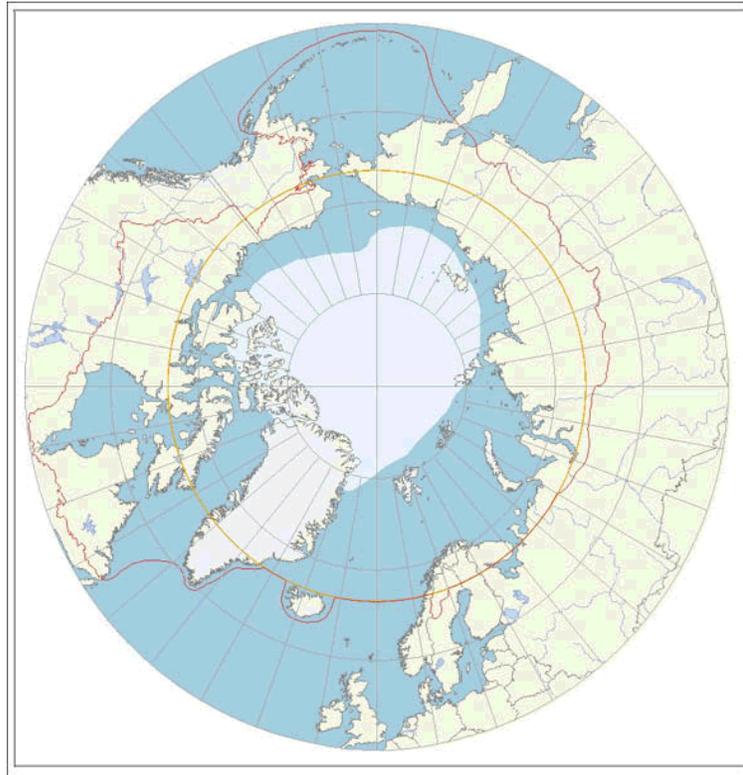


Arctic Strategy



APPROVED BY THE IUCN COUNCIL
AT ITS 56TH MEETING, 27 TO 29 MAY 2002

Executive Summary

The Arctic Strategy is envisaged as a framework in which components of IUCN's programme organize and coordinate their efforts to optimise the Union's impact in the region and ensure that such efforts contribute to the Key Results Areas which guide the overall programme. It is structured around programme components that have a commitment/history of working in the Arctic. They include the Secretariat offices in Canada, CIS, Europe, and United States; the SSC, WCPA and CEM; and the Commission counterpart programmes (Species Conservation, Protected Areas, Ecosystem Management) located in HQ.

The proposed Strategy will be implemented in a phased manner over three years. In the initial phase the Strategy would rely on existing staff and programmatic capacities to:

- Facilitate communication and sharing of information that is relevant to the Arctic region between and amongst the various components of IUCN's Overall Programme and our members/partners that are engaged in the region.
- Sustain Commission-based activities in the Arctic, especially those of the SSC Specialist Groups, the WCPA and the CEM.
- Facilitate development and implementation of conservation/development demonstration projects in the Arctic of the Russian Federation in collaboration with members and partners.
- Influence the Arctic Council and its Working Groups, to adopt and pursue policies consistent with IUCN's mission.

The activities envisaged in relation to each of these roles will:

- Respond to needs expressed by members and partners in the region;
- Provide a cost/effective way for the Secretariat to deliver on the mandate conveyed in WCC Resolution 2.22;
- Ensure that lessons learned in work undertaken in the Arctic are available to other regions;
- Complement, and bring added value to, activities being pursued by IUCN's members and other institutions in the region; and
- Assure significant contributions to the Key Result Areas.

An IUCN Arctic Strategy will enhance our capacity to influence, encouraging and assist countries, indigenous organizations and the private sector in the Arctic to conserve the integrity and diversity of the Arctic ecosystem and to ensure that uses of natural resources are equitable and ecologically sustainable.

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1 Purpose

IUCN's members in adopting Resolution WCC 2.22 (*IUCN's work in the Arctic*) requested:

"... IUCN to pay particular attention to:

- (a) integrated ecosystem management ... ecological integrity and environmental security in the Arctic, notably *inter alia*, the conservation and management needs of species and habitats, to protected areas, to the northern timberline forests, to the Arctic marine environment, and to pollution;
- (b) the rights, needs and involvement of Arctic indigenous peoples, their dependence upon, and traditional knowledge of, the sustainable use of natural resources; and
- (c) the needs of other permanent residents in the Arctic, and their involvement in IUCN activities.

The resolution also calls "... for the Director General to:

- (a) prepare and implement an Arctic Strategy and Action Plan; and
- (b) establish Arctic activities as part of IUCN's Overall Programme until the next World Conservation Congress and to provide appropriate Secretariat support."

In addition there have been several other resolutions addressing Arctic conservation issues that have been adopted at World Conservation Congresses or their predecessor General Assemblies. Recurring themes include:

- The importance of developing conservation strategies and sustainable development plans that take into account the particular requirements and concerns of indigenous Arctic peoples, their rights, needs, involvement, traditional knowledge, sustainable use of natural resources.
- The needs of other permanent residents.
- The impacts from the development of circumpolar maritime transport routes and from land-based activities on the Arctic marine environment.
- The need for impact assessments, environmental analysis, and guidelines for use of the Arctic ecosystem.
- The need for conservation and management of species and habitats.
- The importance of co-management of shared wildlife populations.
- The importance of implementing international conventions.

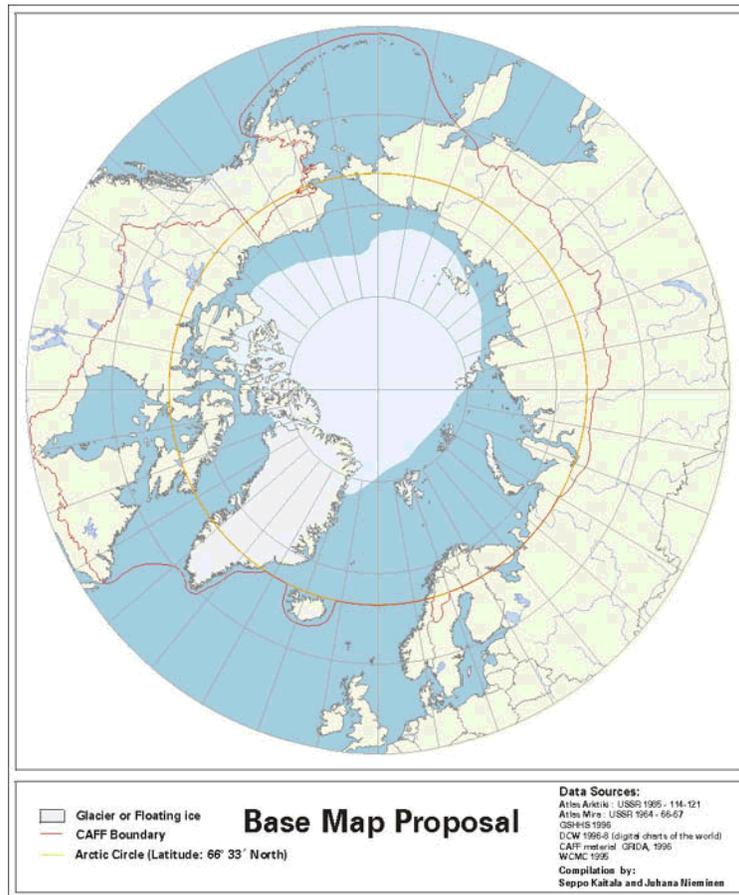
This Arctic Strategy provides a framework for focussed work in the region that promotes activities by, and partnerships with, established institutions in the region. It emphasizes activities that would benefit from IUCN's engagement at minimal cost in terms of time and resources.

2 Situation Analysis – the Arctic Context

2.1 Overview

The Arctic spans eight countries (Canada, Denmark/Greenland, Finland, Iceland, Norway, Russia, Sweden and the USA), and its 25 million km² are split into a terrestrial and a marine component. It is defined on the basis of geographic, ecological characteristics, and the prevailing climate. IUCN's Arctic Strategy intends to address mainly the area encompassed by the Conservation of Arctic Flora and Fauna (CAFF) Working Group of the Arctic Council.

Figure 1 Arctic region.



The terrestrial component is approximately 14 million km² stretching northward from the continuous boreal forests to the Arctic Ocean coastline. There are several terrestrial sub-systems (Arctic desert, treeless tundra and taiga), which include extensive wetlands, glaciers, mountains, lakes, rivers and meadows with much of the territory underlain by a thick layer of permanently frozen ground termed “permafrost”.

The marine component is equally large and consists of the Arctic Ocean and surrounding water bodies. The Arctic Ocean, with its permanent ice pack of over 6 million km² and seasonally formed ice-sheet is a major determining factor and exerts a strong influence on the global ocean and climate regimes. Arctic waters are surprisingly rich and boast productive fishing grounds. In summer, Arctic waters teem with invertebrate life that in turn attracts large numbers of migratory marine mammals from the southern latitudes.

