

Islamic Republic of Iran

The Fifth National Report  
to the Convention on Biological Diversity





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Convention on Biological Diversity**

**April 2015**

Cover: The Asiatic cheetah (*Acinonyx jubatus venaticus*), also known as the Iranian cheetah, is a critically endangered cheetah subspecies surviving today only in Iran

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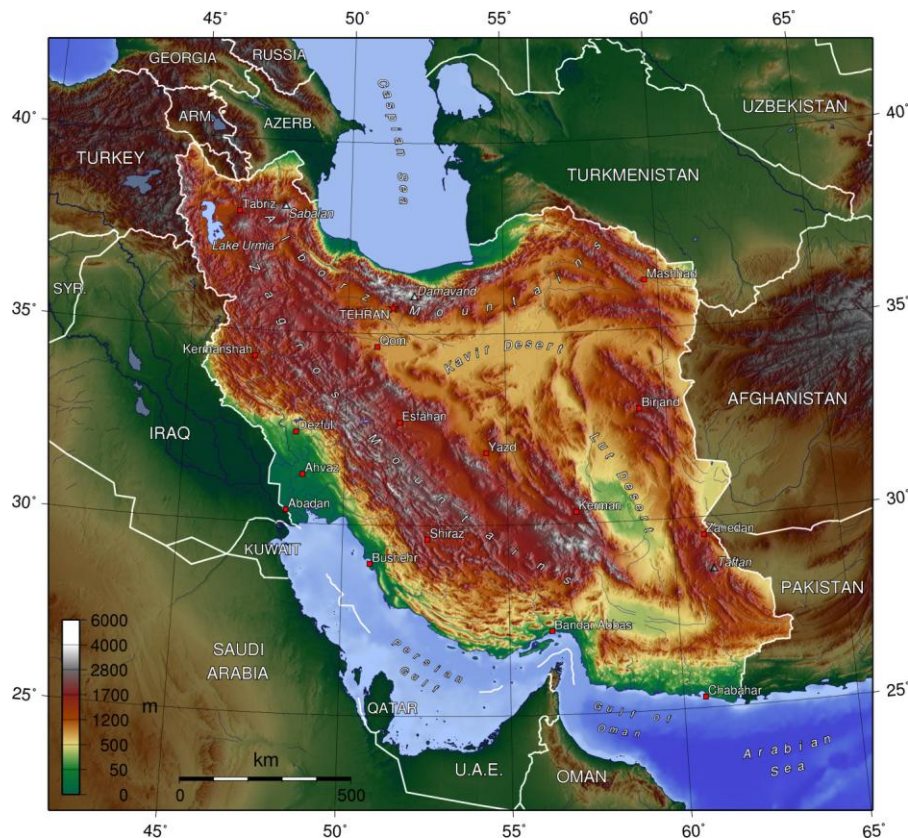
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## Executive Summary

### Biodiversity in Iran

Iran is located in West Asia and borders the Caspian Sea, Persian Gulf, and Gulf of Oman. The mountains enclose several broad basins, or plateaus, on which major agricultural and urban settlements are located. With an area of 1,648,000 square kilometers, Iran ranks eighteenth in size among the countries of the world.



Although much of Iran is dry, the wetlands of Iran are globally significant; large populations of migratory birds winter at these wetlands or use them on their way. The complex and varied climates, topography, geological formations and anthropological management of natural resources have led to a varied and unique biological diversity. In the Iranian ecosystems approximately 8,000 species of plants, 197 species of mammals, 535 species of birds, 227 species of reptiles, 21 species of amphibians, 160 species of freshwater fishes and 710 species of marine fishes have been recorded. Iran is one of the most important countries in the Middle East and Western Asia for conservation of biological diversity. Habitat diversity in Iran allows for a wide range of animals to inhabit in Iran. With regards to ecosystem diversity of marine and coastal zones in the North and South of the country, it consists of 25 ecological types and units, in which the most important are coral reefs, bays and small islands.

## **Conservation and restoration**

Department of Environment (DoE) and its 6000 personnel throughout the country are determined to imply the laws and protect the biodiversity. The present Environment status of the country is very optimistic. The important concern and priority of the President is environmental issues of the country and Head of Environment Department has successfully integrated environmental aspects of development in the Administration.

The country's protected areas have consistently been increased and from 194 sites in 2010 have established 274 sites in 2014, with 29 national parks, 44 wildlife refuges, 35 national natural monuments, 166 protected areas and 10 Biosphere Reserves .At the present time there are many international active and successful environmental projects in the country:

Conservation of Asiatic Cheetah

Conservation of Iranian Wetlands

Conservation of Biodiversity in Central Zagros Mountains

Conserving and Managing the Biodiversity of Anzali Wetland

Conservation of Caspian Hyrcanian Forest Biodiversity

Integrated Natural Resources Management in Iran Agro Ecosystems

Rehabilitation of Degraded Lands

Sustainable Management of Hablehroud Land & Water

Conservation against Desertification by Carbon Sequesterian

Establishment of Breeding Centers and Gene Banks

Forest, Rangeland and Watershed Management Organization and Fishery Organization also play an important role in conservation of natural resources of the country.



## Legislation

### **Fifth National Development Plan**

Seven articles in the Fifth National Development Plan (2010-2014), has been dedicated to environmental obligations of the government. According to these articles the government should:

- Develop and implement the integrated ecosystem management program and action plan
- Develop and implement the program for protection and sustainable use of biodiversity in fragile and sensitive ecosystems of the country.
- Develop the rules of procedure (bylaw) to promote public awareness and achieve sustainable development with the aim of protection of environment.
- Develop and implement the country environmental information system in sensitive ecosystems.

### **The revival of Supreme Council of Environment in 2013**

This council is the country's highest decision-making body on environmental matters. The President is the head of the council and the members are: Head of Environment Department, Ministers of Agriculture, Industry, Mines and Commerce, Ways and Urban Development, Health and Medical Education, Head of Planning and Budget Institution; and four authorities recommended by the head of Environment Department.

## Threats to Biodiversity

Water scarcity, land degradation and Pollution are three main threats to Iran biodiversity .Iran faces serious water shortage, its scarcity in Iran is the result of two mechanisms: inadequate natural water supply resources and development of water infrastructures. Soil loss is related to the salination, sedimentation, erosion of the soil, desertification, deforestation, inadequate land-use planning, and overgrazing. In rapidly urbanized areas, air pollution originating from vehicle emissions and industrial effluents has become a serious environmental and public health hazard concern. The Dust Phenomenon or dust storms in recent years has taken on new dimensions in Iran and has changed from a local problem to a national issue. The primary source of the dust storms that are regularly and negatively impacting Iran's air quality lies in the neighboring countries.



## Importance of Biodiversity

The biodiversity is important for water resources ( a very crucial factor in Iran present day natural situation ) ,agricultural and aquaculture productivity and as a result the food security ,human health, climate , aesthetics and economy. Livelihoods of millions of people in Iran are completely dependent on biodiversity of their surroundings.



Local Tribes life in Iran is dependent on biodiversity

## Strategic Plans for Biodiversity 2011-2020

The Government and specially the Environment Department (DoE) are consistently following the guidelines of the Aichi Targets. One of the main strategies of DoE is integration and mainstreaming to get close to these 20 goals. The increase percentage of protected areas shows the serious decision of the country to achieve the Aichi target goals. Environment Department has also delineated a strategy as Environment National Document which is developing and updating as NBSAPII. DoE at present time is integrating the environmental guidelines in the Sixth National Development Plan of the Country.

## Part I: Biodiversity status, trends and threats and implications for human well-being

### 1.1 Importance of Biodiversity in Iran

Iran biodiversity contains some of the world's important genetic resources, being the home of the original stocks of plant and animal species of great commercial value such as wheat, sheep and goat. These valuable species have been preserved up to present day; for example the wild sheep (*Ovis orientalis*).



**Wild Ancestor of domestic sheeps**

( *Ovis orientalis* in Central Alborz Mountain )

**still alive and protected**

Iran's forests biodiversity play a vital role not only in food safety but also in the lives of millions of people. Mountain forests supply more than 47 percent of the fresh water. They produce high quality clean water .In West of Iran and in Zagros woodlands, a family living in the local community has more than 70 types of



dependence on biodiversity of forests of oak and mastic (wild pistachio trees). People use oak seed for their bread, the foliage to feed their livestock, and timber for fuel source. Without these forests, livestock and agriculture is impossible and there is no water for drinking and farming. More than 800 thousands of tribes, depends directly on these kinds of woodlands. Their livestock produce animal proteins for millions of people. In northern forest of Iran lives, livelihoods and food security of more than 4 million people depends on biodiversity of this ecosystem. These forests are also a valuable resource for ecotourism in the region and the world.



Northern Forests of Iran

There are 4 million farmers in Iran which their economic life and their families depend directly upon agro biodiversity also millions of people with indirect dependence.





More than one hundred and thirty thousands people and their families in southern seashores and about eight thousands person and their families in northern shores of Iran live totally based on aquatic biodiversity of Persian Gulf, Oman Sea and Caspian Sea. To this number we should add people who are indirectly dependent.



Pharmaceutical plant plays a very important role in Iran. Every year more than 132000 tons of these plants are produced in the country for internal use and export.



Local Tribes of Iran have a very dependant life on their surrounding biodiversity

To these we should add the very crucial and important biodiversity role of wetlands, mountains ,rangelands and steppe of Iran for lives of several millions of people .



## 1.2 Major changes in the status and trends of biodiversity

A detailed description of Iran biodiversity status was provided in the fourth national report .A brief description of biodiversity is as follow:

The Islamic Republic of Iran contains a vast diversity of ecosystems, including two important mountain ranges, 10 Biosphere Reserves, 24 Ramsar listed wetlands and unique dry lands and forests. Woodlands cover 12.4 million hectares and there are 10,000 hectares of Avicenna mangroves along the Persian Gulf. The number of species indicates biodiversity richness: 8,000 species of plants (of which 1,900 are endemic), 535 species of birds, 197 species of mammals and 870 species of fish.

Iran has been making substantial efforts to conserve and sustainable use of biodiversity and natural resources .Integrated management , increasing of the protected area , legislative actions ,cooperation with United Nation in several environmental projects , saving Asiatic cheetah from extinction ,protection of wetland losses from drought are some examples .

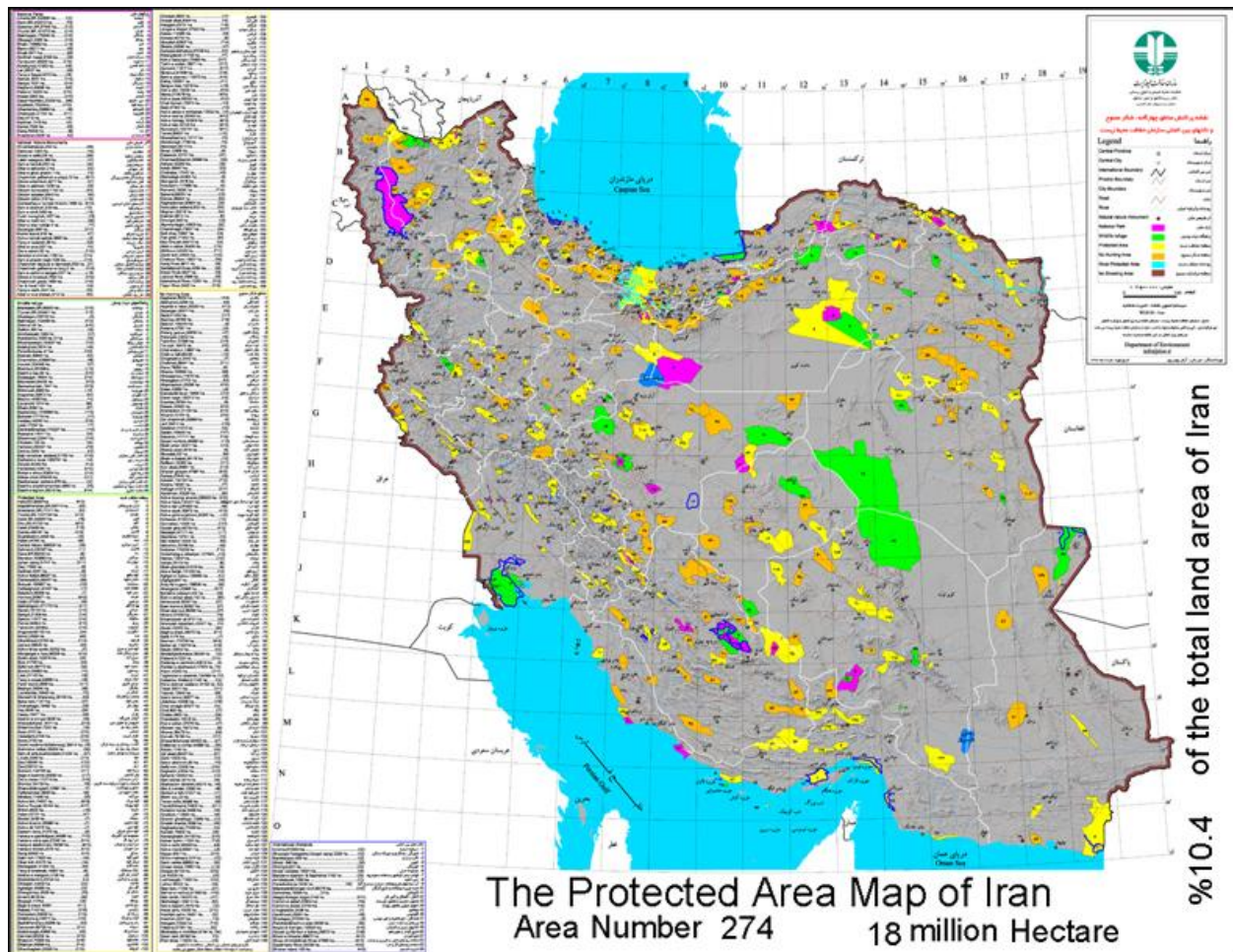
Key steps taken by the country after submission of the Fourth National Report include:

### 1.2.1 Improving the Conservation, Restoration and Integrated Management



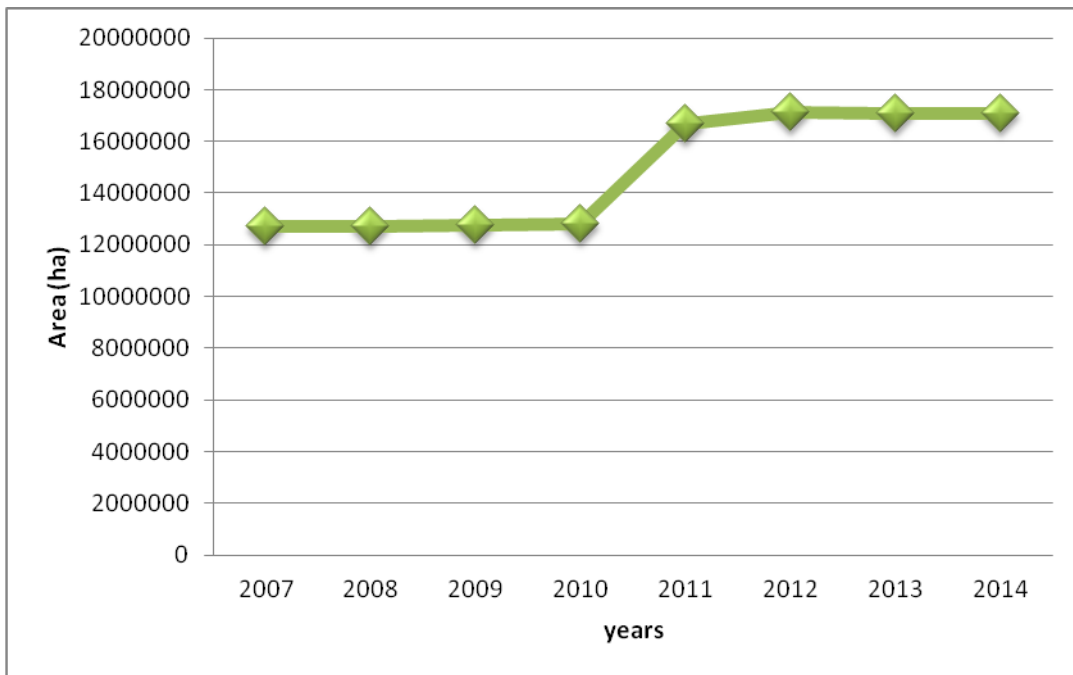
## Improvement of Protected Area

The country's protected areas have consistently been increased and from 194 sites in 2010 have established 274 sites in 2014, with 29 national parks, 44 wildlife refuges, 35 national natural monuments, 166 protected areas and 10 Biosphere Reserves .Now the protected area of the country has increased to 10.4 percent. To these areas we should add the wetlands and forest reserves which also are managed as protected areas. There are more measures taken for the development and enhancement of aquatic and terrestrial areas and this goal is being done, but the priority for Environmental Protection Department is to improve the quality and reduce the destructed areas and also the restoration of existing protected areas. Finally the Protected Area Management Plan of 137 sites has been prepared to promote the biodiversity conservation and improvement of indicators in these areas.



**Types and the Number of Protected Areas of Iran as of 2014**

Source: Environment Department (DoE), GIS Unit



**Increased levels of protected areas since 2010**

Source: Environment Department (DoE), GIS Unit .2014



## Protected Areas

<i>Protected Areas</i>			
Titles	Number	Area in Hectares	Percent of the Land Area
National Parks	29	2001624	1.2
National Natural Monuments	35	37576	0.023
Wildlife Refuge	44	5595746	3.4
Protected Areas	166	9116779	5.5
Number and Total Area	274	<b>17086402,32</b>	<b>10.3</b>

<i>No hunting Areas</i>		
Titles	Number	Area in Hectares
No hunting Area	154	7073351
<b>Percent of the Land Area</b>	<b>8.53</b>	

<i>Biosphere Reserves</i>		
Title of BR.	NO.	Area(ha)
Touran, Kavir, Uromia, Arasbaran, Golestan, Arjan parishan, miankaleh, Harra, Geno & Dena	10	3192075

<i>Wetlands</i>			
Row	Title	No.	Area (ha)
1	Ramsar site Wetlands	24	1425277
2	Important Wetlands	84	2825426
<b>Percent of the Land Area</b>	<b>1.7</b>		

Source: Environment Department (DoE), GIS Unit .2014

Also:

- Carrying out the Rehabilitation and reconstruction projects in the damaged zones of protected areas and performing management plans in 50 per cent of the country's protected areas.

- Given the extent of the shared borders between Iran and neighboring countries as well as international waters, conducting joint memorandum of understanding between Armenia, Iran and Iraq for the development of cross-border conservation areas.
- The geographic information systems is provided for all of country's 274 and about 18 million hectares of protected areas. Also zoning plans has been provided for about 100 regions that includes protection zones in each region, the zones of sustainable usage , restoring zone .....
- In 2001 Iran passed the bill in which Agriculture Ministry and Environment Department were required to take the necessary administrative measures to reduce the exploitation of the nation's forests , evaluate the manufacturing of wood in forest, take measures to restore damaged areas, create mechanism necessary for the use of other non-timber forest benefits such as planned tourism , carbon sequestration, water production and conservation of biodiversity and to improve the indigenous people's participation in biological resource management. Additional amendment in this respect was passed in 2002 and 2014.

### **Increasing the Number of Rangers**

There are more than 2000 rangers throughout the country. In 2013-2014 the Environment Department has acquired the permission to triple the number of rangers to 7300 persons .The process is taking place now.



**Protected Area Rangers in North West of the Country**



**There are more than 500 Ranger Stations in the country**

## Establishment of Breeding Centers and Gene Banks

- Environment Department (DoE) has established several breeding sites to protect the endangered species like Persian fallow deer (*Dama mesopotamica*), Goitered gazelle (*Gazella subgutturosa*), Jeeber gazelle (*Gazella dorcas*), Red deer (*Cervus elaphus*), Persian wild ass (*Equus hemionus*) and Asiatic cheetah (*Acinonyx jubatus venaticus*). It has also recently established six genetic centers.
- The Forest, Rangeland and Watershed Management Organization together with the Research Institute of Forestry and Range Management have created a very large collection of seed & forest genetic resource ex situ collection.
- For restoration and proliferation of wild fish stocks, The Iran Fisheries Organization in nine fish breeding centers in north of the country proliferated and released in Caspian Sea about 225 million pieces of different kind of wild bony fishes . Also 2 millions pieces of sturgeon fishes were proliferated and released in 2014.
- Forest, Rangeland and Watershed Management Organization produce millions of wild trees seedlings in numerous centers through the country every year. the statistics till 2014 are :
  - Afforestation 10000 ha
  - Reforestation 33000 ha

## **Saving of the Asiatic Cheetah**

The Asiatic cheetah (*Acinonyx jubatus venaticus*), also known as the Iranian cheetah, is a critically endangered cheetah subspecies surviving today only in Iran. It used to occur in India as well, where it is locally extinct.



**Case Study :**

**Conservation of Asiatic cheetah (CACP) - Phase II (2010-2016)**



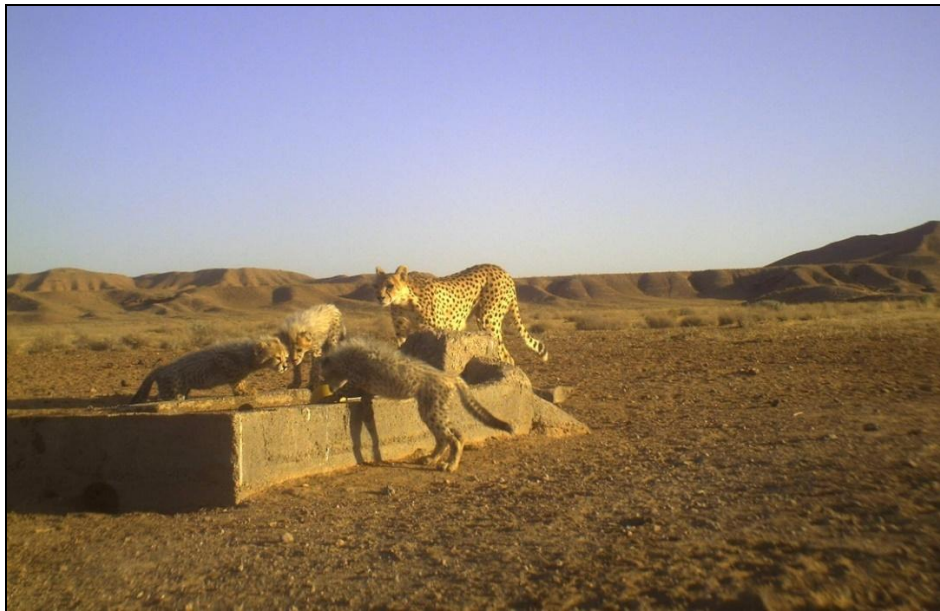
The CACP is a long standing initiative between Iran's Department of Environment, UNDP and a number of committed international partners, namely the Wildlife Conservation Society, Panthera, Cheetah Conservation Fund and IUCN's Cat Specialist Group. Phase I of the project was co-funded by the Global environment Facility and was implemented from 2001 to 2008. Phase II implementation incepted in the summer of 2010. An opportunity has now arisen to collaborate with Iran's DoE to achieve two parallel goals.

Addendum to phase II will be aimed at assisting the DoE to fulfill its commitments to UNCBD under Iran's Programme of Work on Protected Areas (PoWPA). The extended phase II will aim to remove a number of barriers currently hampering sustainable PA management. The single most important barrier pertains to Protected Area (PA) financial sustainability and the addressing of PA financing gaps. As pilots will be selected in cheetah habitats, the ultimate goal of this Addendum would be to achieve the sustainability of PAS as well as augment the sustainability of CACP results. Thus, the Addendum will build on the substantial achievements of CACP through strengthening the current PA management regime in selected cheetah

habitats.

The addendum will identify plausible livelihood options that could achieve a higher level of integration of local communities as active and long-term partners in PA management. It will aspire to generate representative local enterprises with access to capital and markets and empowered local communities as local partners of DoE in conservation activities. In this respect, systematic capacity development will target DoE provincial staffers as well as the main beneficiaries of wildlife and ecosystem conservation- the local communities. The presence of private sector will also be assessed as an enabler with regard to access to capital and markets. The crux of project's philosophy would therefore be to design and implement sustainable and biodiversity-friendly livelihood options for local communities, where possible bringing to bear the resources of the private sector. The project will therefore continuously weigh and try to strike a balance between the conservation needs of the pilot PAs and sustainable poverty alleviation within PAs. This new approach would be vital to secure the long term survival of endangered wildlife in pilot areas and the emergence of a modern conservation paradigm, based on which the interests of all stakeholders are fully considered and secured through the design of appropriate incentive mechanisms as well as commensurate conservation obligations.

The Addendum will also aspire to implement a climate resilient rangeland management model. Among natural or non-anthropogenic threats, drought is the principle danger, exacerbating overgrazing and further limiting ungulate carrying capacity.



Increase the number of observations of Cheetah mother and cubs in Cheetah selected habitats and the succession of female cheetahs to raise their cubs to reach the maturity, makes a lot of hope for the future.

**What Have We Accomplished So Far?**

Importantly, Phase II implementation extended protection of cheetah and its associated biota to 10 habitats in close collaboration with provincial DoE offices. Augmented protection was achieved through implementing a number of measures as follows:

- Augmented and improved logistical capabilities
- Enforcement of grazing laws and regulations as well as taking steps to alter the grazing patterns in the 10 target habitats in an effort to rehabilitate rangelands for use of the cheetah prey
- Procurement of grazing and water rights within the PAs. This has been an important project activity to ensure that key exposed habitats are secured and to eliminate the threat of poachers that might visit these habitats under the pretext of water and grazing rights
- Increased control over the issuance of permits for development projects
- Submission of proposals to the Environment High Council in an effort to upgrade a number of select habitats to higher protection designations

A number of activities have also targeted at biological research and awareness raising:

- Maintenance of a central, up-to-date database in a universally accepted format that allows for easy search and retrieval
- On-going assessment and compiling of current information and capacity, thereby identify gaps
- Conducting a series of provincial workshops with relevant organizations (Ministries of. Industry and Mine, Agriculture as well the Council for Planning and Development) to refine the data and fill in the gaps
- Identifying cheetah ranging behavior and corridors through research techniques, including socio-economic questionnaires, radio-telemetry, etc., starting field projects in southern core areas
- Developing and applying a protocol for extensive monitoring of cheetah across central and eastern Iran
- Develop and apply protocols for a semi-quantitative monitoring of prey species (gazelle, wild sheep, wild goat) in the following sites: (1) Naybandan, (2) Kavir, (3) Touran, (4) Dare Anjir, Bafq and Kalmand, and (5) Abbas Abad and SiahKouh
- Identifying and training small groups of 2-6 villagers from key communities in and around the 10 priority areas to conduct public awareness campaigns (training of trainers)
- Production and distribution of site-specific educational materials by partners in the target communities
- Promoting public awareness using existing or creating new opportunities (e. g. commemorating the Cheetah Day).
- Transform cheetah into a national symbol through proposing Cheetah as Logo for Iran's National Football team.
- Implementing the community based reserve over the cheetah non-protected habitats in Yazd province.
- Perform Cheetah habitat modeling by maximum-entropy approach for species



(Maxent) on the base of CACP data base

- Inclusion of cheetah education material in books prepared for primary and secondary junctures of public education

### **Saving and protecting the biodiversity of wetlands:**

A Conservation of Iranian Wetlands Project in cooperation with Department of Environment DoE and other Habitat and protected areas bureau stakeholders has developed as

"National Wetlands Conservation Strategy and Action Plan".

In 1971, for the purpose of protecting wetlands valuable ecosystems, Ramsar Convention- the oldest international resolution with the subject of world nature conservation - was endorsed in Ramsar City of Iran. By emphasizing on the wetlands' role in supplying the needs of human societies, the convention has set wetland biodiversity conservation as its main objective. Since the beginning, Iran has played the main role in formation of Ramsar Convention and by the time the convention was legally official in 1975, Iran was one of the first 7 countries, who became a member of Ramsar Convention.

Despite all the efforts for conservation and management of wetlands, the threats such as 1) Severe scarcity of water resources, 2) the competition between wetlands and other uses of water resources, 3) Land use conversion in the catchment areas, 4) Urban, agricultural and industrial waste water discharges to the wetlands without proper treatment, 5) High level of sediments in surface water flows, 6) Successive drought and 7) Lack of appropriate planning and management of wetlands, has made these ecosystems face serious threats at national and international levels.

