

North Africa sub-regional programme

2008 - 2012



April 2008

List of acronyms

UNEP	United Nations Environment Programme
UNDP	United Nations Development Programme
MAP	Mediterranean Action Plan
RAC/SPA	Regional Activity Centre for Specially Protected Areas
GEF	Global Environment Facility
GFCM	General Fisheries Commission for The Mediterranean
UMA	Union du Maghreb Arabe
UNFCCC	United Nations Framework Convention on Climate Change

FOREWORD

The present draft programme was prepared by IUCN Centre for Mediterranean Cooperation on the basis of thematic priorities of IUCN overall programme for the period 2009-2012, bearing in mind the priorities identified by the North African members at the meeting held in Malaga from 3 to 4 September 2007.

This programme was submitted to and accepted by the members during the meeting held in Tunis from 14 to 15 March 2008. The North Africa programme covers the following countries: Algeria, Egypt, Libya, Morocco and Tunisia. It will be implemented by IUCN members from the region with the support of the IUCN Centre for Mediterranean Cooperation in Malaga.

INTRODUCTION

The countries of North Africa present diverse environments and landscapes with great richness and diversity of fauna and flora. They host different types of ecosystems such as coastal, island, mountain, desert, oasis and wetlands.

Those ecosystems are particularly threatened by different human-induced and climatic factors, and at times fail to ensure the goods and services necessary for socio-economic development of countries in North Africa, thus challenging the livelihoods of the people dependent on those ecosystems and on natural resources in general.

Besides, there are strong interrelationships between terrestrial ecosystems - mainly the arid ecosystems, which are subject to water stresses - and marine and coastal systems that become areas of attraction / shelter for people and are thus subjected to greater stresses.

Countries in North Africa are usually characterised by shared challenges concerning degradation of natural resources at the marine and terrestrial levels as well as by significant socio-economic problems (unemployment, poverty, etc.), namely in the arid zones representative of such region.

Countries in North Africa are characterised by their aridity and their northern marine boundaries. Hence, the populations in the region are expected to be the first to be impacted by the combined effects of climatic change and desertification processes, and are thus bound to face serious economic losses.

It is true that the extent of impact of climate change will vary according to the type of ecosystem and area, but the forecasts available indicate that both ecosystems and economies will be highly exposed. Depending on the different scenarios, crop yield and fisheries will decrease, which will in turn decrease food security and lead to eventual socio-economic migration, especially in the coasts where more than 70% of the population lives. It is thus imperative that measures for adaptation to this phenomenon are put in place.

Moreover, certain forms of use of natural resources have led to overexploitation, as in the case of water resources and some stocks of living marine resources. The sustainability of such use can only be guaranteed through approaches that enable the decline trend to be reversed.

In certain cases, pressure on natural resources springs at least partly from the loss of traditional practices. Many of these practices have proven to be efficient tools for the

sustainable use of resources - They are particularly adapted to the natural conditions in North Africa and should therefore be preserved as human/cultural heritage, and as milestones to guide future development.

While constituting a major worry for all the North African countries, environmental issues are sometimes seen as secondary priorities by governments and decision-makers, because of the prevalence of poverty and other social and economic concerns (unemployment, low school attendance, and poor access to drinking water and to health system).

CONTEXT AND PLANNED RESPONSE

IUCN had since 1994 embarked on a programme aiming at promoting the conservation of biodiversity in North Africa, supporting sustainable use of natural resources, and giving local communities, especially women and young people, the necessary skills to conserve biodiversity, as well as developing a platform of exchange of experience and information.

The most recent IUCN programme (2000-2004), focused on Biodiversity in North Africa (PBAN) and was carried out in Algeria, Egypt, Libya, Morocco and Tunisia. This programme, funded by the Swiss Development Cooperation Direction, enabled important achievements in biodiversity conservation work, mainly in the field of aromatic and medicinal plants, and in compiling traditional knowledge practices and promoting environmental education within the local communities.

Several IUCN members helped to implement this programme with activities at national level and other activities involving inter-country collaboration. In addition to the specific programme results, it provided the necessary framework to reach conclusions and to learn lessons to improve IUCN action in North Africa.

With its new 2008-2012 programme, IUCN intends to develop a comprehensive programme for sustainable management of natural resources in the North Africa region, based on the priorities identified by the IUCN members. They will play a major role in its implementation, working in collaboration with local partners and in coordination with initiatives that have already been launched.

The general aim of the 2008-2012 programme is to contribute to sustainable development in North Africa by providing suitable solutions to deal with global environmental challenges.

The activities of the programme will be developed by IUCN members in the framework of the sub-regional programme for North Africa, and they will contribute to the overall results of IUCN-Med.

The North Africa programme will pay particular attention to the necessary steps that will guarantee adaptation of ecosystems and populations to climate change effects. This would be particularly emphasized at the level of the most fragile ecosystems in North Africa regions by looking at governance issues and emphasizing the strengthening of capacities and training.

Through its Mediterranean programme, the IUCN will make available to North Africa the expertise and experience obtained through its various programmes and commissions, and its knowledge about species and its experience in biodiversity conservation and ecosystem management by suggesting appropriate tools for managing natural resources and helping in decision-making.

The programme will develop means to ensure equitable socio-economic development for the people of North Africa and mainstream gender empowerment in its activities.

GENERAL CONTEXT

Geographical and demographic framework

The five countries of North Africa cover a total area of 5,275 million sq. km. and occupy the whole southern Mediterranean shore, with a coastal fringe that extends for about 5 200 kilometres.

Table 1: Geographical data on the countries of North Africa

(x1000)	Algeria	Egypt	Libya	Morocco	Tunisia
Total Land Area (ha)	238,74	100,145	175,954	71,085	16,361
Forest	2,145	72	358	5,680	510
	1%	~0%	~0%	8%	1%
Agriculture Land and Crop / Natural Vegetation Mosaic	8,215	3,300	2,150	9,230	5,100
	3,4%	3,3%	1,2%	13%	31,2%
Shrub, Savannah & Grassland	9%	1%	2%	42%	31%
Sparse or Barren Vegetation; Snow & Ice	86,9%	94,7%	96,8%	32%	35,8%
Wetland/Water Bodies	~0%	1%	~0%	0%	1%

Land Cover Data for North African Countries (From Earthtrends Country Profiles: earthtrends.wri.org)

Although the situation differs from country to country, in general terms, a large part of the surface area of the five countries has an arid or semi-arid nature, explaining the low percentage of cultivated area. Land degradation and lack of access to ecosystem services has a direct impact on the rural populations' living standards, and this is one of the main reasons for migration to towns and coastal areas.