The Arctic has been home to humans for thousands of years. Several waves of people and cultures have spread across the Arctic coast, from paleo-Eskimos thousands of years ago to the Thule Culture several centuries ago. Some reached the High Arctic as early as 2 000 B.C. The great seasonal variations in the Arctic environment have caused many groups to move among different locations during the year, as resources became abundant. Patterns of human settlement and resource use have historically been linked to environmental and ecological factors¹.

¹ Conservation of the Arctic Flora and Fauna (CAFF) 2001. *Arctic Flora and Fauna: Status and Conservation*. Helsinki: Edita. 272 p.

2.2 Human and Environmental Situation

Human situation

Close to 500 million people live in the eight arctic countries, but the population of these countries is concentrated in the southern part of the territories. Only about 3.5 million people live in the Arctic region itself, mostly in cities in the northern part of the Russian Federation. The population of the eight Arctic stakeholder countries is provided in Table 1. Of the total population about 0.5 million (14%) are indigenous people.

Table 1. Populations of the Arctic countries (1998).

Country	Population ²
Sweden	8, 850,000
Finland	5,158,000
Norway	4,478,000
Iceland	279,000
Canada	31,280,000
Denmark	5,356,000
United States	285,000,000
Russian Federation	147,000,000
TOTAL	487,401,000

While the economic situation in the eight Arctic stakeholder nations is good, the socio-economic condition of those subpopulations that reside within the Arctic of these countries is not very good. In general, these populations are comprised of disadvantaged elements of the national populations. The socio-economic conditions in the region, peoples' rights to the land, and need for protection of natural resources and the environment prompted Arctic indigenous peoples (Table 2) to form advocacy organizations, which have been very successful in influencing the political, economic and social processes within Arctic countries and international forums. Recognition of their effectiveness, and their rights as representatives of "First Nations" has led to the six associations listed in Table 2 being given "Permanent Participants" status on the Arctic Council.

Table 2. Arctic-based Indigenous Peoples Associations

Indigenous Peoples Associations	Members
Aleut International Association (AIA) ³	9,200
Arctic Athabaskan Council (AAC) ⁴	40,000
Gwich'in Council International ³	5,400
Inuit Circumpolar Conference ⁴	152,000
Saami Council ⁴	85,000
Russian Ass. of Indigenous Peoples of the North (RAIPON) ⁴	200,000
TOTAL	491,600

² Population Data Source: <http://www.lonelyplanet.com>

³ Population Data Source: Indigenous People Secretariat, pers. communication.

⁴ Population Data Source: <http://www.arctic-council.org>

Several Arctic countries have formally recognised indigenous peoples' rights to land and natural resources and the authority for local decision-making. For example, Canada has negotiated several land-claim settlements with northern indigenous peoples and has recently established the territory of Nunavut, which has a majority Inuit population. Denmark has established systems of Home Rule governments in Greenland and the Faeroe Islands. The Nordic countries have separate Saami parliaments run by their indigenous populations of the north.

Environmental situation

The Arctic is characterized by a cool variable climate where winter temperatures can reach -60° C and summer temperatures can climb as high as 25° C. The Scandinavian portion of the Arctic is more temperate due to effect of the oceanic Gulf Stream.

The extreme variation in climate limits growth and affects survival, seasonality and variability. A continual state of near-darkness during the winter months alternates with near continuous light during the summer and a short intense growing season. Overall, the Arctic receives relatively little precipitation, most of which falls as snow. Some areas receive less than 50mm of moisture per year.

Species in the Arctic are not evenly distributed. Centres of increased diversity occur in low-lying areas, which more diverse plant communities. They are interspersed by zones of relative barrenness. These "biodiversity hot spots" may be critical for a few species or migrants. In the ocean, winds and currents create and maintain recurring fractures in the sea ice that lead to open water, called polynyas, which support a greater abundance of marine life and thus attract many bird and mammal species.

There are several endemic species in the Arctic, which are highly adapted to the rigours of the region. Ninety-six rare endemic plants have been identified in the Arctic, which have been recorded in the CAFF Atlas of Rare Endemic Vascular Plants of the Arctic. However, for large areas of the Arctic, there are no data on the distribution of plants. Nearly half (47%) of the endemic species are not protected, 23% are partially protected, and 30% are fully protected. Based on the IUCN Red List categories of threat, 1% of the Arctic plants are Endangered, 19% are Vulnerable, 29% are Lower Risk Near Threatened, 26% Lower Risk Least Concern, and 24% are Data Deficient⁵.

Two hundred seventy nine bird species breed in the Arctic. All obtain some measure of protection under one or more major international agreements (e.g., Ramsar Convention, CITES, Bonn Convention, African Convention, Bern Convention, EEC Wild Birds Directive, African-Eurasian Waterbird Agreement, Asia-Pacific Migratory Waterbird Conservation Strategy). Nevertheless, 212 of these species are not as yet adequately protected throughout their migratory routes⁶.

Twelve species of birds that breed in the Arctic are threatened (i.e., listed in the IUCN Red List as vulnerable, endangered or critically endangered). All of these species have received a considerable amount of international attention, and most are the subject of major conservation efforts. Twenty-one species or populations of mammals found in the Arctic and 10 species of fishes are considered threatened. Nine of the mammal species are whales⁷.

Approximately 17% of the land area of the Arctic is under some form of legal protection, with about half consisting of the Northeast Greenland National Park. Another substantial amount of the area designated for protection is ice cap or glacial ice. Only 1.7% of the marine environment and 5.4% of the boreal ecosystem along the southern fringe of the Arctic are protected. The number and area of

⁵ Conservation of the Arctic Flora and Fauna (CAFF) 2001. *Arctic Flora and Fauna: Status and Conservation*. Helsinki: Edita. 272 p.

⁶ Scott, D.A. Global Overview of Arctic Migratory Breeding Birds Outside the Arctic. CAFF Technical Report No 4, Wetlands International; executive summary <http://www.caff.is>.

⁷ Conservation of the Arctic Flora and Fauna (CAFF) 2001. *Arctic Flora and Fauna: Status and Conservation*. Helsinki: Edita. 272 p.

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designated protected areas (IUCN categories I-V), including Ramsar international wetland sites are listed in Table 3 by country as of 2000⁸. Areas smaller than 10km² are not included.

Table 3. Number and area of protected areas in the Arctic by country.

Country	Number of Areas	Total Area (km ²)	% of Arctic Land Area of the Country
Canada	61	500,842	9.5
Finland	54	24,530	30.8
Greenland	15	993,070	45.6
Iceland	24	12,397	12.0
Norway	39	41,380	25.3
Russia	110	625,518	9.9
Sweden	47	21,707	22.8
USA (Alaska)	55	296,499	50.2
TOTAL	405	2,515,943	17.0

Table 4. Number of IUCN members, by category in the eight Arctic countries.

Country	State Membership	Government Agency Members	International NGOs	National NGOs	Affiliates
Canada	1	10	1	22	1
Denmark	1	0	2	6	0
Finland	1	1	0	3	0
Iceland	1	0	0	0	0
Norway	1	1	0	2	2
Russian Federation	1	0	1	7	0
Sweden	1	0	1	6	0
United States	1	6	14	44	2
TOTAL	8	18	19	90	5

⁸ Ibid.

3 Stakeholder Analysis

3.1 Members

Each of the eight Arctic stakeholder nations is an IUCN State Member. There are an additional 132 members located in the eight Arctic countries (Table 4). Of these, 18 are government agency members, 19 are international NGOs, 90 are national NGOs and there are five affiliates.

Each of the eight state members plus a combined 6 government agencies and NGOs have an expressed interest in the Arctic and/or Arctic peoples issues.

IUCN's members have consistently endorsed resolutions on conservation and sustainable development issues related to the Arctic at General Assemblies and World Conservation Congresses. There is keen interest between various combinations of our State Members to address particular conservation, such as the Bering Straight fisheries issues, Canada-Russian Federation collaboration on boreal forest management, and US-Canada cooperation on caribou management.

3.2 IUCN's Programme

Four Commission-based Programmes are presently engaged, or are planning work in the Arctic:

- Ecosystem Management Programme/Commission on Ecosystem Management – The Ecosystem Management Programme, is developing its work programme around the three core thematic areas that the CEM Steering Committee adopted at its recent meeting: Ecosystem Restoration, Indicators of Ecosystem Status, and Implementing the Ecosystem Approach. The CEM Steering Committee has identified the Arctic an important biome and as such has appointed a thematic team leader who will be responsible for overseeing any CEM-based work in the region. Thus, EMP activities in the region will focus on the three core thematic areas.
- Environmental Law Centre/Commission on Environmental Law – The Commission has a working group on indigenous peoples issues, which is also addressing issues related to equitable sharing of benefits. A *Guide to the Arctic Legal Framework*, which was prepared as a programme/Commission collaborative effort, has been published. Consideration is being given to the formation of a Working Group on Polar Law within the Commission.
- Protected Areas Programme/World Commission on Protected Areas – Over the passed decade the WCPA has pursued a successful campaign to designate both terrestrial and marine protected areas in the region.
- Species Programme/Species Survival Commission – There are several SSC Specialist Groups engaged in species conservation/sustainable use issues in the region. The important groups that are active are the Polar Bear Specialist Group (which is the technical advisor to the Polar Bear International Agreement amongst seven of the eight Arctic stakeholder nations), Seal Specialist Group and Cetacean Specialist Group. The Sustainable Use Specialist Group was active in the region during the period when the Arctic Council was being established.