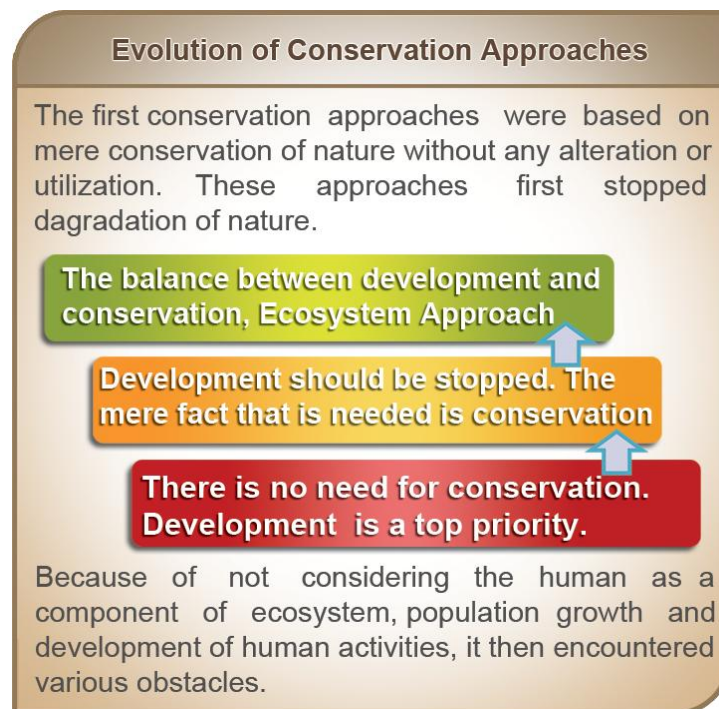
Ramsar Convention- the oldest international resolution with the subject of world nature conservation	
Date and the signing location	1971-Ramsar Site, Iran
The Types of defined wetlands in Ramsar Convention	42 types
Types of wetland exist in Iran	41 types
Number of internationally important wetlands in Iran	84 wetland

The number of Iranian wetlands registered in Ramsar Convention	35 wetland under 24 titles
The areas of Iranian wetlands registered in Ramsar Convention	1486438 hectares

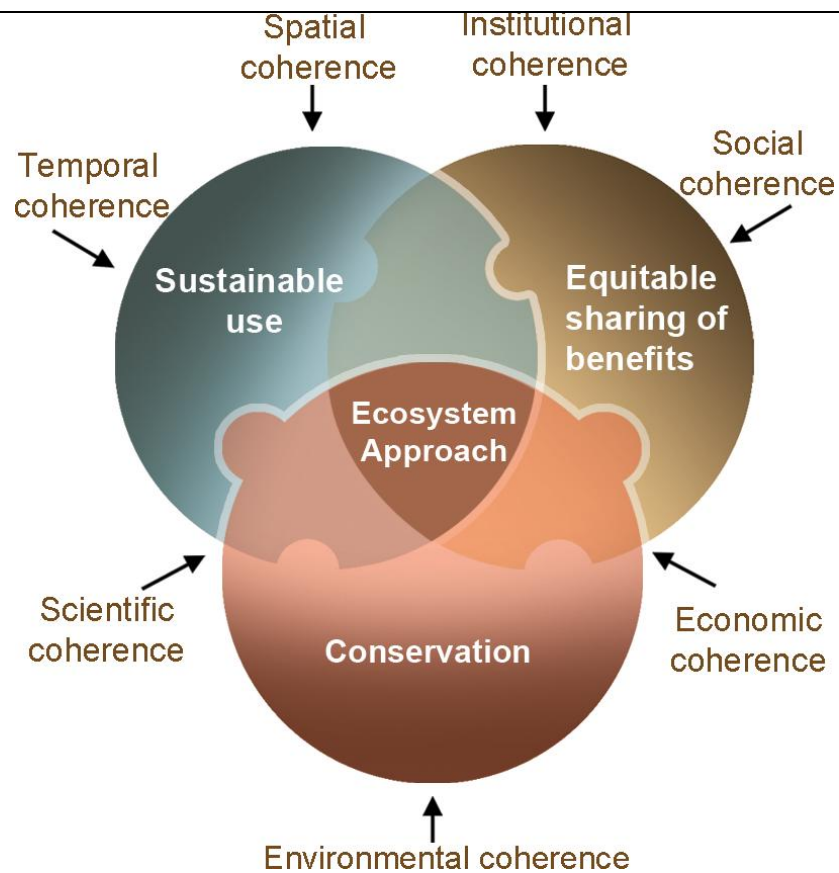
Case Study :

Establishment of ecosystem approach for wetlands in Iran :

The practical and organized commitment to integrated conservation of the environment, particularly wetlands in international level has more than half a century history. During this period of time various managerial approaches have been globally developed. The first conservational approaches were based on nature and environment protection with absolute bans on alteration or utilization.



During the above procedure, ecosystem approach was presented as one the successful practices of environmental management globally.



Ecosystem management is an advanced conservational approach, in which the conservation of environment is being carried out along with considering rational economic utilization and the role of human, especially local societies as a part of ecosystem. Furthermore, this approach is functional - mostly in catchment areas - by taking into account the relationship between various components beyond the apparent boundaries of ecosystems.

It is obvious that in this approach, conservation of environment is not the mere responsibility of an independent organization, but it should be carried out in a participatory procedure, by having a responsible party and the collaboration of rest of related organizations as well as bold presence of people, particularly local societies.

Similarly in Iran according to the 4<sup>th</sup> and 5<sup>th</sup> socio-economic development plans, Department of Environment has been determined as the main responsible party for implementation of ecosystem management. Subsequently, Conservation of Iranian Wetlands Projects has commenced its activities in order to establish ecosystem

approach in the wetlands management.

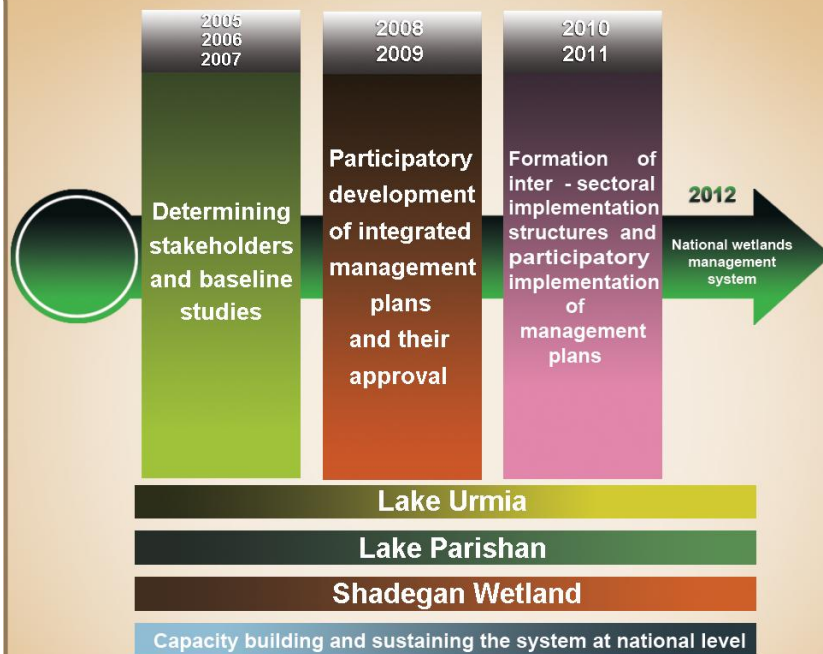
### Conservation of Iranian Wetland Project (CIWP)

CIWP is a 7 years joint initiative between GEF, UNDP and the Iranian government (led by the Department of Environment), which was initiated in 2005. CIWP aim is to systematically remove or substantially mitigate the threats to sustain Iran's wetland ecosystems. CIWP has started the implantation of the activities in three important wetlands of the country as demonstration sites and is making an effort to disseminate the achieved experiences to the other country's wetlands by presenting a managerial system and providing legal tools for implementation of the system.



The general procedure of the activities carried out by CIWP is demonstrated in the following graph.

## The Graph of General Procedure and The Main Stages of CIWP



After preparation and approval of management plans by local, provincial and national stakeholders, each of these management plans was approved by high-profile decision-makers (the Cabinet or provincial planning council) for implementation.

After implementation of priority actions of management plans by related authorities and NGOs, in final phase of CIWP there has been a great deal of efforts to provide the necessary mechanisms for a managerial system development along with providing legal and financial infrastructures for the implementation in the whole Iranian wetlands.

### Key achievements of CIWP

Develop and Ratify Integrated Management Plans for Lake Parishan, Lake Urmia and Shadegan Wetland

According to scheduled plan of CIWP, integrated management plans of Urmia Lake, Lake Parishan and Shadegan Wetland catchment areas were developed in participatory manners, after necessary consultations and several feedbacks and reviews at national, provincial, regional and local levels. Afterwards the management plans were ratified as multi-sectoral documents.

- Integrated management plan of Urmia Lake was approved after going through the necessary procedures and was signed by ministers of energy and Agricultural Jihad, the president deputy, Head of DoE and three governors of Urmia Lake catchment as the first ecosystem-based inter-sectoral management plan in the country. In addition, the management plan implementation has been included in the Cabinet's enactments.
- Management plan of Parishan wetland has been developed after going through the same procedure and was approved during the Cabinet provincial visit and was officially notified to Fars General Governor for implementation. Consequently planning council of Fars General Governor commenced the formation of managerial structures.
- Management plan of Shadegan wetland was approved in the Governor's planning council of Khuzestan and was officially notified to the whole governmental parties at the provincial level.

#### Development of Inter-sectoral Structures for Implementation of Management Programs

By having the management plan being ratified and according to what has been anticipated by CIWP, frequent capacity buildings for implementation of the activities has been carried out up to date by which the development of executive structures and systems has been achieved. Based on the size of each wetland, multi-sectoral managerial structures has been developed at local, provincial and national levels for supporting the management plan implementation. Furthermore, technical working groups, namely, sustainable water resources and agriculture management, biodiversity and public awareness and participation is established in each demonstration site, for the purpose of technical supports of the managerial structures.

The most important carried out activities in this regard is as follow:

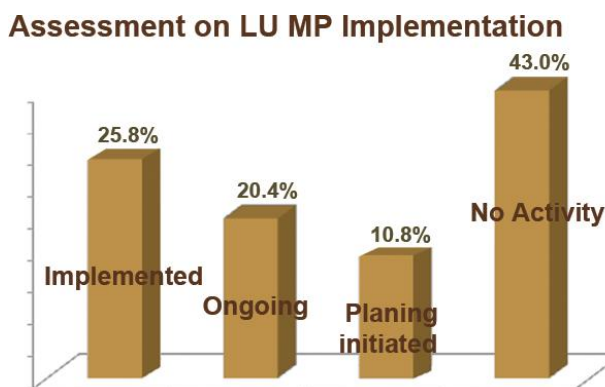
- The establishment of Lake Urmia National Implementation Committee with Vice President as the head of Committee and Department of Environment as the secretariat for implementing Lake Urmia management plan. The Committee members include President Deputy Strategic Planning and Control (SPAC), the Ministries of Energy, Agricultural Jihad, Interior, Urban

development and the Governorships of three provinces of East and West Azerbaijan and Kordistan.

- Establishment of regional council for management of Lake Urmia basin consisted of Governors and senior managers from related provinces
- Currently speaking, local management committee of Lake Parishan is established with Kazeroun Governor Chairmanship. This committee has a multi-sectoral structure and all the local related organizations as well as the representatives from NGOs and local communities are the members of this committee. This committee is responsible for the implementation of Lake Parishan management plan and related tasks. Also at provincial level, Water and Agriculture Working Group of the Fars Planning Council is established as the management plan provincial management committee.
- Establishment of Shadegan Wetland provincial management committee along with holding its first meeting. Furthering the official notification from Khuzestan Governor to Shadegan District governor, the Shadegan wetland local management committee is also established with one meeting being held.

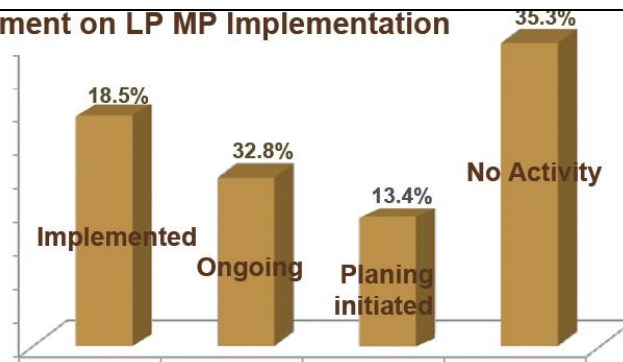
#### Implementation of Integrated Management Plan of Demonstration Sites

Along with the formation of managerial structures, implementation of management plans was also considered. Implementation status of the management plans until the end of first half of 2011 is as followed:





### Assessment on LP MP Implementation



Some of the most important accomplished activities in line with the management plans implementation are:

- Calculation and approval of annual environmental water rights of Lake Urmia with the value of 3.1 billion cubic meters and water level of 1274.1 as the minimum ecological level of Lake Urmia, as well as conducting Shadegan Wetland water demand survey along with its synthetic report.
- Provincial water share calculation, approval and official notification to the provinces located in Lake Urmia basin and securing environmental water rights of Lake Urmia and prohibition of any new water allocation for new development projects in West and East Azarbayjan province.
- Investigation and approval of 24 priority projects in line with Lake Urmia integrated management plan and official notification to related executive parties along with planning and coordination for budget allocation.
- Development of Lake Urmia drought risk management plan, in order to ensure water right of the lake in drought situation
- Conducting a program for enhancing wetlands management secretariats in related provinces
- Planning for developing management plans for satellite wetlands of Lake Urmia such as Ghorigul wetland and Ghareh gheslugh Wetland Nonshooting Area in East Azarbayjan, as well as Kaniborazan Wetland in West Azarbayjan
- Pilot farms set up in the vicinity of Lake Parishan and Lake Urmia satellite wetlands, for introducing sustainable agriculture
- Planning and promoting the concept of eco-village in the vicinity of Ghorigul wetland in East Azarbayjan
- Boundary-marking of Lake Urmia (80%) and Lake Parishan (50%) with cooperation of Department of Environment in related provinces and planning for conducting Shadegan Wetland delineation.
- Monitoring and restoration activities for endangered species in Lake Parishan (Typha, Otter, indigenous fish)
- Conducting analytical surveys on Lake Parishan threats and developing an

action plan to minimize their impacts on the ecosystem (water abstraction, pollution resources)

- Initiation of Lake Parishan and Shadegan visitor center construction and installation of public awareness billboards in the vicinity of Parishan and Urmia Lakes
- Development and implementation of monitoring plan and protocols prepare periodic monitoring reports and equip provincial DoE offices with monitoring equipments.
- Development and implementation of Wetlands Wise Use Strategies (Ecotourism Development Strategy for Lake Parishan, training of Local tour leaders, Fishing Strategy for Shadegan Wetland).