In fact, a great part of the territory of the North African countries is subject to an arid or semi-arid climate, with particularly fragile ecological conditions and a prevalence of problems linked to desertification and the encroachment of the desert on oases and other ecosystems of the region.

Mountain and forest ecosystems are present in all the North African countries, apart from Egypt. In Morocco, Algeria and Tunisia, mountain areas and forest areas in general cover large areas of the territory and are sites of diversified human activities and populations with great dependence on natural resources and often relatively low living standards, experiencing at times limited access to basic infrastructure.

All the North African countries have very extensive coastal areas where the majority of the population and most economic activities are concentrated. All these countries have a façade that opens onto the Mediterranean Sea. Morocco and Egypt, as well as their Mediterranean coastal fringe, have a coastal fringe on the Atlantic (for Morocco, 2500 km.) and the Red Sea (for Egypt, 1500 km.). Ensuring rational management of coastal areas and marine resources is one of the main challenges facing the five countries of the region.

Wetlands are also an important ecosystem in North Africa. The region contains several wetlands of world importance. With a few exceptions, North Africa's wetlands are dry for long periods and are subject to the impacts of hydraulic and urban development.

The current estimated population of the five countries is around 156 million residents and is growing at an average rate of 1,6%; it will thus have grown by about 11 million people by 2012, the date when the present programme will have been completed. The forecasts made by the Blue Plan¹ indicate that by 2025 the total population of the five countries of North Africa will be 197 million people.

Table 2: Changes in the total population of the countries of North Africa

	Total population in 1970	Total population in 2000	Estimated total population in 2007	Estimated total population in 2012	Estimated total population in 2025
Algeria	13,623	30,332	33,691,160	36,090,560	42,329,000
Egypt	32,364	66,007	74,095,640	79,873,240	94,895,000
Libya	1,986	6,038	6,820,320	7,379,120	8,832,000
Morocco	15,081	28,505	31,212,320	33,146,120	38,174,000
Tunisia	5,127	9,615	10,532,560	11,187,960	12,892,000
Total	63,054	130,882	145,819,440	156,489,040	184,230,000

Economic and political context

Since their independence, the countries of North Africa have followed economic development models with varying degrees of openness into the world economy.

Politically and economically, these countries, except from Egypt, are linked by the Union of the Arab Maghreb (UAM) Agreement, which also integrates Mauritania. This Union has a Secretariat based in Morocco whose mandate includes certain environmental issues. It should be noticed that the UAM's level of activity remains relatively low.

Four North African countries have signed Association Agreements with the European Union, which came into force in 1998 (Tunisia), 2000 (Morocco) and 2004 (Egypt). Algeria signed an Association Agreement with the European Union in December 2001. These Agreements replace the cooperation agreements signed in the 1970s and concern in particular economic exchanges, although they also deal with social concerns and the environment. The extent to which these Agreements have been implemented differs from one country to the next, but the desire for further relations and cooperation with the European Union is clearly displayed by the governments of the five countries of the region.

Economically speaking, the situation of the five North African countries differs considerably from country to country, especially regarding GDP and GDP per capita. However, the fight against poverty and the improvement made in the standard of living (income, education, health) and basic infrastructure are among the main priorities for the five countries. GDP per head varies according to country from US\$ 1 694 to US\$ 5 527, and the average poverty rate of the North African population is estimated at 19,5%.

According to World Bank data, poverty has clearly declined in recent years in North Africa, but the five countries are faced with major mid- to long-term socioeconomic challenges; their development efforts suffer from the pressure of desertification, a decline in soil quality, overexploitation of natural resources (overgrazing, overfishing, etc.) and the increasing

¹ As part of its activities the Blue Plan (a UNEP/MAP Centre) carries out prospective studies on the economic and social evolution of the Mediterranean.

scarcity and quality degradation of water resources. These difficulties will be aggravated by the effects of climate change, whose first impacts are already being felt in the region.

Preserving the state of the environment at a suitable level to attain economic and social development objectives is thus a major challenge for the five countries. This challenge is also a mid- to short-term political stake, since it underpins the social stability, and thereby the political systems, of these countries.

Environment protection is a political choice declared by the political authorities of the five countries, which already possess relatively substantial institutional and legal frameworks as regards the environment, even if a need for institutional capacity enhancement is still obvious.

This political trend is dictated not only by sensitivity to environmental issues but also by the increasingly visible impact that environmental degradation has on the social and economic sectors. As part of its METAP programme, the World Bank has undertaken studies on the cost of environmental degradation in four countries in the region (Algeria, Egypt, Morocco and Tunisia). It emerged from these assessments that the total cost of environmental degradation for these four countries is 7,6 billion US dollars per year, corresponding to a percentage of GDP that varies between 2,1 and 4,8% per country.

Table 3: Cost of environmental degradation (in million US\$ per year)

	Soil	Air	Water	Coastal area	Waste	Total	% of GDP	Overall
Algeria	541	446	367	287	52	1693	3,6	568
Egypt	1060	1890	860	290	180	4280	4,8	560
Morocco	150	340	410	170	160	1230	3,7	300
Libya	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tunisia	109	121	128	54	28	440	2,1	124

The North African countries and the main environmental conventions

The five North African countries have signed the main multi-lateral environmental conventions. They all are also Parties to the Barcelona Convention for the Protection of the Mediterranean Marine and Coastal Environment. However, they have not all signed the thematic protocols of this Convention.