Some considerations is being given to setting up an Arctic/Sub-arctic Plants Specialist Group. Finally, while not directly involved in the regions, the Bryophyte, Conifer and Lichen Specialist Groups may be of some relevance to work in the region.

In addition, the heads of the following programmes have expressed interest in contributing to an Arctic Strategy if funding were available:

- Forest Conservation Programme – The Temperate and Boreal Forest Programme relates directly to the southern fringe of the Arctic in the Russian Federation and provides a model of facilitated cooperation between two of IUCN's State Members – Canada and the Russian Federation. For years

a portion of the US Voluntary Contribution and the Canadian Forest Service have provided partial support to the temperate and boreal forest programme conservation work.

- Policy, Biodiversity and International Agreements – IUCN has been granted observer status to the Arctic Council, the principal intergovernmental body that drives the development agendas in the region. The IUCN Policy coordination group in HQ would be important to developing and forwarding IUCN's positions for meetings of the Arctic Council or its Working Groups. Also, issues and information in the Arctic may be of value in informing IUCN regarding issues in other policy fora that might be of interest to the Arctic constituency.
- Climate change – There is interest in the Climate Change component of the intercessional programme to promote adaptation to changes brought on by climate change and severe climate events, such as permafrost thawing, flooding, etc.
- Global Marine Programme – The Global Marine Programme would be an important ally in activities related to designation of marine protected areas and is interested in addressing marine conservation issues in Russia. In addition, the working groups on Sustainable Livelihoods, Collaborative Management and Environmental Security, sponsored under the Commission on Environmental, Economic and Social Policy (CEESP) may see value in addressing Arctic issues.

A list of the Commission focal points and relevant working groups affiliated with the Commissions is provided in Annex 1.

3.3 Regional Organizations

The principal Arctic regional organization that is relevant to the Arctic Strategy is the inter-governmental Arctic Council established by the eight Arctic stakeholder countries. In addition, the six indigenous organizations listed in Table 2 will be important as they are permanent participants to the Arctic Council.

3.4 National Organizations

The governmental and non-governmental members from each of the Arctic stakeholder countries (see Table 4) represent a very important constituency, which might prove to be valuable partners in implementing the Arctic Strategy. Through their participation in the Arctic Council Working Groups, all eight countries are addressing to some degree Arctic environmental issues.

3.5 Donors and Funding Organizations

The principal donor/funding sources for work in the Arctic are the eight Arctic nations and the European Union. In this context there are several possible "windows" of opportunity, with ministries and/or departments related to development, environment, indigenous affairs, and human health and welfare being the primary sources of funding. The emphasis placed on these sources varies according to the country. For example, the European Union provides funding for work in the Russian Federation.

Recently the UK and the Netherlands, who are observers to the Barents Euro-Arctic Council (see 3.6 Regional Cooperation, below), have expressed interest in supporting Arctic work. The Dutch have already financed some work in the Arctic through WWF and provided very modest support for Arctic work through the IUCN CIS office. A representative from the UK Government has requested that he be invited to a Donors' Round table the IUCN CIS is planning in June.

Organizations like WWF and other conservation-based organizations have generated significant funding through direct appeals to the public (through their national organizations) to conserve various species or to advocate for the designation of protected areas in the region.

3.6 Regional cooperation

There is considerable cooperation by governments and NGOs in relation to issues that are adopted by the Arctic Council. In addition there are several bilateral agreements between different combinations of the eight Arctic stakeholder nations on matters of mutual interest, such as fisheries issues in the Bering Strait, the Canada-Russian Federation collaboration on boreal forest management in the Russian Federation, the US-Canada cooperation on caribou management, and the Barents Euro-Arctic Council.

Traditionally, there has been little cooperation between the Arctic indigenous peoples organizations and the conservation NGOs that work in the region. A notable exception is the Arctic relevant SSC Specialist Groups who normally engage with indigenous peoples in the region.

From another perspective, over the years several of the Indigenous Peoples' organizations have sought out IUCN as a potential ally to address such issues as listings of Arctic species under CITES, seal skin import restrictions adopted by the European Union or the movement to promote and adopt "humane trapping" regulations. IUCN representatives have often been called on to make presentations at Indigenous Peoples' meetings. It is common for indigenous issues to be the subject of resolutions sponsored by IUCN members for consideration at the Union's World Conservation Congresses, most generally prompting heated debate.

4 IUCN's Niche and Comparative Advantage

The Situation Analysis (Annex 2) provides the basis to identify IUCN's optimal niche in relation to the Arctic, taking into account:

- IUCN's core competencies;
- the strengths and comparative advantages of our members, partners and competitors in the region; and
- the potential for attracting necessary support from donors and partners.

4.1 Key issues

The key issues that are documented in the Situation Analysis that are relevant to IUCN's current programme of work falls into two broad categories:

Externally driven issues or impacts that are affecting the Arctic

- Climate change. Arctic ecosystems and communities are extremely vulnerable to the affects of climate change. Permafrost is thawing; permanent ice fields are melting and increasing rates. The changes in climate in the Arctic may provide insights into changes in climate in other regions.
- Introduced species. Species are being found in the Arctic that had not been recorded previously including migrants, most likely as a consequences of climate change, and intentional introductions by humans
- Pollution. Air- or water-borne Persistent Organic Pollutants (POPs) are occurring in increasing frequency in the food chain in the Arctic, including fish, marine and terrestrial mammals. The resident human population commonly is now shown to have incorporated these pollutants. The source of these POPs is almost exclusively from developed nations. The fact that many POPs are proven carcinogens does not bode well for either human or other affected species.

Internally driven issues that are affecting the status of the Arctic ecosystem or species

- Habitat fragmentation and degradation. The increased exploitation of renewable and non-renewable natural resources in the Arctic, along with attendant increase in human activity, is contributing to fragmentation of the ecosystem.
- Species exploitation. Unsustainable exploitation of Arctic species threatens the survival of Arctic residents as well as the species. The natural capital (e.g., timber, oil, minerals), which could contribute to the sustainable development of peoples in the region is being expropriated by outside interests – especially in the Russian Arctic.
- Natural resource extraction. With increasing global demands for mineral resources and fuel there is growing interest in the mineral and oil deposits in the region. In the Russian Federation, where the local people are desperate to realize even modest income to meet their subsistence requirements, the stage is set for uncontrolled exploitation.

4.2 IUCN's relevant programmes

In addition to the core group of programmes noted in Section 3.2 (IUCN's Programme) the following programmes could make significant contributions – assuming funds are available.

- Sustainable Use Initiative (SUI) – The SUI might find it of interest to field test recently developed Analytical Framework for Assessing Factors that Influence Sustainability of Uses of Wild Living Natural Resources. In testing the Analytical Framework the SUI would be complementing the CBD initiative to develop and operationalize Principles of Sustainable Use.
- Wetlands and Water Programme – There may be an argument for developing a case study under the Water and Nature Initiative that looks at modes of water management along the ecotone between the Arctic and Northern Boreal Forest Ecosystems.

4.3 Major interests of other conservation/development organizations

There are a number of national, international, NGO and indigenous peoples' organizations working on issues related to Arctic conservation and sustainable use. The key players that are relevant to IUCN's mission are the Working Groups of the Arctic Council, Indigenous Organizations, and WWF's Arctic Programme, which are highlighted below.

The Arctic Council (<http://www.Arctic-council.org>) was formed in 1996 by formal agreement amongst the eight Arctic Stakeholder nations. It comprises the Ministers responsible for the Arctic in the eight countries plus representatives of six indigenous peoples organizations: Aleut International Association, Arctic Athabaskan Council Gwich'in Council International, Inuit Circumpolar Council, Russian Association of Indigenous Peoples of the North (RAIPON) and Saami Council. The Council approves the work programme of five permanent Working Groups (see below). IUCN has "observer status" to the Council and has been represented at most meetings of the Council since its formation. There has been close collaboration between IUCN and the Conservation of Arctic Flora and Fauna Working Group (CAFF), which is engaged in a number of activities directly relevant to IUCN, including:

- implementing an Arctic Biodiversity Conservation Strategy;
- preparing an overview of the status and trends of Arctic Flora and Fauna;
- implementing a Circumpolar Protected Areas Network (CPAN) in co-operation with IUCN WCPA;
- establishing a circumpolar biodiversity monitoring network in co-operation with the Arctic Council's Arctic Monitoring and Assessment Program (AMAP) and the International Arctic Science Committee (IASC; see below) as part of an Arctic climate change impact study; and

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- preparing a strategic plan to address biodiversity monitoring, conservation of genetic resources, species and habitats, protected areas, and integration of conservation objectives into economic sectors through enhanced information activity.