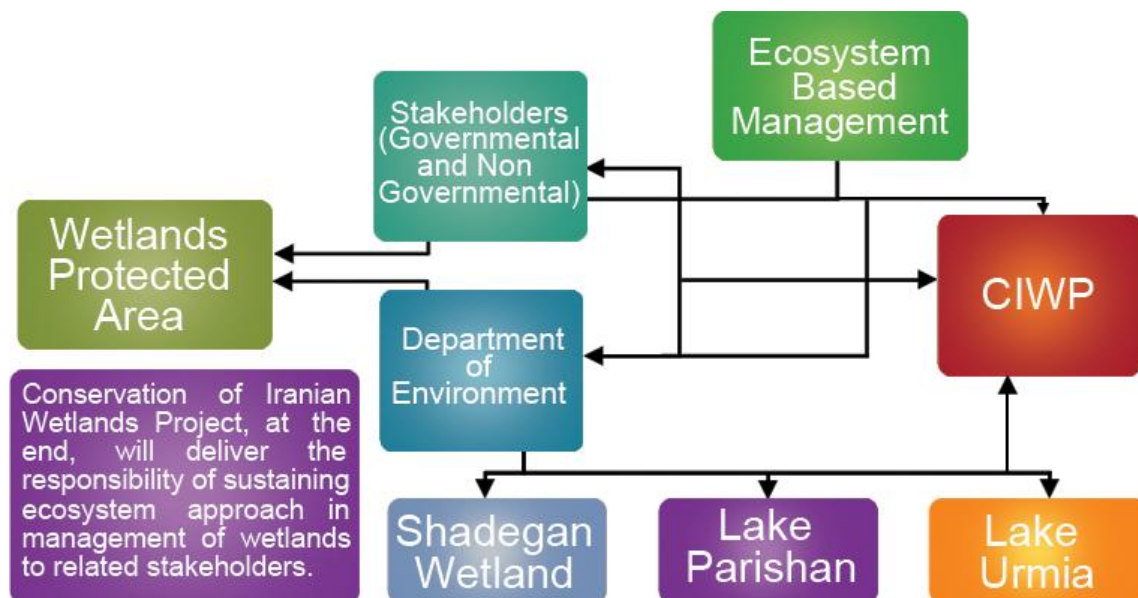
Researches, Awareness Raising and Capacity Building in Order to Develop and Implement Wetland Management Plans



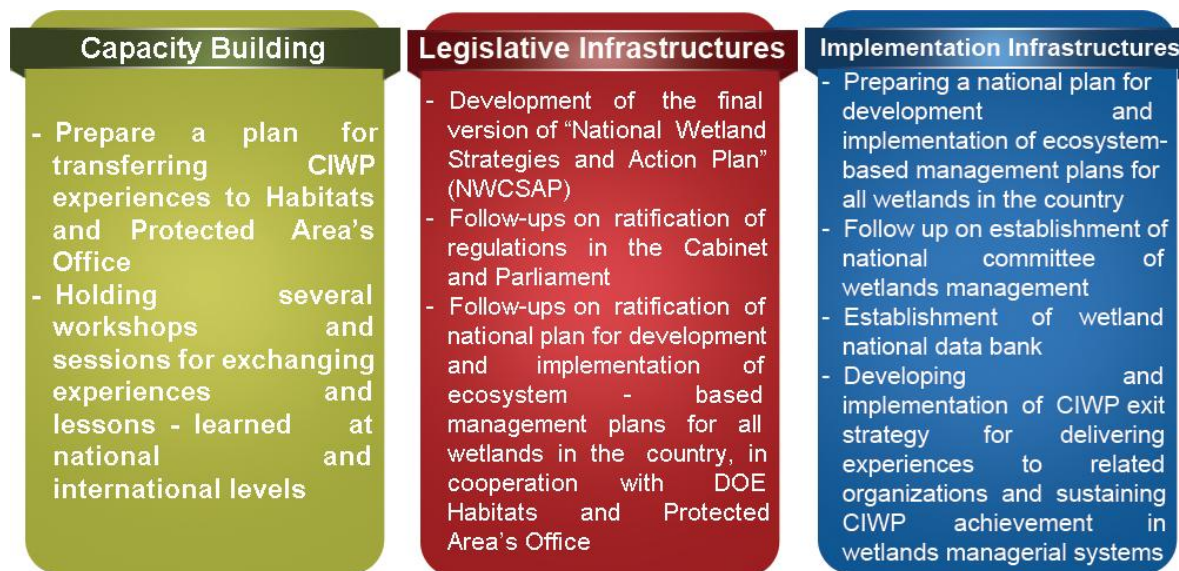
Transferring CIWP Experiences and Capacity Building for Establishment of Iranian Wetlands Managerial System

Along with the development, ratification and implementation of management plans in

demonstration sites, transferring the experiences of the project, preparing legal infrastructure and developing wetlands managerial systems according to ecosystem approach has been taken into account.



The most important activities regarding these items are as follow:



## Conservation of Biodiversity in Central Zagros Landscapes



The ultimate goal is to ensure the protection and sustainability of use of biodiversity in the Central Zagros Region.

Now the framework and action plan of the sustainable development and conservation of the central Zagros mountain has been developed .The project aims to establish a collaborative conservation system in which all stakeholder groups are fully engaged in planning, implementing and monitoring of resource management planning to ensure the protection and sustainability of use and exploitation of all biodiversity, renewable natural resources and ecological processes. The main strategy is mainstreaming which enables the agencies that govern the main economic or resource use sectors – agriculture, forest, rangelands, water, tourism, energy, infrastructure – to incorporate conservation and ecological sustainability measures into their own policies, programs and sectoral practices .

The project has accomplished a number of baseline-studies, capacity-building, planning and organizational arrangements but the main highlights are as follow:

- Pilot areas identified in a consultative manner
- Threats to biodiversity identified and analyzed to determine underlying causes of biodiversity decline and to understand barriers for inter-sectoral planning of resources management
- Priority areas for action determined based on threat analysis in each pilot area
- Mainstreaming mechanisms established at the provincial and local levels
- Local Planning Committees have met in a regular basis to determine baseline activities in line with the objectives of the project



## Sustainable development and conservation of Central Zagros



The Zagros Mountains, the largest one in Iran, about 32 Million ha and covers about 11 provinces of the country, is famous for its biodiversity around the world. Although, it is providing more than 50 % of the water needed in the country, it is prone to real damages due to the unsustainable development programs and activities. Therefore, DoE of Iran, on behalf of the country, with a joint support of UNDP and GEF decided to design and implement "The conservation of Biodiversity in the Central Zagros Landscape Conservation Zone Project."

Accordingly, "The Central Zagros Mountains' Conservation & Sustainable Development" plan will be developed for mainstreaming of conservation of biodiversity and sustainable use with activities done in various fields such as agriculture, forestry, rangeland, water, infrastructure development and tourism in the Central Zagros Landscape in 3.068.000 ha. This document aims at strengthening the livelihood and great stimulus for economic development in the area on one hand and conservation of biodiversity along with sustainable development, on the other.

This plan includes strategies' framework and action plan, management system and the scale-up strategy. After having the vision of the project developed, the framework and action plan introduced to reach the vision. By using the management tools, such as ecological-based land-use planning, guidelines, management support system, information tool, and monitoring and evaluation plan, implementation of the action plan would become feasible. The strategies' framework and management support system is explaining the management structure, stakeholders at national, provincial and catchment management areas and also scale-up

strategy and central Zagros Management System's development. It anticipates and presents the required budgeting in 10 catchment management areas in the upcoming years.

In order to develop this, 3 consultative workshops at national level were held in order to get the positive cooperation of the stakeholders and it ended in forming 3 working groups of budgeting and planning, laws and regulations, and resource use. And 8 consultative workshops were held in the 4 Provinces of the Project. The provincial workshops resulted in forming working groups from the experts, who were the representatives from the stakeholders in each province such as Governor's Office, FRWO, MOAJ, DoE, Fishery, Nomads Organization, NGOs, CBOs and etc.

At the moment, the draft of the sustainable development and conservation has been developed and sent to the key stakeholders to insert their feedbacks on it and in order to be finalized and presented to the High Council of Environment and to have it ratified. It is hoped that in the 6<sup>th</sup> plan of the socioeconomic and cultural development to have the needed funds for having the scale-up strategy run allocated.

## **Conserving and Managing the Biodiversity of Anzali Wetland**

### **Anzali Wetland Ecological Management Project (Phase I&II 2003-2019)**

Japan International Cooperation Agency (JICA) has helped Iran to conserve and manage the Anzali Wetland in North of Iran, The study and support was implemented from 2003 to 2012. This sharing of techniques and information on wetland monitoring and management planning, along with the provision of assistance in the development of a wetland management system, led to the establishment of the Anzali Wetland Management Committee in 2011. Staffed mainly by members of Iran's Department of the Environment, the Committee drew up a master plan for the management of Anzali Wetland. Concrete initiatives have also been introduced to develop materials for environmental education and lay the foundations for eco-tourism promotion.

Implementation of the second phase of this project to the Memorandum of Understanding with Environment Department of Iran was signed on 2014 with 5 years of duration. Under this MoU, the Ministry of Agriculture, Ministry of Energy, Governor of Gilan province, the Fisheries and Natural resources section as well as local communities and other stakeholders will participate. Some major achievements of the first phase include zoning, plan of action, environmental education, and ecotourism action plan.



Other Iran and JICA mutual projects are:

- Project on Establishment of Participatory Water Management System in Golestan Province
- Project on Strengthening Environment Management in the Petroleum Industry in the Persian Gulf and its Coastal Area
- Participatory Forest and Rangeland Management Project in Chaharmahal-va Bakhtiari Province/2010-2015
- Participatory Integrated Management Plan for Lake Urmia Basin.



**The Anzali Wetland**

## Conservation of Caspian Hyrcanian Forest Biodiversity

The Caspian Hyrcanian Mixed Forest Ecoregion is located in northern Iran along the southern coast of the Caspian Sea and northern slopes of the Alborz Mountains. These ancient broadleaf and mixed lowland and mountain forests covering 1.8 million hectares form unique and diverse communities and house many endemic and threatened tree, mammal and bird species. The area is listed by the World Wide Fund for Nature (WWF) as a Global 200 Ecoregion, and by BirdLife International as an Important Bird Area (IBA).



The project aims to conserve biodiversity in key landscapes within the Caspian Hyrcanian forest ecosystems by a) strengthening the national and local policy framework governing land use in the Caspian Hyrcanian forests, b) enhancing the rights and roles of the local communities in their management, and c) demonstrating ways and means of improving management (including land use planning, zoning, compliance monitoring and enforcement). The project will work at three levels: (I) strategic policy and regulatory interventions targeted at 800,000ha across the whole 1.8 million ha forest; (II) integrated management for multi-purpose forestry demonstrated in 4 pilot basins totaling 120,000 ha; (III) community-based management demonstrated in 30,000 ha within two of the pilot landscapes. Capacity building will be a key theme at all three levels.



Project Pilots are:

1. Farirud-Zilakirud (Basin No. 22&23), Gilan Province
2. Dohezar-Sehezar (Basin No. 33&34), Mazandaran Province
3. Baliran (Basin No. 53), Mazandaran Province
4. Chehelchay (Basin No. 92), Golestan Province

### **Integrated Natural Resources Management in Iran Agro Ecosystems**

(MENARID International Project)

This project aims at institutional strengthening and coherence for integrated natural resources management. The Middle East and North Africa Regional Program for Integrated Sustainable Development (MENARID) International project is being conducted in including Algeria, Egypt, Iran, Jordan, Morocco, Tunisia and Yemen. In Iran, the project started in September 2010 as a joint activity between Global Environmental Fund (GEF), United Nations Development Program (UNDP) and Forest, Rangeland and Watershed Management Organization (FRWO) of Iran (as Iran government representative).



The goal of the project is to promote climate- resilient and gender sensitive integrated management of renewable natural resources, while maintaining the capacity of ecosystems to deliver the goods and services needed to support local livelihoods. The project will contribute to this goal along with the other projects under the MENARID and in Iran.

Project Objective and its components:

The objective is to remove barriers to integrated Natural Resources Management by developing and strengthening institutional knowledge, capacity and coordination, and by demonstrating and up-scaling successful sustainable land and water management practices.

The current project is comprised of three substantive and complementary components as below:

- 1: Improved knowledge and understanding
- 2: An enabling environment
- 3: Community driven approaches





Expected outcomes:

- 1: Enhanced engendered knowledge and understanding of the drivers of land-use change causing land, ecosystem and water degradation with consequent impacts on ecosystem services and local livelihoods
- 2: An enabling environment for integrated natural resources management (INRM) and the use of the enhanced knowledge from Component 1
- 3: Community-driven, climate-resilient approaches and techniques for sustainable land and water management demonstrated through INRM practices

MENARID Demonstration sites and Focal Areas:

MENARID, a full size GEF project in Iran, is executed in four type of agro ecosystems (rang lands, rain-fed agriculture, irrigated agriculture and forest/woodlands) where cross-sectoral coordination is essential, located in five provinces, Sistan and Baluchestan, Kermanshah, Yazd, and also Semnan and Tehran which are pilot sites of Water and Land Recourses Sustainable Management( Hablehroud).



The project is aligned with GEF policies and priorities in four focal areas:

1- Land Degradation: The project objectives align closely with supporting sustainable agriculture and rangeland management in the land degradation focal area strategy. It is consistent to develop an enabling environment that will place sustainable land management in the mainstream of development policies and practices at the national and local levels in Iran.

2- International Waters: By identifying interactions between different sources and the multiple use demands of water, the project will ensure that water is not over-used and supplies are available to feed above- and below-ground sources for adjacent territories.

3- Biodiversity Conservation: The project will address the regulatory and institutional constraints to mainstreaming of biodiversity conservation into livelihood activities in the wider agricultural production landscape surrounding protected areas.

4- Climate Change Mitigation: Through its focus on measuring, monitoring and demonstrating carbon sequestration and its attendant benefits to ecosystems and livelihoods, the project will fully support management of land use, land-use change and forestry as a mean to protect carbon stocks and reduce greenhouse gas emissions.

#### MENARID Key Stakeholders

The project key stakeholders are classified in four different groups as below:

1- Government: at local, provincial and national levels is a primary stakeholder as it continues to coordinate environmental protection and national development objectives in its actions.

2- Local Communities: especially the poorest and most vulnerable who are not only the custodian for critical biodiversity and globally-important environmental assets but are also dependent on the quality of local natural resources.

3- Private Sectors: are another stakeholder potentially benefiting as opportunities arise for the development and implementation of activities and initiatives that have potential to be commercialized.

4- Civil Society and NGOs: will have a significant stakeholder role in promoting awareness of integrated natural resources management, especially in project sites and in developing linkages both to human welfare and to sustainable resources, ecosystem and environmental management.

## Rehabilitation of Degraded Lands (2011-2016)

Rehabilitation of forest landscapes and degraded land with particular attention to saline soils and areas prone to wind erosion.

This project is a collaborative effort of Forest, Rangeland and Watershed Management Organization with GEF and FAO.



Forest, Rangeland and Watershed Management Organization (FRWO), through its Desert Affairs Bureau (DAB), will be the primary technical executing partner responsible for ensuring the overall achievement of project objectives, outcomes and outputs, with the technical and administrative support from FAO.