Table 4: Status of ratification of International Conventions and Agreements

	Year of signing				
	Algeria	Egypt	Libya	Morocco	Tunisia
General Fisheries Commission for the Mediterranean	1967	1951	1963	1956	1954
Ramsar Convention on Wetlands of International Importance, especially as Waterfowl Habitat (1971)	1984	1988	2000	1980	1981
Convention on International Trade in Endangered Species of Wild Fauna and Flora (1973)	1984	1978	2003	1976	1975
Convention for the Protection of the Marine and Coastal Environment of the Mediterranean (1976)	1981	1978	1979	1980	1977

Convention on the Conservation of Migratory Species of Wild Animals (1979)		1983	2002	1993	1987
Convention on the Conservation of European Wildlife and Natural Habitats (1979)				2001	1996
United Nations Convention on the Law of the Sea (1982)	1996	1983		2007	1985
Convention on Biological Diversity (1992)	1995	1994	2001	1995	1993
United Nations Framework Convention on Climate Change (1992)	1994	1995	1999	1996	1994
Kyoto Protocol (1997) to the United Nations Framework Convention on Climate Change	2005	2005	2006	2005	2005
United Nations Convention to Combat Desertification (1994)	1996	1995		1996	1995
Agreement for the Conservation of Cetaceans in the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (1996)	2007		2005	2001	2002

Main funding programmes

All the countries in the region are calling for foreign financial support to implement their environmental programmes. Part of this support is provided via bilateral cooperation with the European countries. Canada, the US and Japan are also making a contribution to this bilateral cooperation. Most of the external funding of the environmental projects is given multilaterally through United Nations programmes and European programmes. GEF has been one of the main sources of funding provided to the countries of the region in recent years for implementing environmental projects.

Main Guidance of the IUCN North Africa Programme

Principles followed for the preparation of the North Africa component of the IUCN-Med Programme

This sub-regional programme for North Africa was designed bearing in mind the five thematic priority areas of the IUCN's 2009-2012 programme, and in particular the programme for its Centre for Mediterranean Cooperation (IUCN-Med).

These five global IUCN thematic priority areas are:

- *Thematic priority area 1 - Conserving the diversity of life. Ensuring sustainable and equitable management of biodiversity from local to global levels.*
- *Thematic priority area 2 - Changing the climate forecast. Integrating biodiversity considerations and opportunities into climate change policy and practice.*
- *Thematic priority area 3 - Naturally energizing the future. Implementing ecologically sustainable, equitable and efficient energy systems.*

- **Thematic priority area 4** - *Managing ecosystems for human well-being. Improving livelihoods, reducing poverty and vulnerability, and enhancing environmental and human security through sustainable ecosystem management*
- **Thematic priority area 5** - *Greening the world economy. Integrating ecosystem conservation values in economic policy, finance and markets*

While keeping a strong link with the above-mentioned priority themes, the special features and requirements of the North Africa region were the main guiding principle when drafting this programme, considering specifically the conclusions and recommendations of the Meeting of the North Africa members held in Malaga in September 2007.

The areas of action by the main international organisations and cooperation agencies operating in the region were also taken into consideration to avoid overlapping and duplication. The programme was indeed designed to promote complementarity with the programmes of other actors while focusing on those areas where IUCN and its members could offer an added value.

Main orientations of the IUCN's North Africa Sub-Regional Programme

Thematic Priority Area 1 - Conserving Biodiversity in North Africa

The North African territory has remarkable marine and terrestrial biological diversity linked to its great geo-morphological variability and the diversity of fauna and flora species therein. The region's ecosystems and landscapes are also very diverse. Much of this territory has been subject to the human use of resources for centuries, increasingly so over the past thirty years, particularly in the coastal areas.

Like the rest of the Mediterranean, North Africa is a hot spot of endemism, both for fauna and flora. Moreover, many species considered as threatened at international level, or that have disappeared in other parts of the planet, are still present in the countries of North Africa. The arid conditions to which much of North Africa is subject adds to the complexity and accentuates the vulnerability of the region's species and ecosystems, despite the great degree of adaptation to aridity shown by many animal and plant species.

The five countries of the region are Parties to the Convention on Biological Diversity. As part of implementing this Convention, Algeria, Egypt, Morocco and Tunisia have developed national strategies to conserve biodiversity and adopted national action plans to put their strategies into effect. These countries received a financial contribution from UNDP to prepare strategies and national action plans on the basis of national studies which have for each country made an assessment of biological diversity and identified the main threats and priorities. According to these studies, the main ecosystems in the four countries are:

Table 5: Main ecosystems as identified in the national study on biodiversity

	Main priority ecosystem
Algeria	<ul style="list-style-type: none"> - Coastal and marine ecosystems - Mountain ecosystems in the Tell Atlas - Steppe ecosystems - Saharan ecosystems

Egypt	<ul style="list-style-type: none"> - Ecosystems in the hyper-arid regions with moderate winters (desert in the eastern part of the country and the southern part of the country's western desert) - Ecosystems in the hyper-arid areas with cold winters (mountainous massif of the southern Sinai) - Ecosystems in the coastal belt with Mediterranean influence - Fresh-water ecosystems - Marine ecosystems, particularly coral reefs and mangroves
Morocco	<ul style="list-style-type: none"> - Forest and steppe ecosystems - Saharan ecosystems - Marine and coastal ecosystems - Continental wetlands ecosystems - Cave ecosystems
Tunisia	<ul style="list-style-type: none"> - Forest ecosystems - Wetlands ecosystems - Coastal area ecosystems - Marine and lagoon ecosystems - Steppe ecosystems

The main directions of the national strategies to protect biological diversity were defined by these countries bearing in mind the main threats (see Table below):

Table 6: Main threats and mitigation options

Country	Main threats to biodiversity	Main directions of the national strategy to protect biological diversity
Algeria	<ul style="list-style-type: none"> - Loss/modification of habitats - Forest fires - Overexploitation of resources - Pollution - Invasive species 	<ul style="list-style-type: none"> - Development of protected areas - Protecting biological diversity by protecting habitats - Fight against degradation of natural resources - Systematic inventorying of fauna and flora - Creation of a gene bank