In addition, three more working groups of some relevance to IUCN (relevant activities in brackets) are:

- Sustainable Development Working Group (SDWG) (Sustainable Reindeer Herding, Ecological and Cultural Tourism in Alaska, and Survey of Living Conditions in the Arctic);
- Arctic Monitoring and Assessment Program (AMAP) (monitoring of effects of Persistent Organic Pollutants (POPS), heavy metals, radioactivity, climate change, and UV-B on human health, 1998-2003); and
- Protection of the Arctic Marine Environment Working Group (PAME) (an Arctic component of the Global Program of Action for the Protection of the Marine Environment from Land-based Activities, and support for a Russian National Program of Action).

Indigenous Peoples Organizations (<http://www.Arctic-council.org>) – Six international Indigenous organisations are permanent participants to the Arctic Council. An Indigenous Peoples' Secretariat (IPS) supports and facilitates indigenous peoples contributions to the various Arctic Council sponsored activities. Each of these organizations is pursuing goals or projects related to sustainable development, natural resource management and safeguarding of their Arctic environment. The impacts of "climate change" are of special interest to all of these organizations because the livelihoods of their constituents may be jeopardized because of the affect of climate change on the natural resources on which they depend.

World Wide Fund for Nature (WWF; <http://www.ngo.grida.no/wwfap>) – WWF's Arctic Programme is implemented through WWF Denmark. The programme has four targets, which are relevant to IUCN:

- to complete a circumpolar network of terrestrial, marine and freshwater protected areas by 2010;
- to conserve or restore viable populations of wide-ranging wildlife species such as caribou, musk-oxen, bears, walrus, whales and migratory water birds by 2010;
- to reduce CO₂ emissions in industrialized countries to 10% below 1990 levels by 2010; and
- to eliminate or dramatically reduce the levels of 30 of the most hazardous industrial chemicals and pesticides found in the Arctic by 2007.

Additional institutions/organizations that could have varying degrees of relevance to an IUCN Arctic Strategy are listed in alphabetical order in Box 1.

4.4 Defining IUCN's role in the Arctic

In relation to the Key Result Areas, taking into account the information provided above and the Situation Analysis, IUCN can bring added value to work in the Arctic by adopting four broad roles:

- To facilitate communication and sharing of information that is relevant to the Arctic region between and amongst the various components of IUCN's Overall Programme and our members/partners that are engaged in the region.
- To sustain Commission-based activities in the Arctic, especially those of the SSC Specialist Groups, the WCPA and the CEM.
- To facilitate development and implementation of conservation/development demonstration projects in the Arctic of the Russian Federation in collaboration with members and partners.
- To influence the Arctic Council and its Working Groups, to adopt and pursue policies consistent with IUCN's mission: "To influence, encourage and assist societies throughout the world to conserve the integrity and diversity of nature and to ensure that any use of natural resources is equitable and ecologically sustainable."

The first role provides a means to optimize existing commitments and ensure that our members and partners who are active in the region are aware of IUCN work and contributions to the conservation issues in the region.

The second role recognizes the leading role IUCN's Commissions are playing in addressing Arctic issues, and the need to synchronize their activities in that region.

The third role targets IUCN's capacity to address urgent conservation/development issues in the Arctic region of the Russian Federation, which is an area that Canadian International Development Agency (CIDA) has expressed interest in supporting.

The fourth role focuses IUCN's policy work on the Arctic Council as a cost-effective means of promoting policies and actions that are consistent with IUCN's mission, especially in relation to conservation and sustainable use of natural resources.

Box 1. Additional institutions working in the Arctic that could be relevant to IUCN's Arctic Strategy.

Advisory Committee for the Protection of the Seas (ACOPS; <http://www.acops.org>) – assists efforts to develop and implement strategies for the sustainable development of the coastal and marine environment; identification and characterization of 147 environmental hot-spots; development of an Arctic Charter for Indigenous Peoples, developed with the Arctic Council and RAIPON.

Arctic Ocean Sciences Board (AOSB; <http://www.aosb.org>) – engaged in projects dealing with the physical and biological role of polynyas in the Arctic and with river discharge, which could be linked to species survival and biodiversity monitoring.

Barents Euro-Arctic Council (<http://virtual.finland.fi/finfo/english/barents.html>) – The aim of the Council is to promote sustainable development in the Region; co-operation in a wide variety of fields; and projects aimed at improving the situation of indigenous peoples in the North.

International Arctic Science Committee (IASC; <http://www.npolar.no/iasc>) – focuses on the impact of global changes in the Arctic, processes of relevance to global systems, natural processes within the region, and sustainable development in the Arctic.

Northern Forum (<http://www.northernforum.org>) – supports sustainable development and the implementation of co-operative socio-economic initiatives in northern regions and through international fora. Priority projects of the Northern Forum relate to wildlife management, an inventory of species in with particular emphasis on rare or endangered species (Russian Red Book), and compilation and review of wildlife management guidelines for participating regions.

UNEP/GRID-Arendal (<http://www.grida.no/>) – a collaborative programme of the United Nations Environment Programme's Global Resource Information Database and the Government of Norway, which provides credible environmental information to the public and policy- and decision-makers on matters relating to international environmental management of the Arctic.

University of the Arctic (<http://www.urova.fi/home/uarctic/>) – a network of academic institutions and programs in the circumpolar North that is "... currently developing program structures, which will deliver higher education in the North, for the North, and by the North".

4.5 Capacity Assessment

IUCN's capacity to fulfill the four roles outlined above, with relevant, measurable outputs over the next three to five years will depend on the availability of:

- a. funding;
- b. technically competent people to undertake the work; and
- c. institutional administrative and support systems (e.g., management and accounting services; fund raising, human resource management, and communications).

Taking these limitations into account, IUCN can formalize a limited scope of work in the context of an Arctic Strategy related to:

- Continued provision of expertise on species conservation and sustainable use (SSC specialist groups).
- Continued provision of expertise on protected areas development and management (WCPA working group on Arctic protected areas).
- Developing and executing field demonstration projects in community based management of renewable natural resources in Russia.
- Providing technical advice and assistance to IUCN State and NGO members from the eight stakeholder nations; to select working groups of the Arctic Council; and to other interested partners and members from other regions.
- Possibly providing advice and assistance related to adaptation to changes in Arctic ecosystems brought on by severe climate events in the region and climate change in general.

The institutional skills and systems that IUCN has that would have direct bearing on a successful Arctic Strategy are:

- The existence of a strong country office in Moscow.
- A successful track record of Canada-Russia office cooperation in regards to the Boreal Forest project.
- Skills at fund raising for field demonstration projects (e.g., CIDA funding of the Boreal Forest work).
- A capacity to manage and communicate information.
- Skills to establish and nurture volunteer networks associated with the key Commissions that are engaged in the region (e.g., SSC, WCPA, CEM).
- The capacity to prepare and deliver sound policy guidance to international forums based on scientific/technical information provided by specialists.
- Institutional capacity to provide a forum for diverse actors to come together to address issues of mutual interest.

The weaknesses that will have to be addressed to undertake an effective Arctic Strategy are:

- The absence of an institutional framework within which to plan and deliver credible products.
- Dependence on seconded staff in the US and Canada offices (whose availability is subject to independent decision-making processes) to do much of the work.
- The lack of minimal financial support to provide needed communications and coordination of current work in the region.
- The high diversity of Arctic issues that could overwhelm a sparsely resourced capacity.
- The SFR 40,000 budgeted in the CIS office for project development is not sufficient.

5 Long-term strategy

The long-term aim is an effective, financially viable, institutional capacity that influences, encourages and assists Arctic countries, indigenous organizations and the private sector to conserve the integrity and diversity of nature in the Arctic and to ensure that any use of natural resources is equitable and ecologically sustainable.

5.1 Objectives and Outcomes

Drawing on the situation analysis and the foregoing assessment, four objectives have been identified, which are presented in Table 5. Each contributes to one of the four strategic approaches that have been adopted to target programme efforts on IUCN’s Mission (see Box 2).

The four objectives and long-term indicative outcomes envisaged from a focused Arctic Strategy are listed Table 5. They also illustrate the potential scale of effort envisaged in an Arctic Strategy. Note that the Long-Term Indicative Outcomes cited in Table 5 are linked to the indicative results/outcomes cited in Table 7.

Box 2. IUCN’s four core strategies to address the Key Result Areas adopted by members (Amman, 2000)

Knowledge (K): generating, integrating, managing, and disseminating knowledge for the conservation, sustainable and equitable use of nature and natural resources.

Empowerment (E): building capacity, responsibility and willingness of people and institutions to plan, manage, conserve and use nature and natural resources in a sustainable and equitable manner.

Governance (G): systemic improvement of laws, policies, economic instruments and institutions for the conservation and sustainable and equitable use of nature and natural resources.

Operations (O): effective management, information, finance, human resources and communication systems as the foundations for effective delivery and use of knowledge, empowerment and governance.