### Objective

The project development objective is to remove barriers to participatory integrated sustainable land and forest management (SLFM) in Iran by:

(i) Strengthening capacity of local communities, provincial and local institutions to plan, implement and evaluate participatory and integrated SLFM initiatives at the village and watershed scales.

(ii) Adoption and implementation of the defined plans including sustainable alternative livelihood options with socio-economic and environmental benefits sustaining ecosystem services.

(iii) Enhancing capacity at local and national levels to mainstream these approaches into national plans, policies and processes.

The project's global environmental objective is to reverse and reduce land degradation and biodiversity loss and their subsequent negative impacts on ecosystem health, goods and services, through increased capacity to plan and implement participatory integrated SLFM initiatives based on practical solutions addressing immediate and long term socio-economic needs while ensuring sustainable management of natural resources and sustained ecosystem services on watershed scale.

#### Activities

Co-funded by the GEF and relevant Government counterparts and supported by a team of international and national consultants, the project proposal involves the following four project components:

- (i) Participatory integrated SLFM capacity development;
- (ii) Implementation of participatory integrated watershed and village level plans in selected pilot sites;
- (iii) Improving the policy and institutional environment for participatory integrated SLFM approach;
- (iv-a) Awareness raising and dissemination of best practices and lessons learnt; and
- (iv-b) Project management

Strengthened capacity of local communities, provincial and local institutions to plan, propose, implement participatory integrated management and evaluate SLFM initiatives - the outcome of the first component - forms the basis and will define the project intervention. This feeds into the project's second component where the participatory integrated village and watershed level plans are implemented addressing interlinked challenges of wind erosion, land degradation and biodiversity loss in selected priority sites within two project watersheds. This component will include identification, enhanced understanding and provision of incentives for maintenance of ecosystem services. The third component will strengthen capacity for participation and partnership between local resource users, provincial and national level decision making bodies, such as FRWO and other institutional stakeholders, including the Department of Environment, Ministry of Energy, Ministry of Mining etc, together with the private sector, to better understand and promote the participatory integrated SLFM principles and facilitate the review, updating/revision and implementation of supporting policies and regulations. This will be achieved through the establishment of a SLFM platform for local, provincial and national stakeholders involved in planning, decision making and implementation of SLFM plans. The projects' fourth component will support increased awareness among institutional stakeholders, decision-makers, researchers, university students and the



public at large of the importance of the country's unique biodiversity and landscape. The multisectoral, cross-cutting nature of threats and constraints will be highlighted, possible solutions, best practices and lessons learned identified and disseminated in an effort to increase understanding and solicit the commitment of all stakeholders to the long-term health and sustainability of ecosystems and the services provided by them.

### **Sustainable Management of Hablehroud Land & Water**

(Hablehroud is a river in Semnan province . Duration of project: end of 2016)



#### **PHASE I**

Sustainable Management of Land and Water Resources came into existence as a joint project by the Government of I.R. Iran and the UNDP in 1997. The Hablehroud Watershed with an area of 1.2 million ha was selected as a pilot area and the project was deemed to achieve the following objectives. The main objective of the project was to develop appropriate models for planning, management, execution, operation, monitoring, and evaluation of land and water resources in a number of sub-basins in the watershed so that the results obtained could be generalized and extended into a national plan for the protection and



conservation of natural resources through the rural community participation in the management of watersheds across the nation. These aggregate objectives can be broken down into two sets as follows:

**Objectives in line with national policies:**

- Improved livelihood and living standards of the local inhabitants living on the natural resources in the Hablehroud Watershed as a result of sustainable utilization of land and water resources.
- Developing an appropriate model for the integrated and participatory management of land and water resources leading to the socioeconomic development of the region such that the model could be replicated in other parts of the state with slight changes to accommodate local requirements. The mode was, further, desired to facilitate the national action plan for the same purposes.
- Decentralization and promoting cooperation and coordination among public organizations, on the one hand, and between public organizations and the local parties, on the other, towards the development of the watershed.
- Social development through creation and strengthening of financial and administrative tools and institutions and creation jobs in rural areas.
- Economic development based on land and water resources and increasing the income level in the regions within the watershed.
- Developing a participatory methodology for preparing an integrated management of land and water resources in the Hablehroud Watershed.
- Creation of efficient and effective systems for the monitoring and evaluation of resource management and sustainable development.
- Promotion of the successful participatory approach that is to be developed to all levels of the social strata with special attention devoted to participation by women, youths, and marginalized groups including those lack possession of land, water, or skills and technical know-how.

**Objectives in line with local development:**

- Capacity building among local experts, managers and communities to play a more active role in planning and management of land and water resource and in development of their watershed.
- Enhancing local capabilities and skills for organizing efficient production and soil and water utilization systems.
- Defining the status of local (governmental, non-governmental, and local community) parties in planning and management of development projects.

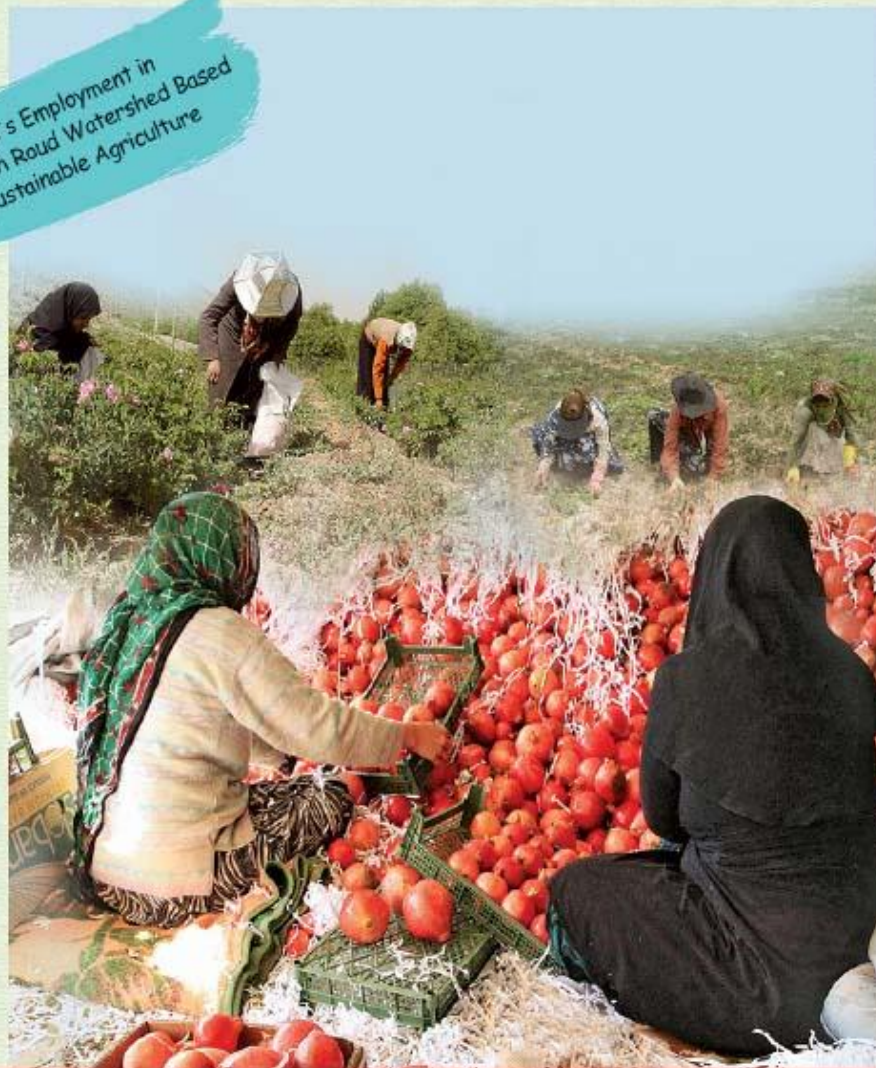
# QUARTERLY NEWSLETTER

Sustainable Management of Land & Water  
Resources (Hableh Roud)  
Ministry of Jihad-e-Agriculture  
Forests, Range, and Watershed Management  
Organization of IRAN  
Deputy of Watershed Management, Range  
and Desert Affair

No. 23 Spring 2014



Women's Employment in  
Hableh Roud Watershed Based  
on Sustainable Agriculture



Clearly, the ultimate goal of the project and all its activities had form and develop around public participation and sustainable development. This project is one of the National Execution Guideline (NEX) projects for local communities by UNDP in Iran

which started with input and consultation from FAO. The project includes four interrelated projects: 1) Desertification Control Project, 2) Irrigation and Agriculture Project, 3) The Umbrella Project, and 4) Watershed Management Project. Eight villages in the two Delichay and Namroud sub-basins within Damavand and Firoozkoush towns, Tehran Province, were selected as pilot villages. They were Hesarbon, Arou, Havir, Dehnamak, Lazour, Najafdar, Vazna, and Zarman. Nine villages and two rangelands in Semnan Province were selected in the two sub-basins of Rameh and Ich. These were Chahar-Tagh, Rameh, Ghalibaf, Ich, Abdolabad, Dehnamak, Imamzadeh Abdollah, Jovein, Behvard, and Lasjerd villages and the three Sootehzar, Lazoureh, and Khonar rangelands as pilot regions.

## **PHASE II**

Upon completion of Phase I, a meeting was held by the Ministry of Agricultural Jihad, National Management and Planning Organization, Ministry of Foreign Affairs, and the UNDP. Based on the importance of the Hablehroud Project and its outcomes, the meeting decided that it should continue to its Phase II due to its priority among national plans. An international consultant was accordingly invited to develop the document for Phase II of the project in which emphasis was to be laid upon poverty reduction and sustainable production by local farmers and rural producers in a manner to help obtain self-sufficiency goals of in producing basic commodities and achieving food security with improved productivity of basic (forests, rangeland, land, and water) resources. The document was duly prepared and signed by the parties.

### **Conservation against Desertification by Carbon Sequestration**

On 2013 the Carbon Sequestration Project (CSP) led by Bureau of Desert Affairs, in the Forest, Rangeland and Watershed Management Organization (FRWO) and supported by UNDP celebrated 10 years of progress in combating desertification in Iran.

10 years ago, in April 2003, the first phase of the project -funded by the Global Environment Facility (GEF) began in Hossein Abad, South Khorasan province with the aim to demonstrate that desertified rangelands can be cost effectively reclaimed by and for the benefit of the local community.

Upon the successful implementation of the first phase, the second phase started in 2010 for a period of five years in 40 villages and across 225 thousand hectares, to ensure that people are fully involved in sustainable management of natural resources. For this reason the existing Village Development Groups (VDGs) were strengthened and new ones were created and legally identified to represent the needs and interest of villagers.

In April 2012, the project was expanded to include sites in the provinces of Kerman (Shahdad) and Tehran (Mallard).



Ms. Esmat Hosseini, leader of one of the Village Development Groups (VDGs) in Nazdasht village, Khorasan Province. She runs the village kindergarten and teaches carpet and clothes weaving.

Following the successful outcomes of the project, both UNDP and the FRWO agreed to further replicate the methods and mechanisms of the project in four other provinces (Alborz, Bushehr, Markazi, and Semnan). This agreement was signed during this ceremony, as an addendum to the project.

UNDP has also agreed to provide technical support through international consultancy missions and South-South Cooperation initiatives, and enable further contribution by Iran to implement the United Nations Convention to Combat Desertification (UNCCD).

According to the addendum signed during this ceremony of the 10th anniversary of CSP, in 5 years the project will cover a total area of 684,800 Ha in Iran:

<b>Province</b>	<b>Area (Ha)</b>
South Khorasan	225,000
Tehran	80,000
Alborz	80,000
Semnan	50,000
Markazi	50,000
Bushehr	61,800



Kerman	138,000
Total	684,800

The Carbon Sequestration Project activities focus on MDGs [1](#) , [3](#), and [7](#).

**1st time to calculate Human Development Index (HDI) at provincial level**

The latest results of monitoring and evaluation of the project in South Khorasan province show that during the first phase, the Human Development Index (HDI) has changed from 0.441 in the first year to 0.517 in the fourth year.

This is the first time that the HDI is calculated for project at provincial level.

## 1.2.2 Legislative Actions

### **The Fifth National Development Plan (2010-2014)**

In the fifth national development plan (NDP). Articles 187 to 193 are dedicated to environmental obligations of the government.

According to these articles the government should develop and implement the environmental program for integrated ecosystem management , protection and sustainable use of biodiversity , public awareness and comprehensive information systems .

### **The revival of Supreme Council of Environment in 2013**

This council is the country's highest decision-making body on environmental matters. The President is the head of the council and the members are: Head of Environment Department, Ministers of Agriculture, Industry, Mines and Commerce, Ways and Urban Development, Health and Medical Education, Head of Planning and Budget Institution; and four authorities recommended by the head of Environment Department.

### **Finalizing of Caspian Sea Biodiversity Protocol with Russia and Turkmenistan**

The Caspian Environment Programme (CEP) is a regional umbrella programme developed for and by the five Caspian Littoral States, Azerbaijan, Islamic Republic of Iran, Kazakhstan, Russia and Turkmenistan, aiming to undertake the necessary measures for the protection, preservation and restoration of marine biological

resources. The Environment Department has taken major steps in finalizing the Protocol in 2015.

In this protocol the contracting Parties shall:

**(a)** Provide comprehensive inventories of threatened species of flora and fauna and accord protected status to such species based on the categories of Annex I of this Protocol from which a Caspian Red Book will be developed in cooperation with relevant international organizations, to be adopted by the Conference of the Parties, subject to previous discussion and analysis by the Contracting Parties.

**(b)** Regulate activities having adverse effects on protected species and their habitats, and other measures to ensure a favorable state of conservation of such species;

**(c)** Control and where appropriate prohibit the intentional and, to the extent possible, the accidental taking, possession or killing, the transport and use for commercial purposes of protected species of flora and fauna, their parts and derivatives thereof;

**(d)** Control and, where appropriate, prohibit the disturbance of fauna, particularly during the period of breeding, incubation, hibernation or migration, as well as other periods of biological stress;

**(e)** Regulate all forms of destruction and disturbance of protected species of flora and their parts and products, including the picking, collecting, cutting, uprooting, possession of, commercial trade in, or transport and exhibition for commercial purposes;

**(f)** Cooperate for the protection and recovery of migratory species;

**(g)** Undertake long-term monitoring of the status of threatened species included under Annex I of this Protocol, as well as the nature and magnitude of impacts threatening their survival according to agreed common population dynamics criteria;

**(h)** Exchange information on measures being taken to conserve populations of threatened species included under Annex I of this Protocol and conduct an assessment of the effectiveness of such measures based on agreed common criteria;

**(i)** Elaborate and implement national and, as appropriate, regional action plans for the species listed under Annex I of this Protocol for their in-situ and ex-situ conservation and recovery;

**(j)** Cooperate to ensure the protection, conservation and, if necessary, restoration of threatened species listed under Annex I of this Protocol.