Country	Main threats to biodiversity	Main directions of the national strategy to protect biological diversity
Egypt	<ul style="list-style-type: none"> - Demographic pressure - Hunting and excessive taking of resources - Globalisation and its negative impacts on use of resources - Lack of human and financial resources - Degradation of habitats due to agriculture and industrial pollution - Invasive species 	<ul style="list-style-type: none"> - Managing natural resources on scientific basis that guarantee that the natural equilibrium is maintained - Developing national scientific and technological capacities in the field of biological diversity (including managerial and institutional skills) - Mobilizing capacities and resources to protect biological diversity - Setting up action programmes that guarantee the positive participation of individuals and organisations - Introducing the legal instruments and social and economic incentives that back up conservation and the sustainable use of natural resources - National actions must complement regional or international activities, including the equitable exchange of scientific data on biodiversity
Morocco	<ul style="list-style-type: none"> - Deforestation - Overgrazing - Developments in the Coastal zone - Over fishing - Introduction of alien species 	<ul style="list-style-type: none"> - Rational management of biological resources (in and ex situ conservation, participatory approach, monitoring, restoring, etc.) - Improving knowledge on biological diversity (scientific research, training and information) - Awareness and education (programmes suited to the wider public and students) - Enhancing the legislative and institutional frameworks (including dovetailing with Morocco's international commitments) - Enhancing international cooperation
Tunisia	<ul style="list-style-type: none"> - Growing demand for natural, agriculture and fisheries products - Demographic growth and citizens' improved standard of living - Poverty of some rural populations - Scarcity of vital extra-agriculture resources - Disturbance of the ecosystem balance by pollution and excessively selective taking of certain species 	<ul style="list-style-type: none"> - Protecting areas, ecosystems and other elements of biological diversity not yet influenced by human activity - Restoring degraded areas and ecosystems - Limiting genetic erosion - Sustainable use of biological diversity and biological and genetic resources - Developing a system of data collection on biological diversity - Integrating biological diversity within sector-based strategies - Setting up a suitable institutional and legal framework

Activities proposed in the context of Thematic Priority Area 1 - Conserving Biodiversity in North Africa

Remarks:

- The activities to be implemented in each of the countries will be identified in consultation with the members
- The text between the square brackets represents options to be assessed

Results of the IUCN-Med Component Programme	Results of the IUCN-Med Sub-regional Programme for North Africa	Suggested targets / activities
A coherent and representative network of protected areas is developed in the Mediterranean.	1) The sites that are most representative of the habitats or of the fauna/flora of the region are identified and existing sites is reinforced (better managed and protected) in the North African countries	<ul style="list-style-type: none"> a) Elaborating common criteria and a standard methodology for identifying sites of conservation interest – including those identified as important sites for endemic and endangered species. b) Training national teams and national assessment of the status of the species (fauna/flora) c) Identifying priority areas for conservation and effectiveness according to a standard methodology and common criteria d) Enhancing the conservation and management effectiveness of existing protected areas and wetlands e) Integrating biodiversity data in existing management mechanisms of natural resources, including river basins and make the data accessible f) Exchanges with EU-Med researchers (networking actions) for gathering data, applying common methods and covering urgent information gaps including the effects of the free trade agreement (Euro-Med) on biodiversity

Results of the IUCN-Med Component Programme	Results of the IUCN-Med Sub-regional Programme for North Africa	Suggested targets / activities
	2) The legal and institutional frameworks related to setting up protected areas are reviewed and improved.	<ul style="list-style-type: none"> a) Reviewing and assessing the legal and institutional frameworks governing the creation [and management] of protected areas in the North African countries. b) Convening national workshops to review the results of the assessment and make suggestions for strengthening the national legal and institutional frameworks. c) Development of capacities on legal issues on marine protected areas, as well as tools that could gather both ecological and economic uses of natural resources.
At least 4 countries and 1 regional agreement clearly incorporate threatened (and invasive) species components in their conservation strategies	3) The commitments of at least 2 countries of the region concerning protection of species listed by the main relevant Conventions are put into national legislation	<ul style="list-style-type: none"> a) Threatened species are identified and adequate protection measures are incorporated into national conservation strategies b) Assessing the national legislation on the protection of species and the introduction of species, bearing in mind the provisions of the international conventions c) Setting up national systems to assess the state of species and populations d) Setting up a regional (North African) mechanism for regional assessment of the state of species and populations e) Promoting north-south cooperation for technical support, sharing of know-how and transparency in terms of species/habitats information sharing f) Elaboration of guidelines for setting up and periodically reviewing national legislation on the protection of species

Results of the IUCN-Med Component Programme	Results of the IUCN-Med Sub-regional Programme for North Africa	Suggested targets / activities
	4) The capacity of national authorities in technical means and knowledge on species in danger and invasive species is improved in at least two countries in the region	<ul style="list-style-type: none"> a) Elaboration of a guide for the monitoring authorities (customs, national/royal guard, maritime police etc.) for better recognition of the species concerned by CITES and better knowledge of the regulations concerning these b) Information and awareness campaigns for tourists concerning the purchase and transfer of endangered species c) Generate knowledge and awareness on invasive species and its effects and share information around the region
National conservation action plans and programmes in at least 4 countries in the Mediterranean take into consideration the recommendations of ratified International Conventions and Agreements	<p>5) CBD Programme of work on protected areas (POWPA) mainstreamed in national conservation policies</p> <p>6) The Ecosystem Approach guides sustainable development actions in priority sectors</p>	<ul style="list-style-type: none"> a) Support countries in implementing the CBD PoWPA, and specifically what relates to legal and institutional aspects as well as sustainable financing b) Identify pilot sites for the implementation of demonstration activities and sharing of knowledge and experience c) Promote cooperation with other European countries to exchange expertise and develop networks of marine protected areas d) The ecosystem approach is concretised and applied to priority sectors in the region, including fisheries

Thematic Priority Area 2: Facing the Threats and Challenges of Climate Change

The North African countries rely greatly on the use of natural resources, and the effects of climate change will have direct impacts on the resilience of ecosystems and on the competitiveness of the economic sectors that depend on these ecosystems. Climate change will increase the vulnerability of ecosystems as well as the supply of their services. Adaptation strategies should be developed and applied to help the ecosystems and their dependent communities face this change. Moreover, it is nowadays obvious that there will be a real cost to pay for the effects of climate change on economic activity sectors, since even if greenhouse gas emissions are reduced in the near future, the countries will have to confront this and adapt to the inertia of global effects of climate change.

