being made on, for example, the Global Cactus Assessment.

Huge progress has been made on the Sampled Red List Index (SRLI) project, with representative samples being assessed of all the major plant groups by the Royal Botanic Gardens Kew (RBGK), in its role as a Red List Partner Organization. Preliminary results have already been published by RBGK⁷, and these will shortly be included on The IUCN Red List – for the first time giving us an overall picture of the status of the plant kingdom.

The zoological side of the SRLI project is run by the Zoological Society of London (ZSL), and among others they have completed assessments of random samples of 1,500 dragonfly species and 1,500 reptile species.

⁵ All policy statements and technical guidelines are available on the IUCN Species website in English, French, Spanish, and sometimes other languages: www.iucn.org/about/work/programmes/species/publications/iucn_guidelines_and_policy_statements

⁶ See www.iucnredlist.org/technical-documents/red-list-training for details. The joint SSC-Zoological Society of London (ZSL) website on national red lists from around the world can be found here: www.nationalredlist.org/site.aspx.

⁷ See www.kew.org/science-conservation/search-rescue/mapping-plants/plants-at-risk/iucn-srli-explained/index.htm

New marine assessment work continues on the cone shells and on the squids, cuttlefishes, octopuses and nautiloids, but with most attention on the marine fishes. In 2011 an important paper was published in *Science* on the tuna and billfish assessment showing that the level of threat to these species is strongly correlated with generation length and market price. Freshwater species continue to be assessed on a regional basis with the completion of The IUCN Red List assessment of African freshwater species being a major achievement. During this project, 5,167 African freshwater species were assessed by 200 scientists. The livelihoods of an estimated 7.5 million people in sub-Saharan Africa depend on inland fisheries. These new data in The IUCN Red List will be invaluable in helping to safeguard these fisheries, freshwater supplies and the many other associated resources. The results of the African freshwater assessments are published and analyzed in an outstanding IUCN publication, *The Diversity of Life in African Freshwaters: Underwater, Under Threat*, in 2011. The freshwater assessments have now expanded into Asia.

The SSC continues to address the amphibian extinction crisis working as part of the new inter-institutional Amphibian Survival Alliance (ASA)⁸. The priorities for the ASA are the conservation of key sites for amphibians (very many of these fall outside protected areas), and fostering research on threatening processes, especially on the management of the devastating fungal disease, chytridiomycosis. National and regional amphibian action plans are being developed, 55 threatened species have been protected in situ (including 22,000 ha of new protected areas), conservation needs have been assessed for 2,435 amphibian species, and ex-situ programmes have been established for 100 threatened species.

CHALLENGES FOR THE FUTURE

RESPONSE OF SPECIES TO CLIMATE CHANGE

A traits-based approach to assessing species' vulnerability to climate change has been developed and the approach tested on birds, amphibians and corals. A paper entitled "*Climate change susceptibility of the world's birds, amphibians and corals*" is in preparation. This will become a new approach to assessing the impacts of climate change on species, in addition to climate-envelope modelling which is already widely used. Meanwhile, the new methodology is being applied to economically valuable species in the Albertine Rift region of central Africa with a view to gaining insights on how climate change might impact the livelihoods of populations dependent on wild species.

IMPACT OF SYSTEMIC PESTICIDES

In 2011 the SSC established a joint task force with the IUCN Commission on Ecosystem Management (CEM) on systemic pesticides. These systemic pesticides have been implicated in the decline of a number of groups of invertebrates, including pollinators such as honey bees. A number of environmental

groups have called for neonicotinoid pesticides to be banned, but these calls have been strongly contested by the industry. The SSC and the CEM are therefore reviewing the scientific evidence in depth with a view to determining the true environmental impacts of systemic pesticides.

AREA-BASED CONSERVATION PLANNING

Working with the World Commission on Protected Areas (WCPA), the SSC will carry out a study looking at how well protected areas conserve biodiversity, and what the relationship is between this and the IUCN management categories for protected areas. New criteria for identifying and designating sites of importance for biodiversity will be developed and agreed. Criteria have already been formulated for identifying Key Biodiversity Areas (KBAs), and these will now be subject to extensive review with the aim of reaching global agreement on a new system.

RAPID DECLINE OF LARGE ANIMALS IN ASIA

Another major conservation crisis concerns the rapid declines of large animals in Asia, especially Southeast Asia. This includes most species of large mammals, turtles, and freshwater fishes such as the Mekong Giant Catfish and Chinese Paddlefish; many of these species could go extinct unless action is taken very soon. In collaboration with the Secretariat and various IUCN Members, the SSC is launching a new initiative to address the crisis, provisionally called Action Asia. There is an especially urgent need for increased law enforcement on the ground in the places where the most threatened species occur. We have started an important collaboration with the European Association of Zoos and Aquariums (EAZA), which invited us to join a major fundraising campaign for Action Asia, starting in September 2011 and running to 2013 to raise funds from the public for the conservation of severely threatened large animals in Southeast Asia.

SAVE OUR SPECIES (SOS)

"Save Our Species" (SOS)⁹ is a global coalition initiated by the three founding partners IUCN, GEF and World Bank to build the biggest species conservation fund, supporting on-the-ground field conservation projects all over the world. The SSC has formed a working group that plays an important advisory role in the selection of projects for funding.

FACTS AND FIGURES

The SSC is governed by a Steering Committee, which is headed by the Commission Chair. The Steering Committee represents a balance of regional and thematic perspectives, and provides overall direction to the work of the Commission. Because the scope and scale of activities is so large, the Steering Committee has established a number of sub-committees which focus mainly on areas of the SSC's work that need to

⁸ www.iucn.org/about/work/programmes/species/our_work/amphibians/

⁹ www.sospecies.org

be built up. Currently there are sub-committees on Freshwater, Invertebrates, Marine, Plants and Species Conservation Planning. There is also a Red List Committee that governs the strategic development and use of The IUCN Red List, and a Standards and Petitions Sub-Committee which is responsible for maintaining the standards of The IUCN Red List, and handling petitions against particular listings in an impartial and objective manner.

The great mass of work carried out by the SSC is done by Specialist Groups, Red List Authorities and Task Forces, all of which are established by the Chair in consultation with the Steering Committee.

There are currently 112 Specialist Groups, most of which have a taxonomic focus, as follows:

- 10 Amphibian & Reptile Specialist Groups;
- 15 Bird Specialist Groups;
- 7 Fish Specialist Groups;
- 5 Fungi Specialist Groups;
- 9 Invertebrate Specialist Groups;
- 36 Mammal Specialist Groups; and
- 25 Plant Specialist Groups.

A number of the bird groups along with the Freshwater Fish Specialist Group are governed in a joint collaboration between the SSC and Wetlands International.

There are five large disciplinary Specialist Groups:

- Conservation Breeding;
- Re-introduction;
- Invasive Species;
- Sustainable Use & Livelihoods (shared with CEESP); and
- Wildlife Health.

Red List Authorities (RLAs) coordinate and manage the species red list assessment process and submission. There are 85 such RLAs, the majority of which lie within the relevant specialist group. However there are 14 Red List Authorities that are not attached to any particular specialist group and are known as Stand-Alone RLAs.

The SSC also has three Task Forces:

- Biodiversity and Protected Areas (shared with WCPA);
- Systemic Pesticides (shared with CEM);
- Climate Change.

The number of SSC members is constantly changing, but at the end of 2011 it stood at around 8,000. Individual members are invited to join by the Chair of each group.