**(k)** Grant exemptions, where appropriate and in accordance with

national legislation to the prohibitions prescribed for the protection of the species listed under Annex I of this Protocol for scientific and reproductive purposes, and, in case of threats to human health, providing that those exemptions do not harm the survival of the population of the target species or of any other species.

The protocol still waits the signing of Republic of Azerbaijan & Republic of Kazakhstan

### **Signing the Memorandum of Understanding on the Conservation of Migratory Birds of Prey in Africa and Eurasia (Raptors MoU) in 2015**



**Dr. Ahmad Ali Keykha (right), Iran Deputy Head of the Department of Environment and Natural Environment, signing the Raptors MoU with Mr. Nick P. Williams (left), Head of the Coordinating Unit of the Raptors MoU.**

Over 50 delegates from all 31 Provinces within the country gathered on Qeshm Island, Hormozgan Province. The overall aim was to review the status of the 60 species of birds of prey and owls that occur in Iran, and to develop an Action Plan to tackle the many threats faced by these fascinating avian predators.

Dr. Ahmad Ali Keykha, Deputy Head of the Department of Environment and Natural Environment, signed the Memorandum of Understanding on the Conservation of Migratory Birds of Prey in Africa and Eurasia (Raptors MoU).

## **1.3 Major threats to biodiversity**

### **Water scarcity and land degradation**

With an average annual precipitation of 250 mm, Iran faces serious water shortage, which is becoming more severe with rapid population growth. The agriculture sector consumes over 80% of the water share, drinking, industrial and environment sectors count for less than 20% of the freshwater consumption. Moreover, extraction of sand and gravel from river beds for use as construction material is causing damage to river beds and provoking landslides.

Soil loss is caused primarily by the salination, sedimentation and erosion of the soil, desertification, deforestation, inadequate land-use management, and overgrazing.

### **Pollution**

Rapid urbanization, fragmented approaches to urban planning and changing lifestyles with high private and industrial consumption habits have resulted in the significant depletion and pollution of water resources in urban areas. Sedimentation and the emission of nitrates from industrial zones pollute both groundwater and surface water resources. Pollution is also a main factor affecting the manifold degradation of coastlines. In rapidly urbanized areas, severe air pollution originating from vehicle emissions, refinery operations, and industrial effluents has become a serious environmental and public health hazard concern. The continued heavy use of fossil fuels across the country accelerates the pollution process.

Unsustainable Land-use conversions , Over-grazing ,Haunting and Trapping ,Extended Use of Fertilizers and Pesticides ,Natural Drought ,Deforestation and Land Degradation, Climate Change ,Desertification are still present as existing threats which were addressed in detail in fourth national report .



## Water Scarcity

### A great threat to the biodiversity of Iran

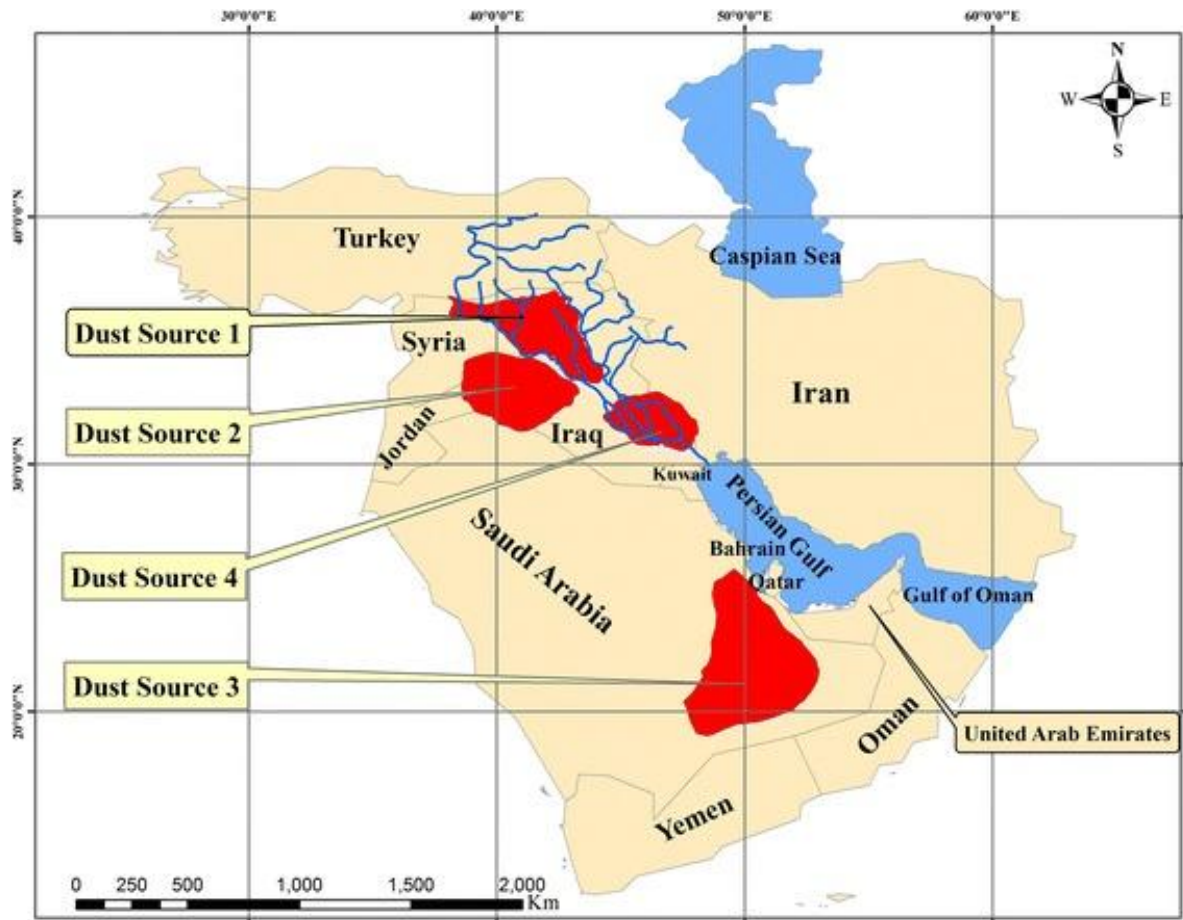


#### Water Scarcity

Water scarcity is one of the most important environmental issue in present day Iran and is of course one of the most fundamental threats to the biodiversity of the country. Water scarcity in Iran is the result of two mechanisms: inadequate natural water supply resources and development of water infrastructures. An immediate action should be taken to address the second issue.

### The Dust Phenomenon

One of the natural phenomena which have had considerable impacts on various regions of the world, including Iran, is “dust storm”. In recent years, this phenomenon has taken on new dimensions in Iran and has changed from a local problem to a national issue.



Identified sources of dust storms



The primary source of the dust storms that are regularly and negatively impacting Iran's air quality lies in the neighboring countries and areas contiguous to the Persian Gulf and beyond. The lack of necessary security and stability in some parts prevents Iran from deploying teams of negotiators to find solutions.

Iran is also facing dust storms that come from African countries affected by drought. In order to fix the problem there is a need of international and regional help and cooperation. There has been allocation of funds last year to control the dust.

#### **1.4 The Impacts of Changes in Biodiversity**

The decrease in biodiversity of aquatic resources of Caspian Sea, Persian Gulf and Oman Sea has a direct effect on livelihood of people and their related family's. Fishing in these areas mostly rely on the natural biodiversity of these ecosystems and not on aquaculture industry. Adding other people related to these activities there will be great negative side effects.

Deforestation and decreases of forest biodiversity in north of Iran causes greenhouse gas emission, disrupted water cycle, increased soil erosion and disrupt livelihood of thousands of people rely on forest. Iran Hyrcanian forest not only supply timber, fuel, fodder and a variety of other products but also have a moderating influence against floods and erosion and help maintain soil fertility. In forest conditions, surface runoff and soil erosion are generally low because of the surface litter cover. If the litter layer is disturbed, then runoff and erosion rates can increase by several magnitudes. Development of forest resources is an integral part of the program for optimum land utilization. Development of forestry and forest industries is also essential for raising the income of the tribal people who live in the forest areas. The destruction of the forests and uplands endangers the watersheds and results in massive soil erosion, declining soil productivity, sedimentation of river channels and siltation of dams and catastrophic floods. Sustainable forest management and development, which focuses on the resources rather than the products, shall be the guiding principle in the management, protection, conservation, utilization and development of forest

resources. Watershed is not simply the hydrological unit but also socio-political-ecological entity which plays crucial role in determining food, social, and economical security and provides life support services to rural people. A large watershed can be managed in plain valley areas or where forest or pasture development is the main objective. It has been established that the deterioration of natural resources, particularly soil and water, in an area can be contained and resources properly developed only by adopting a watershed approach, for overall development.



## **Part II: The National Biodiversity Strategy and Action Plan, its Implementation, and the Mainstreaming of Biodiversity**

### **2.1 Iran's biodiversity targets**

The text of the National Biodiversity Strategies was finalized in June 2003, following the approval of the National Committee on Sustainable Development and approval of the Environmental High Council. The NBSAP has significantly influenced the development and implementation of the country biodiversity policy framework.

Iran four national biodiversity strategies include: 1-Promotion of public awareness and participation; 2-Formation of biodiversity information systems; 3-Sustainable use of biodiversity resources; and 4-Integrated management of biodiversity.

#### **1. Promotion of public awareness and participation in conservation of Biodiversity**

This target is in line with Aichi target no. 1

New measures which have been taking since 2010 are:

- Iran broadcasting has launched a documentary TV channel on 2011. One of its main programs is on different aspects of Iran nature and biodiversity which has had a great influence on public awareness.
- Signing the memorandum of cooperation on 2014 between Ministry of Education and Environment Department based on article 6 by law189 Iran Fifth Development Plan.
- Signing the memorandum of cooperation on 2015 between Ministry of Science, Research and Technology and Environment Department to fulfill the educational goals.
- Conduction of special training programs for teachers and education promoters.
- Conduction of workshops to enhance awareness of the environmental important sectors including students, teachers, rural and urban women, judges, in all provinces of the country.
  
- Inclusion of environmental texts in high school textbooks. ( 2013 )
- Opening of 60 special Environment schools in Autumn of 2015 ( In Iran school year starts in September ) .In five different climatic regions of Iran we will have 10 schools .These schools will be pre-school, elementary and secondary grades ; besides these 50 schools in 5 environmental climate zone countries there will be held 10 special environment schools in the capital ( Tehran ) . The most important feature of these schools is the student's environmental educations and ecological understanding. The goals are strengthening the educational foundation and ecological concepts within people, children and general publics. (Based on the signed Memorandum of Understanding with Ministry of Education).

## **2. Formation of biodiversity information systems**

This target is in line with Aichi target no. 19. New measures which have been taken since 2010 are:

- Establishment and strengthening of the office of Statistics and information Technology in Environment Department. This office is responsible for all kinds of information relating to the environment and biodiversity and is launching the network information for the dispersion of birds, mammals.....etc. in the country, the taxonomic information of natural history museums of all provinces, The GIS information system and the protected area information system.
- The Conservation of Iranian Wetlands Project has established a comprehensive wetland data bank in 2013.
- The Statistical Center of Iran compiles the agricultural, forestry and aquaculture biodiversity information. This center has set up training courses of agricultural statistical information collection in 2014.

## **3. Sustainable use of biodiversity resources**

This target is in line with Aichi target no. 7. The government has been obliged to implement the Sustainable use in the fifth national development plan (2010-2015). The Environment Department controls all biodiversity related natural resources use in the country (more than 2000 rangers in 500 controlling stations through out the country are constantly active in this respect) and also implement projects in line with this goal like the wetland and Zagros mountain projects. The Ministry of Agriculture has tried to develop sustainable production and utilization of resources, by implementation of plans like protection of genetic resources and reserves and coordination of the integrated management of the resource and institutionalization of public participation in planning, decision making and implementation.

Actions taken by government in respect to forest sustainable management:

- Inclusion of forest sustainable management in national development plans and strategies
- New legislation aimed at reduction of deforestation and support of afforestation and reforestation
- Low-interest loans for forest activities/management
- Domestic public funding are annually allocated for forestry projects and plans by the government
- Domestic private funding are provided through Investment Development Fund of Agriculture
- Replacement of wood by fossil fuels
- International cooperation to promote forest sustainable management like: Caspian Hyrcanian Forest Project, Sustainable Management of Hablehroud Land & Water.
- Preparation of Forest Resources Assessment of Iran (FRA 2015)

- Restoration of Degraded Forests
- Enhancement of Forests and Rangelands Conservation Level
- Finalization of forest resources maps of five vegetation regions including Caspian, Zagros, Arasbarani, Persian Gulf and Oman Sea and Iran- o- Touranian regions
- Formulation of Vision 2025 on natural resources management
- Development of guidelines on sustainable forest management in the Zagros forest ecosystems to prevent and control oak dieback
- Study and classification of rangelands of Iran
- Revision of Forests and Rangelands Law
- Conservation and protection of natural resources and forests reserves
- Formulation of directives on national land use planning law
- Revision of National Action Plan to Combat Desertification
- Formulation of Forest Exploitation Monitoring Program
- Development of national class set of criteria and indicators for SFM

Some examples In the Fishery are:

- Increasing control of illegal fishing in northern and southern part of the country
- Restoration and Proliferation of Fish stocks
- Control of importing invasive fish species

#### **4. Integrated management of biodiversity**

This target could be in line with Aichi target no. 2. This goal has been implemented very intrinsically in fifth national development plan and all of Environment Department & Ministry of Jihad-e-Agriculture environmental projects. (Part I of this report)

The revival of Supreme Council of Environment in 2013 is the biggest sign and act of practical integrated management of environmental issues in the country. This council is the country's highest decision-making body on environmental

matters. The President is the head of the council and the members are: Head of Environment Department, Ministers of Agriculture, Industry, Mines and Commerce, Ways and Urban Development, Health and Medical Education, Head of Planning and Budget Institution; and four authorities recommended by the head of Environment Department.

## **2.2 Iran's biodiversity targets updates**

The Environment Department (DoE) has delineated a strategy as Environment National Document which is developing and updating as NBSAPII but still not finalized. The CBD secretary of Iran is mainly shaping this goal with the help of Sustainable Development Office of Environment Department (DoE) and consulting and guidance of the central CBD Secretary office in Canada.

## **2.3 Implementation for the Convention and outcomes**

The country has increased the protection through increasing the protected area and establishment of ex situ preservation sites and has revived the Supreme Council to implement the sustainable development and finally has affirmed the Nagoya Protocol by Government Body to implement the ABS.