Table 5. Objectives and indicative outcomes envisaged under the Arctic Strategy

Objectives	Long-Term Indicative Outcomes
To generate biological, physical and socio-economic knowledge developed in support of decision making and natural resource management in the Arctic. (K)	<p>Information on conservation and development projects in the Arctic are compiled and made available to indigenous peoples’ organizations, conservation organizations, governments and other interested stakeholders.</p> <p>Lessons learned in the Arctic and other regions that are relevant to Arctic residents, including indigenous populations, are communicated to the Arctic Council.</p> <p>Traditional knowledge and current understandings of ecological and social processes in the Arctic are made available to policy-makers in the region.</p> <p>Systems, including specialist networks, are established to acquire, monitor and assess information on Arctic issues.</p> <p>Needs for formation of selected trans-national protected areas is determined and a strategy adopted to promote their establishment.</p>
To empower stakeholders to conserve and sustainably use natural resources in the Arctic. (E)	<p>Capacity-building activities related to management and sustainable use of renewable natural resources in the Russian Arctic are developed and implemented.</p> <p>Information and tools are provided to stakeholders in the region to promote implementation of the CBD Ecosystem Approach and CBD Principles of Sustainable Use.</p> <p>Capacity of indigenous peoples’ organizations to debate and implement Arctic clauses of the United Nations Framework Convention on Climate Change (UNFCCC) is enhanced.</p>

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Objectives	Long-Term Indicative Outcomes
<p>To promote a legal and policy enabling environment among Arctic stakeholder nations for conservation and sustainable development. (G)</p>	<p>Policies governing conservation and development in the Arctic are harmonized among stakeholder nations.</p> <p>Synergies between key agreements, processes and policies are enhanced as a result of advocacy in arctic fora (e.g. Arctic Council, Barents Euro-Arctic Council).</p> <p>Circumpolar, regional and national policies, legislation and governance structures incorporate incentives favouring conservation and sustainable use of biodiversity.</p> <p>Equity components of global, regional and national conservation policies, agreements and frameworks are strengthened.</p> <p>Bilateral and multilateral linkages between IUCN members are supported and enhanced in the Arctic.</p>
<p>To effectively organize and manage a programme of work in the Arctic to achieve a successful delivery and use of knowledge, empowerment and governance, using available capacities in IUCN constituencies. (O)</p>	<p>Establishment of a Secretariat Arctic Strategy Coordinating Team.</p> <p>Secretariat support is provided to specialist networks, working groups, partnerships and fora of relevance to achieving the outcomes envisaged under the Arctic Strategy.</p> <p>IUCN Ecosystem Management Programme is providing administrative support and supervising staff contributions to the Strategy; assisting fundraising to implement the Arctic Strategy.</p> <p>Technical oversight of CEM, SSC, and WCPA-based activities in the region is being provided by their respective Steering Committees.</p> <p>Sources of funding are identified and proposals prepared for field demonstration projects and policy work.</p>

5.2 Main Themes

The Arctic Strategy will be implemented in a phased, step-wise manner (see Table 6). Each step is in the context of the four broad roles noted in Section 4.4 (Defining IUCN's role in the Arctic) and designed to contribute to the Key Result Areas of the approved inter-sessional work programme (see Table 7).

Table 6. Indicative activities envisaged in a phased, step-wise development of the Arctic Strategy

Step	Role	Envisaged Activities
Step 1 (0 - 9 months)	Facilitate communication and sharing of information	Acquire and disseminate information on conservation/ development work in the Arctic.
		Provide a secretariat focal point to facilitate and coordinate the contributions from different sectors in the Arctic.
	Sustain Commission-based activities	Commission-based work in the Arctic (e.g., SSC, WCPA, CEM) continues with support from counterpart Secretariat programmes.
		Links facilitated between the work of the CEM, SSC, and WCPA to needs identified by Arctic Council working groups.

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Step	Role	Envisaged Activities
	Facilitate development and implementation of conservation/development demonstration projects	Preparation of concepts of field demonstration projects in the Russian Arctic; fundraising with prospective donors.
		Where mutually beneficial, collaborative projects developed with interested global programmes (e.g., climate change, marine).
	Influence the Arctic Council and its Working Groups	IUCN representation provided at meetings of the Arctic Council, and key working groups.
Step 2 (9 months to ≈ 1.5 years +)	Facilitate of communication and sharing of information	Continue to provide informational services to secretariat staff, members and other key actors in the region.
	Sustain Commission-based activities	Establishment of key protected areas.
		Assessment of conservation and sustainable use of biological resources, taking into account existing management systems for fisheries, marine mammals, and reindeer/caribou, especially by indigenous populations.
	Development and implementation of conservation/development demonstration projects	Pilot projects developed in the Russian Arctic to demonstrate application of the CBD Ecosystem Approach to sustainable use of renewable natural resources.
		Monitoring the impact of global climate change and invasive species on the status of Arctic species and ecosystems.
Influence the Arctic Council and its Working Groups	Policy interventions are prepared on topics determined to be of importance that will be targeted at the Arctic Council and its working groups.	
Step 3 (1.5 years +)	In all four of the envisaged roles, as funding related to global initiatives becomes available (e.g., CEM Ecosystem Approach Initiative, Water and Nature Initiative, Climate Change, Ecosystem Millennium Assessment) new activities will be undertaken, for example:	Sustainable ecosystem management inside and outside protected areas, including development of Circumpolar Ecological Corridors Network (CP-ECONET).
		Analysis of global change impact on Arctic ecosystems and species provided on selected sites in consultation with the Climate Change experts in IUCN.
		Preservation and use of traditional knowledge and cultural heritage of indigenous peoples.
		Assessment of efficacy of restoration ecology techniques to Arctic ecosystems effected by anthropogenic activities (e.g., oil and gas exploration and extraction, mining, transport).

The phased approach allows initiation of the Strategy with minimum financial support, while providing a means to expand the activities as and when there are more funds available. Nevertheless, because of the financial constraints, a large portion of the issues identified in the situation analysis (Annex 2) can be addressed during first and second phases of the Strategy. Nevertheless, as more resources become available mechanisms are planned that will open the door for new suites of activities to be taken on board, that merit action under the Strategy.

5.3 Main Elements of the Strategy

Several key strengths/capacities in IUCN provide a core framework on which the Strategy will be implemented. These are:

- The Commission networks, especially in relation to species conservation, protected areas, sustainable use, and ecosystem management.
- Capacity to formulate technically credible policy guidance and advice.
- Ability to bring a global perspective to Arctic issues and to convey an Arctic perspective to the rest of the IUCN constituency.
- Ability to develop and implement field projects that demonstrate best practices and provide lessons.
- Ability to promote partnerships and collaborative arrangements between interested stakeholders.

6 Medium Term Plan (2002-2004)

The Arctic Strategy Medium Term Plan is structured to ensure that significant contributions can be delivered to the Overall Programme that was approved in Amman – even in the context of the phased approach outlined above. It is designed to deliver results that will contribute to the achievement of six of the Programme’s seven Key Result Areas (see Table 7). As noted above, a step-wise approach is envisaged for the development of the Strategy that builds on existing capacities/interests in Commissions and the Global Thematic Programmes.

7 Business Model

7.1 Strategy definition

IUCN’s Arctic Strategy provides a facility to influence conservation and development practices in the Arctic. The Strategy is designed to:

- build on the existing capacities to conserve and sustainably use renewable natural resources;
- promote collaborative arrangements amongst IUCN’s programmes, members and partners in the region; and
- develop and implement a limited scope of field projects to: a) demonstrate best practices that will inform nation and regional policy processes, b) enhance capacities to sustainably use renewable natural resources, or c) contribute to global initiatives for which an Arctic contribution is desired.

7.2 Positioning

IUCN’s activities in the Arctic region have been characterized largely as selective interventions to promote protection/conservation of species of interest to SSC specialist groups and the formation of protected areas. The establishment of the Arctic Council in 1996 and the subsequent decision to grant IUCN observer status provided an entry point for IUCN to advance its mission and policy message in the region. However, while IUCN has been represented at most Council meetings, use of these forums

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Table 7. Inter-sessional indicative results/outcomes envisaged as Arctic Strategy Contributions to the Key Result Areas of the Overall Programme.