Table 7: Estimation of Greenhouse Gas Emissions for the countries of the region

	Energy		Industry		Agriculture		Soil/forest		Waste		Total
	Q	%	Q	%	Q	%	Q	%	Q	%	
Algeria	70,166	67	4,736	5	12,038	11	13 040	12	4 815	5	104 794
Egypt	82,726	71	10,276	9	17,913	15			5 691	5	116 606
Morocco	26,834	56	3,354	7	11 979	25	3 354	7	2 396	5	47 917
Tunisia	15 251		2,840		6 018		-1 773		1 031		23 367
Total	194,976		21,206		47 949		14 621		13 933		292 684

Q=Quantity in (x1000CO₂ CET). Data compiled from national notifications to the UNFCCC Secretariat

The challenge for North Africa is to integrate the effects of climate change within the implementation of the different national, regional and sector-based strategies. This means accompanying the various economic sectors in the adaptation process (water management, agriculture productivity, tourism offer), favouring low-carbon activities and preparing the population for climate change adaptation measures, particularly for sensitive sectors like the agriculture sector, especially in rural areas where populations do not have access to credit and cannot face up the climate hazards (drought) that result from climate change.

Hence, sector-based policies and measures adapted to the new threats of climate change that integrate the concept of risk reduction (health, economic, food, safety) and the increase of resilience will enable efficient responses to be developed for all activity sectors at technological level, particularly at the level of energy (e.g. renewable energy) and environmental solutions.

This will include steps to minimize vulnerability to climate variations and extreme weather events, enabling vulnerable communities to reduce their exposure to climate risks and widen their options of developing sustainable means of subsistence. Managers of natural resources will increasingly have to learn how to incorporate the concept of climate change in their decision-making processes and to develop adaptation strategies.

Moreover, debate on international policy encourages the extension of knowledge about the themes discussed, so that national and regional positions and concerns are taken into account in international conservation agendas. It is urgent and important that the countries of North Africa are able to participate actively in these international negotiations.

Nationally, the risks linked to climate change can only be taken into account if decision-makers possess clear and simplified data on the vulnerability to climate change of areas, ecosystems and populations. Now such information is only available to the countries of the region in fragmented or incomplete forms, and the elaboration of adaptation strategies and programmes depends enormously on this. Demonstration actions are needed to show the feasibility of certain adaptation methods and techniques, and for decision-makers and the people to be aware of the possibilities offered and also of the limits of adaptation to be put into effect. Capacity development enables the social system, especially institutions, to create adequate frameworks and develop actions aimed at adapting to climate change. The main objective of capacity building is to improve the institutional framework so that adaptation to climate change can occur. Elements of capacity development for adaptation include: a) society involvement, b) education, information and encouragement of behavioural change, c) research, d) monitoring at all levels and e) more integration of the various disciplines (genetic, ecological, silvicultural, social, economics, etc.

IUCN, through its experience and its network of members and partners, can play an extremely important part here.

Activities proposed in the context of Thematic priority area 2 - Facing the Threats and Challenges of Climate Change

Remarks:

- The activities to be implemented in each of the countries will be identified in consultation with the members
- The text between the square brackets represents options to be assessed

Results of the IUCN-Med Component Programme	Results of the IUCN-Med Sub-regional Programme for North Africa	Suggested targets / activities
Participation and capacities of North African countries is effectively enhanced within global climate change policy negotiations	1. IUCN climate change knowledge and strategies (adaptation and mitigation) relevant to different ecosystems and/or economic activities (i.e. agriculture, tourism...) are conveyed to members and partners to enhance their effective participation in national and regional climate change debates	<ul style="list-style-type: none"> a) Socio-economic evaluation of impacts of climate change on local populations and priority ecosystems including marine ecosystems and/or economic activities b) Gather Knowledge on adaptation options applied and/or tested in the region and disseminate it to relevant actors c) Reflect the concerns of members in IUCN position papers and disseminate these papers for supporting their negotiation skills d) Strengthen capacity and propose initiatives relevant to credit mechanisms / carbon markets and cleaner development mechanism

Results of the IUCN-Med Component Programme	Results of the IUCN-Med Sub-regional Programme for North Africa	Suggested targets / activities
<p>Adaptation strategies that enhance the security of vulnerable communities, with a focus on gender, are made operational in priority areas where IUCN and its members participate actively, with the view of improving the security of vulnerable communities.</p>	<p>2. The vulnerability to climate change of rural communities in the arid areas, oases, coastal areas, [wetlands], and mountainous areas is assessed in the North African countries.</p>	<ul style="list-style-type: none"> a) Undertake studies to evaluate socio-economic vulnerability of populations to climate change, with emphasis on marginalised communities and women b) Prepare awareness and information campaigns directed at decision-makers and at the general public including the youth c) Compile traditional knowledge information and identify what might have a positive impact in promoting the livelihoods of rural populations (especially women) and ecosystems d) Compile information on land uses more resilient to climate change and on policy and economic incentives needed to support them e) Support the development of local/regional adaptation action plans
<p>Strategies to adapt to the impacts of climate change developed and implemented in at least 3 Mediterranean priority ecosystems (forests, marine, water)</p>	<p>3. Strategies of adaptation to climate change are prepared for priority ecosystems in the region.</p>	<ul style="list-style-type: none"> a) Crafting an adaptation strategy for four [five] pilot sites with one per ecosystem (arid areas, oases, coastal and marine areas, [wetlands], and mountainous areas) b) Organising regional (North African) workshops on adaptation to climate change (one per ecosystem type) c) Identify and disseminate agricultural techniques and practices that are adaptable to drought conditions and that help face the impacts of climate change d) Use Traditional knowledge from north Africa, such as sustainable pastoralism, as a tool for soil conservation and adaptation to climate change

Results of the IUCN-Med Component Programme	Results of the IUCN-Med Sub-regional Programme for North Africa	Suggested targets / activities
	4. Socio-economic and ecological resilience to extreme weather events is increased	<ul style="list-style-type: none"> a) Identify a number of pilot critical areas/landscapes (according to the Ecosystem Approach scale) where extreme weather events are having a higher impact due to climate change and where to test adaptation options in the field. b) Undertake participatory spatial planning to assess risks, resilience needs, more resilient land uses and landscape patterns, adaptive management options and restoration needs. c) Identify good governance options and adopt flexible policies and incentives to support adaptation needs and more resilient land uses/social conditions d) Develop ecological restoration plans to increase landscape resilience

Thematic Priority Area 3 – Identify and develop energy options that are equitable, ecologically sustainable and adaptable to North African Countries

The energy situation differs greatly among the five countries of the region. Algeria and Libya possess important energy resources and are listed among countries whose energy balance shows a surplus, whereas Egypt, Morocco and Tunisia do not possess sufficient energy resources to satisfy their requirements and thus rely on imports.