Article 50 of the Constitution <sup>15</sup> is the most important accredited existing legal statement concerning protection of the environment and preventing its pollution and degradation. The Constitution prohibits all activities, economic or otherwise, that may result in irreparable damage to the environment. The government has increasingly striven to implement these objectives, by paying increasing attention to environmental issues and to biodiversity conservation. The Fifth National Development Plan (2010-2014), the NDP, Articles 187 to 193 is dedicated to environmental obligations of the government. According to the article 187 the government should:

- Develop and implement the integrated ecosystem management program and action plan (which actually requires appropriate coordination among relevant organizations with environment Department.)
- Develop and implement the program for protection and sustainable use of biodiversity in fragile and sensitive ecosystems of the country.

These laws are very much the realization of the four goals of Iran NBSAPI.

According to the article 188:

- Establishment of clear environmental laws for all Industrial Units of the country to facilitate licensing process.

According to the article 189:

The Environment Department should:

- Develop the rules of procedure (bylaw) To Promote public awareness and achieve sustainable development with the aim of protection of environment. ( In line with Iran NBSAPI first and third goals )
- Develop and implement the country environmental information system in sensitive ecosystems. ( In line with goal no. 2 of Iran NBSAPI )



## **2.4 Mainstreaming of Biodiversity into strategies and plans**

In the Fifth National Development Plan (2010-2014), the NDP, Articles 187 to 193 all sectors of relevant ministries as agriculture, energy, oil, etc. are obliged to cooperate with Environment Department and there is an environment office in them to monitor environmental matters. Some of their biodiversity activities of these sectors were reviewed in Part I of this report. The Environment Department is also creating an NGO net work for the private sector environmental biodiversity related too, for example the private institute of Asian Leopard Specialist Society which has developed a network of 1000 people of specialist and local communities and has a very close partnership with environment Department or the Hormod Environmental Institute which is cooperating with Iran CBD secretary for the implementation of Nagoya Protocol.

The synergies between the Convention on Biological Diversity, Convention on Climate Change (UNFCCC) the United Nations Convention to Combat Desertification (UNCCD) at national level is still in the process of consulting and group sessions talking. The National Capacity Self Assessment (NCSA) Project has been done by Ministry of Foreign Affairs and the results are being practically examined.

## **2.5 Implementation of NBSAP**

The results have been practically examined. The country has taken successful steps in implementing the ISBN goals. The awareness of people in all sectors has increased very well. Advanced information networks have been developed like wetland biodiversity information data bank. Sustainable use of natural resources is a very serious goal of government as an example nobody in country can catch fish without permission. Integrated management approach has been included in all of environmental activities. It seems that about 80% of planned activities have been carried out. The main challenge is too high expectations in terms of Human and instrumental capacities, the degrees of achievements and the time.

## Part III: Progress towards the 2020 Aichi Biodiversity Targets and contributions to the relevant 2015 Targets of the Millennium Development Goals

### 3.1 Progress towards the implementation of Aichi Targets



#### Target 1

By 2020, at the latest, people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably.

The steps taken in regard to this target are:

- Establishment of University of Environment in 2010.
- Preparation of joint letter of memorandum signed between the Environment Department and Ministry of Education.
- Establishing National Environmental Awareness Working Group in the state education system, conducting meetings and implementation of its decisions.
- Establishing The Environmental Schools Executive Committee composed of environmental specialists, experts and professors for mutual thinking about the provision of a draft on the country environmental schools guidelines.
- Establishing Training courses in environmental ethics and explaining the ways of its entry into textbooks. And also training courses on the entry of environmental issues in the text books: "Introduction to country provinces" for the 31 provinces.
- Holding meetings to "explain the basics of Environmental literacy and ethics in the country education system" for the authors of Ministry of Education textbooks.
  
- Implementing the Community Workshop "Effective Strategic Management " for the staff of Special Education and the Public Participation office with the aim of explaining the agenda and the Strategic Plan of Education and Public Participation
- Holding educational meetings to explain Environment Department cultural educational programs, particularly for the Ministry of Education Provinces directors.
- Adoption of a comprehensive educational system for environmental rangers and creating a training committee for the development of its courses and

continuing country rangers training including familiarity with the operation of weapons, martial arts and self-defense and court of justice rules for about 800 rangers .

- Implementing special training programs for teachers and education promoters
- Holding workshops to enhance awareness of the environmental important audiences including students, teachers, rural and urban women, judges, in the Environment Departments of all provinces.
- Holding several training courses in various areas of national, regional and provincial areas for Environment Department staff.
- Cooperation with UNESCO in Sustainable Development Education.



**Head of the Department of Environment Ms. Masoumeh Ebtekar and Ms. Esther Kuisch Laroche Director of UNESCO Office in Tehran Talk about Educational programs on Sustainable Developments in Iran 2015**



## Target 2

By 2020, at the latest, biodiversity values have been integrated into national and local development and poverty reduction strategies and planning processes and are being incorporated into national accounting, as appropriate, and reporting systems.

In the fifth national development plan (2010-2015), articles 187 to 193 has been dedicated to biodiversity values , also The Supreme Council of Environment which is the country's highest decision-making body on environmental matters has been reestablished in 2013.

There is a national Economic Valuation of Environment in Iran which has been prepared for more than sixteen projects .The Environment Department has done (estimated) Economic valuation of environmental costs of industrial development on:

- Marginal wetland areas of Atrak River ( Northeast of the country ),
- Agricultural development on Lake Urmia National Park
- Construction of a dam and water transfer between Bakhtegan wetland ecosystem watershed areas.
- Assaluyeh (Petrochemical industries in south of Iran) industrial Development.
- Construction of a Beltway on Anzali wetland (north of Iran by the Caspian Sea) areas.
- Construction and unauthorized use within the Khojier and Sorkhehesar (near the capital city, Tehran) National Parks.
- Oil pollution in the Persian Gulf coasts (Busher province: Deylam, off the coast region and port Gonaveh).
- Golestan National Park
- Turan region (central Iran) National Park, Wildlife refuge and protected areas.
- water pollution in the Caspian seashore region

The government has done the Assessment of ecological values (goods) and services of the following regions:

- Choghakhour Wetland ( Central Iran ), Gavkhoni International Wetland ( Central Iran ) , Hmun lake , Shadegan wetland , Parishan and Arjan lakes , Miankaleh wetland , Kavir National Park ,Bamu National Park , Turan National Park , Alborz Protected Area ( Alborz Mountains ) , Lar National Park ( Alborz Mountains),Freidonkenar seashores, Yasuj oak and wild pistachio forests, Sanandadj region , Arasbaran Ecosystems, Oushtorankuh protected region, Haraz river Basin. Central Zagros Mountains (west of Iran). Bamu National Park, Tandooreh National Park, Golestan National Park.

In terms of ecosystem Service evaluation these regions has been worked out:

- Turan National Park, Lar National Park ( Alborz),

Also the evaluation of the effects of climate change and environmental policies related to country economic system has been done.





### Target 3

By 2020, at the latest, incentives, including subsidies, harmful to biodiversity are eliminated, phased out or reformed in order to minimize or avoid negative impacts, and positive incentives for the conservation and sustainable use of biodiversity are developed and applied, consistent and in harmony with the Convention and other relevant international obligations, taking into account national socio economic conditions.

Like many other countries, the agricultural sector is subsidized by the government. Wheat, rice, and barley are the country's major crops. The government pays a range of subsidies for improvements in production methods, the use of fertilizers and pesticides, and agricultural research. According to fifth national development plan the Ministry of Agriculture try to minimize the harmful subsidies step by step.

The ESP (Ecosystem service payment) has been done for local communities in several international projects, for example:

- The Urmia Lake project
- The Central Zagros project
- The Asian Cheetah project



### Target 4

By 2020, at the latest, Governments, business and stakeholders at all levels have taken steps to achieve or have implemented plans for sustainable production and consumption and have kept the impacts of use of natural resources well within safe ecological limits.

National laws have introduced compulsory Environmental Impact Assessments (EIA) to be conducted under the guidance of the Department of Environment to mainstream environmental policies into industrial, construction and urban development plans. The Environment Department , In order to coordinate the policies and programs of social and economic development with environmental protection objectives and achievements of the Rio Earth Summit in 1992, has been formed the committee of National Committee for Sustainable Development (NCSD) with subscribe of Plenipotentiaries Ministries of Housing and Urban Development, Industry and Mining, Agriculture, Energy, Foreign Affairs, Culture and Higher Education, Oil, Management and Planning and the Department of Environment .It is chaired by the Supreme Council of Environment . The secretariat is at the Environment Department. This committee has initiated the National Strategy for Sustainable Development and is responsible for developing a database and documentation centers on the application of Agenda 21 and the Conventions on Biodiversity and Climate Change also to propose a set of unique and united policy and coordinate issues related to the two conventions also forestry and Agenda 21 at the international and national ministries and agencies .It also has the responsibility for Planning, implementing joint projects - research on issues related to the Convention on Biodiversity and Climate Change, Forests and the principles of Agenda 21 by countries that are in similar situations and review the measures taken to implement the strategy of sustainable development and the environment, and following-up the actions. The Environment Department has also established two offices in this respect:

## 1 – The Sustainable Development Office

They are part of the Education and Research Deputy of DoE. Their duty is Study and research to propose strategies and indicators for sustainable development policy and integration of social and economic issues (short & long-term). The secretary of National Committee for Sustainable Development (NCSD) is located in this office. They also have the task of International cooperation for sustainable development and Collection of data and information related to sustainable development indicators in collaboration with other relevant executive agencies.

## 2 – The Environmental Impact Assessment Office

They are part of Human Environment Deputy of DoE and responsible for:

- Study, identify, assess and determine the carrying capacity of the biome to prepare the land and the establishment of regional and national development based on environmental indicators.
- Detection and evaluation of the biome for the land use planning process (with the help of various land use indicators) in order to prevent the destruction of the environment and reduce regional environmental degradation as much as possible and also produce criteria on the basis of the regional feasibility.
- The study of renewable and non-renewable natural resource consumption, in cooperation with the relevant units in order to maintain the efficiency of the resources.
- Research on prevention of Environmental losses resulting from economic activities and also provide options that have minimal adverse effects on the environment.
- Study of environmental problems caused by population in order to provide options for the prevention of adverse effects of displacement, migration, urbanization, marginalization and other urbanization phenomena on the environment.
- Assessment of all projects including services, industrial, municipal and agricultural production in order to prevent or reduce environmental degradation and destruction.
- Prepare the pattern of ecological environmental changes resulting from the implementation and future operation of development projects in the country.
- Investigate to identify the causes of environmental impacts caused by development projects of municipal, industrial, agricultural, and manufacturing services activities to the environment and provide options for the reduction and to compensate adverse effects.
- Research in the field of environmentally friendly technologies in terms of economic, social and cultural characteristics of each region

Some examples of the actions taken place by the Environment Department in this respect are:

- Establishing standards of industrial and manufacturing units.

- Signing the Memorandum of Understanding with the Ministry of Cooperatives, Labor and Social Welfare, with the aim of supporting the creation of green jobs.
- Recognizing green jobs and planning for protective measures.
- Cooperation for the establishment of green banking with the UNDP for investment in green jobs and transforming usual jobs to green jobs.
- Signing the Memorandum of Understanding with the Ministry of Cooperatives, Labor and Social Welfare, with the aim of supporting the creation of green jobs
- Recognizing green jobs and planning for protective measures.



#### Target 5

By 2020, the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced.

In 2001 Iran passed the bill in which Ministry of Agriculture-e-Jihad and Environment Department were required to take the necessary administrative measures to reduce the exploitation of the nation's forests, evaluate the manufacturing of wood in forest, take measures to restore damaged areas, create mechanism necessary for the use of other non-timber forest benefits such as planned tourism, carbon sequestration, water production and conservation of biodiversity and to improve the indigenous people's participation in biological resource management. Additional amendment in this respect was passed in 2002 and 2014.

The government has undertaken the following activities to reverse the loss of forest cover and/or to enhance the area and quality of forests (till 2014).

Afforestation 10000 ha  
 Reforestation 33000 ha  
 Restoration 15000 ha

Introduction or enforcement of : 1 - Existing legislation aimed at reduction of deforestation and/or support afforestation and or reforestation, 2 - New legislation aimed at reduction of deforestation and/or support of afforestation (establishment of a forest or stand of trees in an area where there was no forest.) and/or reforestation, 3 - New legislation and actions aimed at conservation and protection of forests, 4 - Subsidies for forest owners to prepare and implement management plans 5 Subsidies for forest protection 6 - Reduced/deferred taxes for forest land, 7 - Low-interest loans for forest activities/management

The protected area network in Iran is dispersed and has spots. Some action has taken place for identifying the corridors in deserts and in northeast of Iran. The government has tried to:

- Create new protected areas in key connectivity areas
- Improve natural resource management to improve connectivity
- Designate connectivity corridors and/or buffers
- Change awareness of key stakeholders in key connectivity areas
- Improve laws and policies within or around key connectivity areas

- Restore the degraded areas in key connectivity areas
- Change land use planning, zoning and/or buffers in key connectivity areas
- Remove barriers to connectivity and ecological functioning
- Integrate the protected areas into poverty reduction strategies



#### Target 6

By 2020 all fish and invertebrate stocks and aquatic plants are managed and harvested sustainably, legally and applying ecosystem based approaches, so that overfishing is avoided, recovery plans and measures are in place for all depleted species, fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems and the impacts of fisheries on stocks, species and ecosystems are within safe ecological limits.

In Southern coastal provinces (Persian Gulf & Oman Sea & Overseas) Gillnet and purse seine are two main fishing methods used by Iranian vessels to target large pelagic species (especially tuna and tuna- like) in the IOTC (Indian Ocean Tuna Commission) area competency and some of small boats used trolling in coastal fisheries. Iran has taken various actions to implement the Scientific Committee Recommendations and IOTC Resolutions. In Northern coastal provinces (Caspian Sea) Region Iran voluntarily has banned commercial fishing of sturgeon species since March 2012.

In 2012 total fish production in Iran was 839,000 tons, which can be distributed as 55% (500,000 tons) from southern water, 5%(40,000 tons) from northern water and 40%(339,000 tons) through inland water. The total catch in 2012 was 500,000t; out of which around 197,000t. was of Tuna(6 species) &Tuna like Species(2 species); this means that Fishery for tuna and tuna-like species is a major component in large pelagic fisheries in Iran and one of the most important activities in the Persian Gulf & Oman Sea. There are 4 coastal provinces in that areas about 11 thousand vessels consist of fishing boat, dhows and vessel which are engaged in fishing in the coastal and offshore waters. Gillnet and purse seine are two main fishing methods used by Iranian vessels to target large pelagic species (especially tuna and tuna-like) in the IOTC (Indian Ocean Tuna Commission) area competency and some of small boats used trolling in coastal fisheries.