KEY RESULT AREA	THEME	INDICATIVE RESULTS/OUTCOMES
1. Effective management and restoration of ecosystems	1.1 Commission-based work in the Arctic (e.g., SSC, WCPA, and CEM) continues with support from counterpart Secretariat programmes.	Systems, including specialist networks, are established to acquire, monitor and assess information on Arctic issues.
		Capacity-building activities related to management and sustainable use of renewable natural resources in the Russian Arctic are developed and implemented.
		Bilateral and multilateral linkages between IUCN members are supported and enhanced in the Arctic.
	1.2 Promotion and establishment of key protected areas.	Needs for formation of selected trans-national protected areas is determined and a strategy adopted to promote their establishment.
	1.3 Preparation and submission of concepts of field demonstration projects in the Russian Arctic; fundraising with prospective donors.	A pipeline of prospective projects is prepared; projects are funded.
	1.4 Assessment of efficacy of restoration ecology techniques to Arctic ecosystems effected by anthropogenic activities (e.g., oil and gas exploration and extraction, mining, transport).	Arctic needs for application of restoration ecology technique included in CEM global analysis of the role of Restoration Ecology in managing ecosystems to promote sustainable livelihoods.
	1.5 Sustainable ecosystem management inside and outside protected areas, including development of Circumpolar Ecological Corridors Network (CP-ECONET).	Pilot projects developed in the Russian Arctic to demonstrate application of the CBD Ecosystem Approach.
	1.6 Where mutually beneficial, collaborative projects developed with interested global programmes (e.g., climate change, marine) and other prospective partners.	Collaborative projects developed and funded with partners.
2. Key institutions, agreements, processes and policies	2.1 IUCN representation provided at meetings of the Arctic Council, and key working groups.	Lessons learned in the Arctic and other regions that are relevant to Arctic residents, including indigenous populations, are communicated to the Arctic Council.
	2.2 Policy interventions are prepared on topics determined to be of importance that will be targeted at the Arctic Council and its working groups.	Information and tools are provided to stakeholders in the region to promote implementation of the CBD Ecosystem Approach and CBD Principles of Sustainable Use.
		Capacity of indigenous peoples' organizations to debate and implement Arctic clauses of the United Nations Framework Convention on Climate Change (UNFCCC) is enhanced.

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KEY RESULT AREA	THEME	INDICATIVE RESULTS/OUTCOMES
		Policies governing conservation and development in the Arctic are harmonized among stakeholder nations.
		Synergies between key agreements, processes and policies are enhanced as a result of advocacy in arctic fora (e.g. Arctic Council, Barents Euro-Arctic Council).
		Circumpolar, regional and national policies, legislation and governance structures incorporate incentives favouring conservation and sustainable use of biodiversity.
	2.3 Preservation and use of traditional knowledge and cultural heritage of indigenous peoples.	Traditional knowledge and current understandings of ecological and social processes in the Arctic are made available to policy-makers in the region.
3. Incentives and finance	N/A	N/A
4. Equitable sharing of costs and benefits	4.1 Assessment of conservation and sustainable use of biological resources, taking into account existing management systems for fisheries, marine mammals, and reindeer/caribou, especially by indigenous populations.	Equity components of global, regional and national conservation policies, agreements and frameworks are strengthened.
5. Assessment of biodiversity and of related social and economic factors	5.1 Monitoring and analysis of the impact of global climate change and invasive species on the status of Arctic species and ecosystems in consultation with the Climate Change Initiative experts in IUCN.	The impact/affect of global change and species introductions on the Arctic ecosystem is documented at three selected sites.
6. Information management and communication systems	6.1 Acquiring and disseminating information on conservation/development work in the Arctic. 6.2 Information provided on projects and activities to secretariat staff, members and other key actors in the region.	Information on conservation and development projects in the Arctic are compiled and made available to indigenous peoples' organizations, conservation organizations, governments and other interested stakeholders. Members and programme staff more aware of conservation/development activities in the Arctic and the relevance of activities in these sectors to their work.
7. Effective, efficient, and accountable governance and management of the Union.	7.1 Responsible and efficient management of the Arctic Strategy.	Secretariat support is provided to specialist networks, working groups, partnerships and fora of relevance to achieving the outcomes envisaged under the Arctic Strategy.
		SSC, WCPA, and CEM Steering Committees oversight of Commission-based work ensures high quality output; links to policy forums.
		Sources of funding are identified and proposals prepared for field demonstration projects and policy work.
	7.2 Provide a secretariat focal point to facilitate and coordinate the contributions from different sectors in the Arctic.	IUCN's work in the Arctic more cost effective in terms of achieving results; Arctic perspectives contributing to the achievement of the KRAs.

has not been particularly effective in promoting IUCN's mission, except in the species and protected areas context.

Promoting the relevance of the Arctic to global conservation/development issues, and vice versa, is a guiding principle of the Arctic Strategy. For example, the dependence of local people on sustainable use of existing natural resources is common to the Arctic and extreme arid lands in Africa, Asia, and Latin America. The tools developed to enhance the sustainability of natural resource use in any one of these areas as direct relevance to the others. While the unabated disbursement of environmental pollutants from non-arctic countries is having a measurable impact on the status of species and health of peoples in the Arctic, they are the harbingers of similar patterns in other regions. The impact of global climate change on the Arctic ecosystem, the species and peoples who reside in the region may provide an "early warning system" for other regions and possible insights into the applicability of the resident adaptation strategies being promoted.

The Arctic Strategy will build on IUCN's core competencies in species and protected areas conservation, ecosystem management, climate change and environmental policy to bring added value to conservation/development activities in the region. Through a step-wise approach, guided by interests and needs of collaborating Commissions and global thematic programmes, joint projects will be developed.

As noted, in the first phase, the focus of the Strategy will be on enhancing coordination of and communications of IUCN's and other stakeholders' work, developing demonstration projects in the Russian Arctic, and providing authoritative input to the relevant working groups of the Arctic Council.

8 Action plan

Based on approval/endorsement of the Arctic Strategy by Council, the Director General will prepare an action plan and programme of work. The Action Plan will address the following topics:

- Resourcing – It will call for additional funding, albeit minimal if the phased approach is approved.
- Results/Outputs Delivery – The indicative results/outputs cited in Table 7 are envisaged over the balance of the inter-sessional period. Specific activities to be undertaken will be described in annual work plans.
- Fund Raising – A structured Fund Raising strategy will be developed in consultation with the heads of the IUCN Secretariat offices in Canada, CIS, Europe, and the United States. Emphasis will likely be given to those Ministries/Departments in the stakeholder nations that are presently engaged in work in the Arctic.
- Management – The Arctic Strategy is a framework in which components of IUCN's programme may organize and coordinate their efforts to optimise the Union's impact and ensure that their efforts make a positive contribution to the Key Results Areas. The details of a management structure will be developed to ensure that all branches of the Secretariat have access and can contribute to IUCN's work in the Arctic.
- Staffing – While no new staff is envisaged to launch the Arctic Strategy, contributions and associated time requirements of existing staff will be considered.

ANNEX 1: IUCN Commission Working Groups relevant for the Arctic, April 2002

Species Survival Commission

<http://iucn.org/themes/ssc/index.htm>

Chair: David BRACKETT

Contact: Carolina Caceres, Canadian Wildlife Service, Place Vincent Massey, 3rd floor, 351 St. Joseph Blvd, Hull, Québec, Canada K1A 0H3; tel: ++1 (819) 953-1403, ++1 (613) 592-9346; fax: ++1 (819) 953-7177; Email: SSC_IUCN@ec.gc.ca

SSC Specialist Groups - Plants

Conifer Specialist Group

Chair: Aljos Farjon

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Newsletter: *FITZROYA*

Publication: *Conifers: Status Survey and Conservation Action Plan (1999)*

Lichen Specialist Group

Chair: Christoph Scheidegger

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Email: christoph.scheidegger@wsl.ch

Medicinal Plant Specialist Group

Chair: Danna Leaman

Contact: Canadian Museum of Nature, PO Box 3443, Station D, Ottawa, ON, K1P 6P4, Canada; tel: 1 (613) 235-7213; fax: 1 (613) 235-9622; Email: djl@green-world.org

Newsletter: *Medicinal Plant Conservation*

Publication: *Directory for Medicinal Plant Conservation*

SSC Specialist Groups Mammals

Bear Specialist Group

Chair: Harry V. Reynolds

Contact: Harry V. Reynolds, Wildlife Research Biologist, Alaska Department of Fish and Game - Fairbanks, 1300 College Road, Fairbanks, AK. 99701-1599, USA; tel: 1/(907) 459-7238; fax: 1 (907) 451-9723; Email: harry_reynolds@fishgame.state.ak.us

Newsletter: *International Bear News*

Publication: *Bears: An Action Plan for their Conservation*

Caprinae Specialist Group (wild sheep and goats)

Chair: Marco Festa-Bianchet

Contact: Marco Festa-Bianchet, Département de Biologie, Université de Sherbrooke, Sherbrooke, QC J1K 2RI, Canada; tel: 1/(819) 821-8000 x2061; fax: (819) 821-8049; Email: mbi-
anche@courrier.usherb.ca

Publication: *Wild Sheep and Goats and their Relatives. Status Survey and Conservation Action Plan for Caprinae*

Newsletter: *Caprinae News*

Cetacean Specialist Group (dolphins, porpoises and whales)

Chair: Randall Reeves

Contact: Randall Reeves, OKAPI Wildlife Associates, 27 Chandler Lane, Hudson, Quebec JOP 1H0, Canada; tel: 1/514/4587383; fax: 1/514/4587383; Email: rreeves@accent.net

Publications: *Dolphins, Porpoises, and Whales: An Action Plan for the Conservation of Biological Diversity 1988-1992*; *Dolphins, Porpoises, and Whales: 1994-1998 An Action Plan for the Conservation of Cetaceans*