The increase in the oil price in the year 2007 had a great impact on the economies of the five countries of the region. Egypt, Morocco and Tunisia have seen their oil bills rise, going beyond the most pessimistic scenarios of their forecasts. This has led to budgetary revisions in the course of the year for Morocco and Tunisia. For Libya and Algeria, the situation has been utterly different. Oil income has greatly exceeded their respective forecasts for 2007.

Without being very large, exchanges exist between the countries in the region as regarding energy. This is so for Tunisia, Libya and Algeria, for example, whose 'high voltage' electricity networks are interconnected. Because of their different energy situations, the five countries do not give the same degree of priority to energy saving and to developing alternative energy options. Hydraulic energy is not much used for the production of electricity in the five countries, with the exception of Egypt, which produces a large part of its electricity from its Aswan Dam facilities. This form of energy is not likely to develop much in the region over the coming years.

Policies to encourage alternative energy solutions should be carefully considered as not to have negative environmental and social impacts. For that, it is important to carry out Strategic Impact Assessment at national level in the three most concerned countries in the region (Egypt, Morocco and Tunisia).

For some areas in the North African countries, cutting wood for energy purposes constitutes a very important threat to the terrestrial plant cover. To help reduce pressure on the region's natural, especially forest resources, it would be wise in the context of the present programme to develop pilot actions aimed at demonstrating the interest of certain techniques for improving energy efficiency, as well as looking at alternative energy options, such as solar energy as an alternative to firewood consumption and for larger-scale energy production.

Activities proposed in the context of Thematic Priority Area 3 - Identify and develop energy options that are equitable, ecologically sustainable and adaptable to North African Countries

Remarks:

- The activities to be implemented in each of the countries will be identified in consultation with the members
- The text between the square brackets represents options to be assessed

Results of the IUCN-Med Component Programme	Results of the IUCN-Med Sub-regional Programme for North Africa	Suggested targets / activities
Impact management tools and methods (avoidance / mitigation/offsets) are incorporated into energy development initiatives in at least 2 countries in the Mediterranean	1) Impacts on ecosystems of production of alternative energy (wind, bio-fuel, biogas) assessed and mitigated in three countries in the region	<ul style="list-style-type: none"> a) Cost-benefit analysis (investment versus advantage) and Strategic Impact Assessment on ecosystems of the development of alternative energy in Egypt, Morocco and Tunisia b) Studies on the best mechanisms for biodiversity compensation/offsetting (protected area designation, landscape restoration, carbon credits...) are developed and effectively implemented in at least 2 countries c) Assess the impact of bio fuels on and communicate results to government of the region

Results of the IUCN-Med Component Programme	Results of the IUCN-Med Sub-regional Programme for North Africa	Suggested targets / activities
<p>Dialogue with energy sector initiated to assess energy options and mainstream conservation issues into their development activities</p>	<p>2) Initiatives by the energy sector that promote exchange of knowledge and technology across the Mediterranean are developed and implemented</p>	<ul style="list-style-type: none"> a) Organise workshops and discussion with the private sector to enhance knowledge and identify possible alternative energy options b) Develop studies and exchange experiences on best available energy options within the specific context of North Africa including south cooperation opportunities. c) Elaborate guidelines on best practices, in collaboration with IUCN Business and Biodiversity programme, and share with members and partners to guide their actions and decisions d) Pilots projects within the tourism sector to promote energy efficiency ex : eco labelling

Results of the IUCN-Med Component Programme	Results of the IUCN-Med Sub-regional Programme for North Africa	Suggested targets / activities
<p>Incentives are developed to ensure sustainable use of ecosystem dependent energy sources in at least 3 pilot sites</p>	<p>3) Sources of energy based on natural ecosystems are optimized and rationalized in their use by using pilots actions and incentives tools and measures</p>	<ul style="list-style-type: none"> a) Develop pilot actions to introduce energy efficient techniques within rural communities and identify barriers that might affect their utilisation b) Investigate the feasibility of solar energy to reduce the amount of wood used and the Greenhouse Gas Emissions c) Promote north-south and south-south cooperation and transfer of knowledge and technology relevant to energy efficiency and optimisation of the use of wood for firewood and charcoal production (new pruning techniques and good management practices that are less harmful to forests, and better performance of charcoal production) ex: rehabilitation of tamarix d) Identify and propose incentives through payments for ecosystem services (PES), such as agreements with water/hydro-energy/water dependant companies e) Pilots project activities that can generate income for population very dependant on forest ecosystems

Thematic Priority Area 4 – Sustainable management of ecosystems in North Africa for human well-being and livelihood improvement

The overexploitation of ecosystems and other forms of irrational management of natural resources are, along with pollution, the main threats to the preservation of ecosystems services in the North African countries. This applies both to the region's terrestrial and marine ecosystems whose services greatly contribute to economic and social well-being of the populations.

Effective management of natural resources requires coordination among sectoral policies, as well as coordinated effort among all concerned actors. IUCN, and through the implementation of this programme, will provide its extensive knowledge on economic valuation of ecosystems. This will help recognise the significant contributions of the different ecosystems, and in particular drylands, to national economies and local livelihoods and shift from the negative perception of drylands as wastelands. Land degradation in drylands and forest land, aggravated by climate change, will not only affect the rural poor, but will hamper economic development at national and regional levels. There is a need for more coherent valuation of ecosystem services and to integrate these values into national economic planning processes. This would also support long term solutions for sustainable agriculture.

Sound economic analysis presents a convincing, and much-needed, case to decision-makers about the need - and convenience - of investing in environmental conservation. A weak understanding of the economic value of ecosystem services (and the economic costs of their degradation and loss) does not impact just on the national economy, and on national and sectoral development, but also acts to marginalise the groups who depend most on the environment and who are most vulnerable to its loss - the poorest groups in society.

Governance structures in some countries in North Africa at times do not enable conservation and sustainable management of resources, and could hence promote degradation of ecosystems and threaten livelihood security. It is thus vital to solve inequitable tenure, access and land property rights regimes, reinforce transparent and participative decision making and empower local communities, including pastoralists, in land use planning and decision-making, to enhance their security and guarantee their fundamental rights to water, food and health.

The programme will favour actions that are likely to bring about the equitable sharing of the benefits deriving from the region's ecosystems. IUCN will also promote the role of youth and women in North African and further value their role in managing ecosystems. In many parts of North Africa, women play a major part in the daily management and use of natural resources. Women are thus a quality target for programmes aimed at perpetuating traditional practices that have proven their sustainability, and for introducing innovative niches of sustainable management of the region's ecosystems.

For the aquatic environment (fresh-water, marine and lagoon environments), aquaculture has not been greatly developed in North Africa, except in Egypt. Now such an activity is likely to develop in the region, driven both by the demand for fish and also by the continual drop in fish landing despite the increase in the fishing effort. The drop in catch per unit of effort is noted in the national fisheries of the five countries of the region. Aquaculture, while it offers major possibilities of food security, development and job creation, does also constitute a major threat to ecosystems if its

development is not suitably planned. Applying the ecosystem approach in planning aquaculture could enshrine this activity within the economic framework and resolve some of the environmental problems that aquaculture poses.

For terrestrial ecosystems, there are many examples in the North African region that show that protection programmes are doomed to failure if the living conditions and income opportunities of the neighbouring populations remain very low. Indeed, poverty is identified as one of the main sources of pressure on ecosystems. Apart from the case of the arid areas, in the poor areas of North Africa, the low living conditions of the inhabitants of the region often contrast with the areas' natural potential, which shows an important development potential. Rational valuation of this potential can only, however, give sustainable results if it takes into account the need to preserve the natural heritage while offering better job and income opportunities to local communities. Developing these regions thus inevitably involves improving the living conditions and income of the local population, thereby lessening these communities' poverty. Increasing people's income through good governance mechanisms, legislation improvement to guarantee equitable rights of use, access, and sharing of benefits, jobs or the creation of added value in new promising markets is likely to lighten the pressure on local natural resources.

Promoting sustainable management of ecosystems in North Africa could involve both innovative niches in fields like ecotourism or agroforestry, and valuing traditional practices and ancestral know-how regarding ecosystem management. Important efforts are needed in terms of training practitioners at all levels (i.e. forest administration, users, NGO, etc) on sustainable management practices.

For traditional practices, an effort should be made to inventory them, identify those individuals who still master them, and set up actions to encourage such practices through incentives, pilot projects and training in the techniques necessary for such practices. Traditional management and land use practices will require innovation in order to make them economically viable and prevent barriers that impede local populations, and especially women, from having access to education and adequate living standards.

Activities proposed in the context of Thematic priority area 4 – Sustainable management of ecosystems in North Africa for human well-being and livelihood improvement

- Remarks:
- The activities to be implemented in each of the countries will be identified in consultation with the members
 - The text between the square brackets represents options to be assessed

Results of the IUCN-Med Component Programme	Results of the IUCN-Med Sub-regional Programme for North Africa	Suggested targets / activities
Development of aquaculture and fishing activities in pilot sites developed to emphasize sustainability and gender equity of benefits	1) Integrated management of sustainable aquaculture and fishing is tested in pilot sites, taking into consideration relevant governance issues	<ul style="list-style-type: none"> a) Understand the economic value of an ecosystems approach to aquaculture, and economic costs of unsustainable aquaculture b) Socio- economic studies for understanding challenges and opportunities for fisheries c) Apply the ecosystem approach to aquaculture activities at the level of one pilot site [two pilot sites] in the region d) Develop and disseminate guidelines for the application of the ecosystem approach to aquaculture

Results of the IUCN-Med Component Programme	Results of the IUCN-Med Sub-regional Programme for North Africa	Suggested targets / activities
<p>Security (food, health) of communities, especially in drylands and forest/range land, increased through innovative systems to apply traditional resource management in at least 5 pilot initiatives</p>	<p>2) Traditional practices for agriculture, livestock farming and use of natural resources rehabilitated to guarantee the communities' food security and self-sufficiency in the framework of one regional project</p>	<ul style="list-style-type: none"> a) Inventory traditional practices of water harvesting, soil ploughing and growing crops in the arid areas b) Information campaign directed at women and youth in arid and/or isolated areas about traditional techniques of resource management c) Undertake a situation analysis on pastoralism in North Africa d) Hold a series of workshops and information events on sustainable pastoralism and disseminate findings e) Undertake studies on the aromatic and medicinal plants sector to understand and evaluate the different economic opportunities

Results of the IUCN-Med Component Programme	Results of the IUCN-Med Sub-regional Programme for North Africa	Suggested targets / activities
<p>Improved natural resource governance (land tenure, property rights...) is supported in the region to contribute to the livelihoods of local communities and the sustainable management of ecosystems</p>	<p>3) Improved governance of natural resources, especially in drylands, forests/rangeland, marine ecosystem and protected areas, is supported to mitigate ecosystem degradation and livelihood insecurity</p>	<ul style="list-style-type: none"> a) Identify the main drivers for land degradation in North Africa and undertake analysis of economic policies and perverse incentives that drive land degradation b) Propose institutional and governance support mechanisms that promote sustainable management of natural resources, especially in drylands and protected areas c) Review selected legislation relevant to resource management and propose advice for improvement d) Undertake training relevant to improved governance of resources e) Identify innovative financing mechanisms for protected area management f) Introduce gender empowerment and job generation activities to ensure improvement of livelihoods g) Contribute to the regional conservation activities of the Alboran Sea and participate in the North-South Mediterranean scientific and knowledge-generating group