Lagomorph Specialist Group (rabbits, pikas and hares)

Chair: Andrew Smith

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Publication: *Rabbits, Hares, and Pikas: Status Survey and Conservation Action Plan*

Otter Specialist Group

Chair: Claus Reuther

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Publication: *Otters: An Action Plan for their Conservation*

Newsletters: *IUCN/SSC Otter Specialist Group Bulletin*; *IUCN/SSC Asian Otter Newsletter*

Polar Bear Specialist Group

Co-Chairs: Stanislav E. Belikov; Scott Schliebe

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Rodent Specialist Group

Chair: Giovanni Amori

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Publication: *Rodents: An Action Plan for their Conservation*

Seal Specialist Group (seal, fur seal, sea lion and walrus)

Chair: Joe Geraci

Contact: Joe Geraci, National Aquarium, Pier 3, 501 East Pratt Street, Baltimore Maryland, 21202-3194 tel 1/410/576-3850; Email aphelps@aqua.org

Publication: *Seals, Fur Seals, Sea Lions, and Walrus: Status Survey and Conservation Action Plan*

Wolf Specialist Group

Chair: L David Mech

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Email: mechx002@maroon.tc.umn.edu

Newsletter: *European Wolf Newsletter*

Publication: *Ethiopian Wolf: An Action Plan for their Conservation*

SSC Specialist Groups - Birds

Crane Specialist Group

Chair: George Archibald

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consin 53913, USA; tel: 1/608/3569462; fax: 1/608/3569465; Email: george@savingcranes.org
Publication: *The Cranes: Status Survey and Conservation Action Plan*
Newsletter: *ICF Bugle*

Diver/Loon Specialist Group

Chair: Joseph Kerekes

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tel: 902/4266356; fax: 902/4267209; Email: joe.kerekes@ec.gc.ca
Newsletter: *Diver/Loon Specialist Group Newsletter*

Duck Specialist Group

Chair: Jeff Kirby

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Goose Specialist Group

Chair: Bart Ebbinge

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Email: b.s.ebbinge@alterra.wag-ur.nl
Newsletter: *Wetlands International Goose Specialist Group Bulletin*

Grebe Specialist Group (home page pending)

Chair: Jon Fjeldsa

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Publication: *Grebes: An Action Plan for their Conservation*

Grouse Specialist Group

Chair: Ilse Storch,

Contact: Storch c/o Wildlife Research and Management Unit, Technische Universität München, Linderhof Research Station, D-82488 Ettal, Germany; tel: 08822-9212-21; fax 08822-9212-12;
Email: storch.wildlife@t-online.de or ilse.storch@gmx.de
Publication: *Grouse: Status Survey and Conservation Action Plan 2000-2004*

Seaduck Specialist Group

Chair: Stefan Pihl

Contact: Stefan Pihl, Department of Wildlife Biology, National Environmental Research Institute, Grenavej 12, Kalo, 8410 Ronde, Denmark; tel: 45/892/01506; fax: 45/892/01515; Email: sp@dmu.dk
Newsletter: *Seaduck Bulletin*

Swan Specialist Group

Chair: Jan Beekman

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Email: beekman@cl.nioo.knaw.nl
Newsletter: *Swan Specialist Group Newsletter*

Threatened Waterfowl Specialist Group

Chair: Baz Hughes

Contact: Baz Hughes, Wildfowl & Wetlands Trust, Slimbridge, Gloucestershire, GL2 7BT, United King-

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dom; tel: 44/1453/891-900 ext: 259; fax: 44/1453/890-827; Email: baz.hughes@wwt.org.uk
Newsletter: *TWSG Bulletin*

Wader Specialist Group

Chair: David Stroud

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SSC Specialist Groups - Reptiles and Amphibians

European Reptile & Amphibian Specialist Group

Chair: Keith Corbett

Contact: Keith Corbett, Herpetological Conservation Trust, 655a Christchurch Road, Boscombe, Bournemouth BH1 4AP, Dorset, United Kingdom; tel: 44/1202/391319; fax: 44/1202/392785

Global Amphibian Specialist Group

Chair: Claude Gascon

Contact: Claude Gascon, Deputy Director, CABS, Conservation International, 1919 M St. N.W. Suite 600, Washington DC 20036 USA tel: 1 (202) 975-9717; fax: 1 (202) 331-0570;
Email: c.gascon@conservation.org

SSC Specialist Groups – Fish

Salmon Specialist Group

Chair: Guido R. Rahr, President, Wild Salmon Center, The Natural Capital Center, 721 NW 9th Ave, Suite 290, Portland, Oregon 97209, USA; tel: 503-222-1804; Email: grahr@wildsalmoncenter.org

Sturgeon Specialist Group

Chair: Mohammad Pourkazemi

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SSC Specialist Groups – Invertebrates

Inland Water Crustacean Specialist Group

Chair: Keith Crandall

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Email: keith_crandall@byu.edu
Newsletter: *Anostracan News*

Mollusc Specialist Group (snails, slugs, squids, clams, scallops, etc)

Chair: Mary Seddon

Contact: Mary Seddon, Curator, Biodiversity & Systematic Biology, National Museum & Galleries of Wales, Cathays Park, Cardiff UK; tel: 44/2920/573343, fax: 44/2920/239009;
Email: Mary.Seddon@nmgw.ac.uk
Newsletter: *Tentacle*

SSC Specialist Groups – Disciplinary

Conservation Breeding Specialist Group

Chair: Ulysses S. Seal

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Email: office@cbsg.org

Newsletters: *CBSG News*, CBSG India News, CBSGNews-Indonesia

Invasive Species Specialist Group

Chair: Mick Clout

Contact: Maj De Poorter, School of Environmental and Marine Sciences, University of Auckland, Tamaki Campus, Private Bag 92019, Auckland, New Zealand; tel: 64/9/3737599 ext 6814; fax: 64/9/3737042;

Email: issg@auckland.ac.nz

Newsletter: *Aliens*

Re-introduction Specialist Group

Chair: Frederick Launay

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Newsletter: *Reintroduction News*

Sustainable Use Specialist Group

Chair: Leif Christoffersen

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Newsletter: *Sustainable*

World Commission on Protected Areas

<http://wcpa.iucn.org/wcpainfo/aboutppa.html>

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WCPA Arctic Action Plan and Report of Planning Session, Ottawa, Canada, 2000.

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Newsletter: MPA News <http://depts.washington.edu/mpanews/MPA28.htm>

Publication: *A Global Representative System of Marine Protected Areas, 1995*; *Guidelines for Marine Protected Areas; Marine and Coastal Protected Areas. A Guide for Planners and Managers, 1999.*

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ANNEX 2: Situation Analysis – Human and Environmental

Bio-physical conditions

The Arctic region is a circumpolar system spanning three IUCN regions - North America, West Europe and East Europe - and shared by eight IUCN member countries (Canada, Denmark/Greenland, Finland, Iceland, Norway, Russia, Sweden and the USA). There are various scientific and political definitions of the Arctic: the area north of the Arctic Circle at 66°33', the 10° C July isotherm (average temperature in the warmest month) as the southern boundary, the continuous boreal forest line, or political boundaries. For the purposes of circumpolar co-operation, however, most organisations such as the Arctic Council apply a less rigid, more pragmatic definition that incorporates elements of each of the others. IUCN will also use this approach when geographically situating its Arctic work, and the map available at: <http://www.grida.no/caff/images/basemap.JPG>) shows the definitional boundaries. It is used by the Arctic Council Conservation of the Arctic Flora and Fauna (CAFF) Working Group.

Thus defined, the Arctic region exceeds 25 million km² split into a terrestrial and a marine component. The terrestrial component is approximately 14 million km² stretching northward from the continuous forest to the Arctic coastline. There are several terrestrial sub-systems: the Arctic desert, or arid lands situated mainly in the Canadian archipelago, the treeless tundra, and the transitional northern timberline forest termed the "forest-tundra" zone, or taiga, that separates the tundra from the continuous boreal forest. Features include extensive wetlands, glaciers, mountains, lakes, rivers and meadows with much of the territory underlain by a thick layer of permanently frozen ground termed "permafrost".

Arctic vegetation has adapted to the unusual climate conditions and occurs in extremely variable vegetation patterns, ranging from stands of spruce, birch, larch or pine, to very wet and rich sedge meadows, to dry polar deserts where vegetation is restricted to a few types of lichens. Temperature, wind, substrate, erosion and topography set the limits for the distribution of plants. In the summer, the Arctic tundra and coastal zones host millions of migratory birds from all over the globe. In fact, Arctic migrants are found on all continents, including Antarctica.