Results of the IUCN-Med Component Programme	Results of the IUCN-Med Sub-regional Programme for North Africa	Suggested targets / activities
Ecosystem goods and services contribute directly, sustainably and equitably to improved livelihoods in at least 8 selected areas.	4) The local communities benefit from the ecosystem services while ensuring their appropriate functioning	<ul style="list-style-type: none"> a) Undertake economic valuation of selected ecosystems with a particular focus on the value of ecosystem goods and services for the livelihoods of the poor b) Develop capacity tools to undertake this valuation, and to carry out the economic analysis to identify the feasibility of sustainable ecotourism and sustainable use activities (in three pilot sites in the region) based on the participation of local communities in accommodation and provision of tourist services. c) Develop in each country of the region pilot actions to promote sustainable use of natural resources (with special emphasis on aromatic and medicinal plants) and identify joint actions at the regional level d) Identify and implement pilot projects that integrate conservation (and ecosystem economic analysis) in spatial planning and land use in key sectors (such as tourism, agriculture, river basin management...) e) Identify vulnerable groups, threats and potential tools (Protected Areas, forest restoration, collaborative management, etc.) for addressing these threats and implement findings in at least 2 pilot cases. f) Raise awareness on economic opportunities for agro-environmental services and for preventing perverse uses/land degradation

Thematic Priority Area 5 – Integrating ecosystem conservation values in economic policy, finance and markets

The private sector in the area of North Africa is of particular significance in terms of socio-economic, geopolitical and environmental interest. The development of Free Trade Agreements with the United States (Morocco) as well as the Euro-Med Free Trade Agreement could have negative impacts on natural resources in North Africa. At the regional level, Egypt, Morocco and Tunisia have signed the Agadir Agreement (2004) to promote free trade among Arab States.

Certain economic activity sectors, such as tourism, industry and agriculture, represent a main source of income to the countries in the region. These activities, however, have proven to have a major impact on natural resources and on the livelihoods of the people depending on those resources. For this reason, it would be vital within the framework of this programme to identify means, strategies and partnerships to make them more sustainable through examining their impact on natural resources and trying to off-set it, promoting certification as well as identifying pilot activities with the private sector to apply lessons learned. Several private enterprises in the Mediterranean are conscious of their footprint and have already initiated activities that aim at the conservation of natural resources. However, those activities are at times ad-hoc and could be more effective with an integrated strategic approach.

The private sector could be considered as a main partner in sustainable development in the region if it properly includes the notion of biodiversity conservation (impact assessment studies, social & environmental corporate responsible policies adopted by companies) as well as legally regulate its activities (natural resource use quotas, access and benefit sharing, production certification i.e. aromatic and medicinal plants).

The integration of environmental concerns within private sector strategies promotes this sector to become more proactive in terms of research, technology and solutions that better conserve biodiversity. It also ensures better entrepreneurial risk management (risk relevant to corporate image, product and production) and the creation of innovative and more sustainable economic future.

The programme will examine the different development options with the private sector within economy-generating markets at the local level, as well as internationally, such as opportunities to develop sustainable tourism – and mainly within protected areas – and building on the “marketing” value of the UNESCO World Heritage Sites and the conventional tourism they usually attract. Certification issues will also be dealt with in the programme framework, as adequate Certification Schemes can represent a good tool to guarantee that all environmental, social and economic requirements are fulfilled and secured in the long-term. Certification can also increase opportunities for marketing all products and services coming from the sustainable management of ecosystems.

Other issues that could be considered relate to sharing lessons and experiences with other Mediterranean countries and looking at how the different cooperation initiatives with the private sector were put in place.

Within the framework of the current programme, the main focus will be directed towards the three economic sectors of sustainable tourism, aquaculture and sustainable agricultural production, in an effort to add value to the economies of those sectors and propose an alternative market to local populations.

Activities proposed in the context of Thematic priority area 5 –Integrating ecosystem conservation values in economic policy, finance and markets

Results of the IUCN-Med Component Programme	Results of the IUCN-Med Sub-regional Programme for North Africa	Suggested targets / activities
Key selected sectors (aquaculture, tourism, maritime traffic) clearly integrate biodiversity issues in their operations	1. Dialogue with private sector on biodiversity issues and examination/ implementation of actions and solutions is enhanced	<ul style="list-style-type: none"> a. Promoting knowledge and sharing experiences on sustainable tourism as an engine for sustainable financing, and identifying pilot activities with the private sector to apply lessons learned and minimise impact of tourism on natural resources (water consumption, conservation of marine resources...) b. Elaboration, diffusion and implementation of guidelines for sustainable development of aquaculture in the region, along with aquaculture producer organizations, regional governments, intergovernmental agencies and other concerned partners c. Work with the private sector to adopt and test biodiversity policies and social & corporate responsibility
Major business clearly incorporate environmental concerns into their operations, plans and strategies	2. Environmental certification is reviewed/proposed/ tested in tourism, agriculture and aquaculture units	<ul style="list-style-type: none"> a. Dissemination of guidelines for environmental certification of tourism activities (and mainly linked to resources in protected areas), aquaculture and agriculture productions b. Regional seminar on certification implementation modalities in private sector operations, and identifying pilot implementation activities

Results of the IUCN-Med Component Programme	Results of the IUCN-Med Sub-regional Programme for North Africa	Suggested targets / activities
Conservation financing is pursued and supported through the development of local green businesses	3. Private sector financing options are analysed and developed into 3 countries in the region	<ul style="list-style-type: none"> a. Identify major businesses at regional level (4 companies), develop communication strategies/ advocacy to encourage environment conservation in the framework of corporate policies and implement at least 2 partnerships/ agreements (i.e. Grants for environment, micro-credits, etc.) b. Organisation of workshop(s) with the private and public sectors and the donor agencies on biodiversity issues in North Africa and on strategic perspectives (examination of the partnership modalities) i.e. Off-setting funding in protected area.
Conservation financing is pursued and supported through the development of local green businesses	4. Local economic productions of pilot regional sites are better integrated within the local and international markets; natural resources management is better handled.	<ul style="list-style-type: none"> c. Local market survey of successful income generating activities and reflections on the organisation of networks (legal and commercial frames) to assure the sustainable management of natural resources. i.e. medicinal and aromatic plants d. Based on the examined business opportunities, identify and implement at least 2 North-South cooperation initiatives (joint venture), to contribute to the development/ enhancement of economic networks (fair trade, biologic agriculture, etc.) e. Development of capacity of local actors in the marketing/ organisation process of the necessary and priority activities (sustainable tourism, market...) f. Develop adapted trainings for special opportunities in the tourism sector at local level in some areas, as certificate, languages course, diving licence.