The marine component is equally large and consists of the Arctic Ocean and surrounding water bodies, which include the Beaufort, Bering, northern Okhotsk, the Chukchi, East Siberian, Laptev, Kara, White, Barents, Greenland, Labrador, and northern Norwegian Seas and the Baffin, Hudson, James Bays and the Davis Strait. On the basis of size alone, the Arctic is one of the world's largest bio-geophysical systems. The Arctic Ocean, with its permanent ice pack of over 6 million km², and seasonally formed ice-sheet the size of Australia, is a major determining factor and exerts a strong influence on the global ocean and climate regimes. Arctic waters, especially the Bering and Barents Seas, are surprisingly rich and boast two of the most productive fishing grounds in the world. In summer, Arctic waters teem with invertebrate life that in turn attracts large numbers of migratory marine mammals from the southern latitudes.

Due to its harsh climate, the Arctic has a short food chain although all trophic levels are present. This means that disturbance of a single species can have major impacts on the system since there are few or no replacement species. Species in the Arctic are not evenly distributed but often occur in centres of relative abundance, or "biological hot spots" interspersed by zones of relative barrenness. Some sites, however, may be critical for only a few species or migrants. Endemic species are highly adapted to the rigours of their region and include the trademark Caribou/Reindeer, Polar bear, Snowy owl and Beluga whale.

Regular population cycles occur in several Arctic species wherein the species will have high numbers in certain years and low numbers in others. The cycles are not well understood but they have important impacts on the rest of the food chain.

The Arctic is characterised by a cool variable climate where winter temperatures can dip to -60°C , although the Scandinavian portion is more temperate due to Gulf Stream warming, and summer temperatures can climb as high as 25°C . Other features include a continual state of near-darkness during the winter months alternating with near continuous light during the summer, a short intense growing season, and low resiliency to anthropogenic disturbance. For example, regeneration of vegetation can take decades or centuries and waste materials can lie un-decomposed for centuries. Parts of the Arctic are prone to severe climatic episodes such as winter ice-storms or sudden periods of high winds.

Socio-cultural conditions

The Arctic has around 3.5 million people, most of whom live in urban centres. The total population is probably declining, due to harsh economic conditions in Russia. In most other regions, the population is increasing due to high birth rate, improving health conditions, and migration.

Indigenous peoples (about half a million people) represent approximately 14% of the total population and include diverse groups such as the Saami, the Nenet, Nganasan, Enet, Yakut, Dolgan, Even, Evenki, Chukchee and Koryak of Russia and the Aleut, Athabaskan, Yupik, Cree, Inuvialuit and Inuit of North America and Greenland. Some North American groups also have members in Siberia. These groups have inhabited the circumpolar world, except Iceland, for millennia and their communities still number in the thousands especially along Arctic coasts and plains. The people often live off the land, using available resources, but their present situation may differ markedly from one to the other and generalisation could be misleading. Non-indigenous people have also lived in northern Scandinavia, Russia and in Iceland for over a thousand years with their cultural, governance and socio-economic histories often intertwined with those of the indigenous peoples.

The social fabric of the north is evolving rapidly. This is caused in part by the shift to a wage economy and by changes in technology and communication. In parts of the Arctic, particularly in North America and Russia, this has resulted in social problems of unemployment, culture clashes and alienation, especially among the youth.

The Arctic countries have sophisticated government and legal infrastructures along with an enviable array of conservation legislation, although enforcement is sometimes deficient. They also have advanced education systems and most have high per capita income averages. However, some parts of the Arctic have not shared fully these advantages and are still heavily subsidised, having low per capita income averages. Partly in reaction to that, Northern governments, local communities and indigenous peoples have formed several organisations in a quest for improved well-being and sustainable economic development. Six of them with international membership are currently recognised as Permanent Participants to the Arctic Council, and all work towards sustainable livelihood and sustainable development.

Land claim settlements and devolution of power is very important for the Arctic Indigenous communities. Their desire for "modern" economic and social systems is often coupled with a strong desire to conserve and celebrate their traditional life-styles and cultural practices and to secure their rights to lands, local decision-making, and resources. Some Arctic countries have taken steps to recognise this. For example, Canada has negotiated several land-claim settlements with northern indigenous peoples and has recently established the territory of Nunavut which has a majority Inuit population.

The situation is different in other countries, where home rule government has been established. It is the case in Denmark, which has established systems of Home Rule governments in Greenland and the Faeroe Islands. The Nordic countries have separate Saami parliaments run by their indigenous populations of the north. On the other hand, in some areas ethnic groups, families and communities do not have rights concerning land use and access to traditional natural resources.

Socio-economic conditions

The Arctic has massive proven non-renewable resources (oil and gas reserves, large gold, high-quality diamond, mineral and precious metal deposits) as well as renewable ones (plentiful marine and land-based wildlife, high fishery potential, sub-Arctic timberline forests, vast expanses of wilderness, landscapes with some potential for tourism (mainly cruise and ecotourism) and a high proportion of the world's freshwater supply, much of it stored as ice). Because of its natural wonders and rich resource base, the Arctic is attracting more attention by industrial developers.

Natural resources have supported Arctic peoples for millennia and continue to play a critical role in their everyday lives. A continual challenge is to conserve its natural and cultural environment while achieving a reasonable balance with economic development, and insure at the same time equitable sharing of the benefits. Unfortunately, benefits of oil, gas and mineral extraction, forestry and Arctic tourism often bypass local communities, and may produce social unrest and mounting social pressures as a result of inequitable sharing of the benefits of resources use. It is particularly true when the benefits of renewable resources exploitation bypass the communities which are left with a depleted and degraded environment, with no possibility of sustainable use.

Over the past 50 years or so there has been a major influx of people from the south moving into the Arctic regions, especially in Eurasia and North America. These movements have usually occurred for economic reasons and were often encouraged by governments, especially in Russia which had a policy of northern settlement to supply its massive northern industrial complexes. Today Russia can no longer maintain those complexes and, with the assistance of the World Bank, has a relocation programme in place to move recent immigrants back south. Finally, in some parts, many young people leave the Arctic to pursue educational opportunities to the south.

The rapid human population growth in some parts of the Arctic puts pressures on the limited carrying capacity of the land, increase pollution and waste, and is a strong incentives to find ways to provide sustainable livelihoods for communities. However, according to the Inuit Circumpolar Conference (ICC), sustainable development of Inuit economies depends on free access to markets. At present, several barriers limit market access for many Inuit traditional products and services. Removing these barriers is seen by the Inuit as an essential step towards economic self-determination; they are aware that these changes must only be sought in full awareness of their potential impacts to Inuit subsistence and other traditions and practices.

Formerly isolated from the world stage due to remoteness, the Arctic is entering the global mainstream. Improvements in satellite and microwave communications are now available to connect Arctic residents with each other and with the rest of the world. In some areas there are now major roadways, regular air travel, cold-resistant oil and gas pipelines and an increase in shipping. In fact, the Northern Sea Route which hugs the Russian Arctic coastline could soon provide direct access between Europe and Asia, although there are still serious economic impediments. These advances in transportation and communications have increased the Arctic's accessibility, strategic value and its potential as a major global supplier of natural resources. Within and among the countries and organisations of the Arctic there has also been a growing trend to closer co-operation.

Institutional conditions

Ten years ago, few regional fora existed connecting government in the Arctic. Now, such fora exist – the main one being the Arctic Council. Others mentioned below are the Standing Committee of Parliamentarians of the Arctic Region, the Barents Euro-Arctic Council and the Nordic Council of Ministers.

IUCN Arctic Strategy

The Arctic Council was established in 1996 as a high-level intergovernmental forum. It provides a mechanism to address the common concerns and challenges faced by the Arctic governments and the peoples of the Arctic. All eight arctic governments are members of the Arctic Council, and six Indigenous organisations are Permanent Participants in the Council (RAIPON, ICC, Saami Council, Aleutian International Association, Arctic Athabaskan Council and Gwich'in Council International). There is provision for non-Arctic states (e.g. Netherlands, U.K., France), inter-governmental and inter-parliamentary organisations and non-governmental organisations to become involved as observers. Twenty-two countries and organisations presently have observer status, among them IUCN (since 2000) and WWF. (<http://www.Arctic-council.org>)

The main activities of the Council focus on the protection of the Arctic environment and sustainable development as a means of improving the economic, social and cultural well-being of the north. The Arctic Council is active mostly through its Working Groups; these are described below, as potential partners for IUCN's work in the Arctic.

One of the main priorities of the Standing Committee of Parliamentarians of the Arctic Region was originally to support the establishment of the Arctic Council. Its purpose now is to promote the work of the Council. Major themes catching the attention of the Committee are supporting the work of the Arctic Council, Capacity Building in the Arctic (educational issues, youth programs, information technology), and financing for sustainable development. (<http://www.grida.no/parl/>)

The Barents Euro-Arctic Council's objective is "to promote sustainable development in the Region, bearing in mind the principles and recommendations set out in the Rio Declaration and Agenda 21 of UNCED." The Council promotes co-operation in a wide variety of fields. It runs projects particularly aimed at improving the situation of indigenous peoples in the North. (<http://virtual.finland.fi/finfo/english/barents.html>)

The Nordic Council of Ministers operates an Adjacent Areas programme aiming at promoting "stable and democratic development", addressing mainly Security, in a broad sense of the term, shared values, and increased economic co-operation. (http://www.norden.org/index_uk.html)