Iran has taken various actions to implement the Scientific Committee recommendations and IOTC Resolutions, one of them is national action to improve data collection system and upgrade data collection software to SQL SERVER 2008 and under web since 2011. We have implemented for Iranian industrial purse seiners and artisanal gillnets modification of logbook template to meet mandatory minimum statistics requirement, particularly about data recording of vessel position in IOTC area for target species, By-catch, and discard.

after 2012 we proceeded with some actions and now reporting provide for



Billfishes, Big eye tuna, Sharks and some other groups of species. It is noteworthy to say that since 2012, we could identify and include swordfish, different species of marlins and other by catch for gillnet and purse seine in our Database. We have implemented logbook system for gillnetter (fishing Dhows), particularly to determine geographical distribution of their fishing operation in IOTC area of competence.

#### Restoration and Proliferation of Fish stocks

- There are nine fish breeding center in north of Iran by the Caspian sea for restoring and proliferating bony and sturgeon fishes .In 2014 about 225 million pieces of different kind were proliferated and released in the sea . Also 2 million pieces of sturgeon fishes were proliferated and released.
- In 2015 about 175 million pieces of kutum (*Rutilus frisii*), 50 million pieces of carp, 20 million pieces of roach and also other species will be released.
- Cites International Organization has banned sturgeon fishing for five years except the countries which restock them.

Sturgeons for natural reproduction leave the Caspian Sea and enter the freshwater rivers but the illegal fishing, river pollutions, reduced river flow, sand and gravel extraction from the river shores and drought are the main reproduction obstacles of sturgeons. There are 43 governmental and private center of sturgeon proliferation which produced 600 tons of meat and one ton of caviar in 2014.

Aquaculture productions of Tilapia fish has been banned by Environment Department in 2014 (except one experimental site) because of its invasive and high competitive role to the endemic species of inland freshwater fishes.



#### Target 7

By 2020 areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity.

Very generally speaking the statistics in 2011-2015 shows that:

In discussing sustainable development and agriculture, in order to maintain production capacity and achieve self-sufficiency in basic agricultural production, the promotion of sustainable development considerations, the emphasis is on the increasing of the value added. In this regard for the promotion of public awareness, the priorities in the training programs were protection of the environment and achievement of sustainable development Also for the protection of soil and water against the chemical fertilizer and poisons, the allowed amount of usage were determined.

It seems that education is a very important factor in agricultural sustainable development Researches in Iran shows that there is a positive and significant relationship between age, farming experience, type of agriculture, agricultural land area, and area of cultivated land, ecological characteristics, social status, knowledge and attitudes for sustainable agricultural production with sustainability and conservation of biodiversity. Six variables of the total production, the attitude, the receiving facility, knowledge of sustainable agriculture, social participation and communicative characteristics are very important in sustainable agriculture. As a result:

- Due to the positive relationship between educational - extension activities and stability it is recommended that for more stability, volume and quality of services of educational - extension activities improved.
- Given the positive relationship between attitudes to sustainable agriculture and sustainable cultivation it is recommended that first, improve farmers' attitudes towards sustainable agriculture in collaboration with relevant organizations to promote agricultural extension, secondly pay more attention to those farmers who have attitudes favorable toward sustainable agriculture.
- Known as the most effective variable is the total variable production which emphasis on better economic status as well as greater land. The more production of a farmer the better sustainability , so it is a good idea to focus on poorer and low land farmers to increase the stability of cultivation and the programs and investments to be inclined toward these groups.
- Intake facilities from consulting to marketing services refer to services provided to farmers during the process of production. Given the importance of this variable in stability it is recommended to centralize specialized centers to provide these services.
- It is better to pay more attention to all groups of farmers and their association during developing programs. As increased participation of farmers in society, they can better enjoy of input, financing and consulting services.

The Fifth Iranian Fisheries Development Programme has been focused on developing and strengthening sustainable aquaculture which has begun from April 2011. The government has established the following strategies for sustainable development and management of forest and trees:

- Policy and practice affecting forests and forestry are based on timely and reliable information.
- Policy and practice affecting forests and forestry are reinforced by international cooperation and debate.
- Institutions governing forests are strengthened and decision-making improved, including involvement of forest stakeholders in the development of forest policies and legislation, thereby enhancing an enabling environment for investment in forestry and forest industries. Forestry is better integrated into national development plans and processes, considering interfaces between forests and other land uses.
- Sustainable management of forests and trees is more broadly adopted, leading to reductions in deforestation and forest degradation and increased contributions of forests and trees to improve livelihoods and to contribute to climate change mitigation and adaptation.
- Social and economic values and livelihood benefits of forests and trees are enhanced, and markets for forest products and services contribute to making forestry a more economically viable land-use option.
- Environmental values of forests, trees outside forests and forestry are better realized; strategies for conservation of forest biodiversity and genetic resources,

climate change mitigation and adaptation, rehabilitation of degraded lands, and water and wildlife management are effectively implemented.

## Case Study :

### Sustainable Development of Agriculture in Central Zagros Mountains



Since 2012, Zagros Project has cooperated with DoE, MOAJ, NGOs and group of farmers by signing a MoU (Memorandum of Understanding) in Fars Province. This MoU aims at agriculture development that is environment-friendly and is conserving the Zagros biodiversity.

Selecting an evolutionary model for having the sustainable agriculture in the pilot areas of the Central Zagros, is regarded as one of the most important measures taken by Conservation of Biodiversity is Central Zagros Landscape Project. This method of agriculture is called IPCM, Integrated Participatory Crop Management, which is emphasizing on the cooperation of the local communities and mainstreaming the agriculture development with keeping the conservation of biodiversity indicators in Central Zagros Mountains; it also raises the main indicators of environment, such as, integrated management of the products,

water, soils, plants, solid wastes, effluent and professional health care in agriculture and making the producing process standardized. These actions would play a vital role in decreasing the trend of destruction and increasing the income of local community who are the beneficiaries.



**Nutrition and fertility based on enriched compost and organic material**

In implementing the IPCM Model 3 phases has been predicted as:

1<sup>st</sup> phase: Implementing it as a pattern in one single village to assess its effectiveness

2<sup>nd</sup> phase: Scaling it up to the whole catchment management area (Fars Province)

3<sup>rd</sup> phase: Scaling it up to other 3 catchment management areas

Since 2012, the implementation of this model began in the Bakian, within the pilot in Fars Province has resulted in very remarkable outputs including:

- Management of water shortages in agriculture (Changing the flooding irrigation to periodic decreased water use in farms up to 50%)
- Management of the cost (Changing the traditional cultivation to the mechanized one decreased the cost of production up to 50 %)
- Management of decreasing and/or eliminating the industrial and chemical pesticides ( Using herbicide had up top 60 % decrease)
- Management of decreasing and/or eliminating the chemical fertilizers,

(Removal of phosphate fertilizer decreased up to 60 % approximately).

Now, the first phase has been successfully completed. The second phase of the project has started in April 2012 after the success of first phase. In the second phase, 6 cores were selected in the pilot Kor-Kamfiruz, located on Fars. Each of these cores will cover three villages. Abbasabad is one of the 6 places that now the project is being implemented in.

In Bakian village, in the 1<sup>st</sup> phase, 40 farmers volunteered to be trained and in other 5 villages, there were 25 volunteer farmers. Collectively, 165 farmers were trained in Kor-Kamfirooz Catchment Management Area. This is well worth noting that these farmers share what they have been trained with other farmers of the area.



Training workshop held in Bakian

Simultaneously, Zagros experiences, regarding sustainable agriculture plan is being scaled up and developed in other provinces of Central Zagros. Some of the activities done in this field are:

- Holding training workshops and developing the concepts and methodologies of the implementation of sustainable agriculture plan at the provincial and pilot management areas' (PMA) levels
- Planning to hold a technical workshops on the sustainable agriculture plan in MoAJ of Isfahan, Fars, Chaharmahal and Bakhtiari, and Kohgiloye and Boyerhamad provinces
- Planning to develop a draft for the sustainable agriculture development in PMAs of Dena-Vanak, West Dena, and Naqan-Buldaji

Following this process, the necessary coordination for review, approval and allocation of the required budget for the implementation of this plan is done via Provincial Planning Councils of the three provinces.



Before



After



Cost Management of the Production



Water Management of Crop Production



#### Target 8

By 2020, pollution, including from excess nutrients, has been brought to levels that are not detrimental to ecosystem function and biodiversity.

Polluting and contamination of the natural habitats are severely prohibited and subject to high penalties. The sewage of the factories is periodically checked and has to meet the standards.

Iran has ratified a National Waste Management Law. Based on article 11 of this law the Ministry of Health, Treatment and Medical Education (in the field of medical wastes), the Ministry of Mines and Industries, the Ministry of Power and the Ministry of Oil (in the field of industrial and mine wastes), the Ministry of Agricultural (in the field of agricultural wastes), should compile standards and methods for wastes executive management and make approved them in High Council of Environment Protection. The said Ministries are responsible for supervising over the implementation of approved methods and standards.

There are problems in Northern provinces of the country (by the Caspian Sea). Particularly the concern is problems caused by nitrogen compounds (fertilizers) that lead to groundwater pollution by nitrate. Also of concern is the pollution of groundwater by pesticides, salts derived from utilization/evaporation of irrigation water, etc.

Agricultural and oil pollution is also an important problem in southern provinces of the country (by the Persian Gulf).

The Environment Department has intensified its effort to:

- 1 – Revise the laws and establish the new guidelines.
- 2 – Develop more competent monitoring system
- 3 – Coordinate the activities of the relevant ministries
- 4 – Create an integrated information system throughout the country

Some of the government measures in the prevention, control and reduction of pollution and factors threatening air, water, soil in 2013-2014:

- Drafting of administrative tasks to reduce air pollution and to determine all the relevant obligations in dealing with air pollution and its approval in the Cabinet.
- Establishment of National and Provincial Working Group on Air Pollution reduction in 8 provinces.
- Establishment of Environmental Monitoring and Controlling Center in three provinces: Bushehr, Kurdistan and Khorasan Razavi.
- Appointing the Director of the National Campaign against dust phenomenon
- Develop a plan of action to deal with the dust phenomenon.
- 35% increase in Terrestrial Dust Monitoring Network in the country
- Following-Up Interim Dust Regional Center Cooperation with Iraq, Turkey, Syria and Qatar
- Formulate and promulgate a Code of Conduct of Article 45 of the Law of receipt of revenues that according to the manufacturers, factories and industrial plants and minerals required a one thousandth of the sales, products and services for environmental protection and pollution control for controlling and monitoring of pollution
- Planning to develop a comprehensive manual for monitoring the environment.
- Planning to design and launch a comprehensive software system for environmental monitoring
- Establishment of 14 stream monitoring stations and doing the bidding to buy 29 more online stream monitoring stations in the country.



#### Target 9

By 2020, invasive alien species and pathways are identified and prioritized, priority species are controlled or eradicated, and measures are in place to manage pathways to prevent their introduction and establishment.

According to law, entry and transit of all wild plant and animal species (living, dead and their components ) requires a permit from the Environment Department .There is also plant import ( also quarantine ) and livestock and aquaculture import ( also quarantine ) regulations which is under the supervision of the Minister of Jihad-e-Agriculture.

The country has the invasive species problem with both invertebrate and vertebrate species:

- The warty comb jelly or sea walnut (*Mnemiopsis leidyi*) is a species of tentaculate ctenophore (comb jelly), originally native to the western Atlantic coastal waters. :In 1999 the species was introduced in the Caspian Sea . The result was a great negative impact on zooplankton, thereby affecting the

entire food chain of the lake. Head of the Institute of Ecology of Sea Fisheries Research Institute, believes the best way to deal with this ctenophore invader is biological control method.

There are reports of 7 invasive fish reported in Iran in 2014.

Aquaculture, sport fishing, control of malaria, ornamental purposes, research activities, demonstration in national fairs and accidental introduction are the main reasons for these introductions (e.g., *Cyprinus carpio*, *Carassius auratus*, *Pseudorasbora parva*, *Xiphophorus hellerii* and *Gambusia holbrooki*) have been established in natural water bodies acting as invasion species. In 2014 the environment Department has rejected to issue the breeding license of imported Nile tilapia fish (*Oreochromis niloticus* native to Africa) to protect the endemic inland fishes of the country.

Invasive plants:

Azola (a non-native water-fern *Azolla filiculoides*) was introduced to the region as fodder for livestock and green fertilizer for the rice paddies. The species, however; found its way to the Anzali wetland (in north of the country), where it spread over a wider area at an alarming rate. The surface of the lagoon has become gradually overgrown with it, and this has caused increased eutrophication, creating large areas of the lagoon where there is insufficient dissolved oxygen for fish to survive. A pilot activity is currently being undertaken to test composting of the removed Azola and its use as fertilizer.

There are some species of conifers that are believed by some authorities to be invasive species in northern forest and some other parts of the country, like: *Pinus nigra*, *Cupress arizonica*, *Pinus eldarica*. Other groups of plants are like *Ailanthus altissima* from china which has been planted in the northern and other parts, and also *Prosopis juliflora* in southern provinces.



**Target 10**

By 2015, the multiple anthropogenic pressures on coral reefs, and other vulnerable ecosystems impacted by climate change or ocean acidification are minimized, so as to maintain their integrity and functioning.

Measures taken by Environment Department (Deputy of Marine Environment) in connection with this goal are:

- Monitoring and protection of coral reefs in Sistan and Baluchestan, Hormozgan and Bushehr provinces.
- Preparing report on the status of the marine environment: State of Marine Environment Report-Persian Gulf and Oman Sea.
- Activate the Marine Environment Laboratory

- Create industries database and certificate-based system in the coastal and wetland basin and integrated coastal System of GIS Web.
- Investigate the optimal location in the Persian Gulf and Oman Sea for Ship Dismantling and develop environmental impact assessment of Ship Dismantling.



#### **Target 11**

By 2020, at least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.

To fulfill this target the government has increased the protected area to 10.4 percent of the areas of the country which are managed by the Environment Department. To these areas we should add the wetlands and forest reserves which also are managed as protected areas. There are more measures taken for the development and enhancement of aquatic and terrestrial areas and this goal is being done. Important priority for Environment Department is to improve the quality of protection and reduce the destructed areas and also the restoration in existing protected areas.

The protected area networks in Iran are dispersed and have spots. Some action has taken place for identifying the corridors in deserts and in northeast of Iran.



#### **Target 12**

By 2020 the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained.

Measures taken by Environment Department with respect to these goals are:

- Implementation of the second phase of the International Conservation of Asiatic Cheetah Project.
- Establishment of Special Wildlife Committee and revision of hunting and fishing policies.
- Preparing a comprehensive management plan for 30 threatened species.
- Design and preparation of management plans project for big cats
- Planning and organizing centers for reproduction and breeding in captivity of threatened animal species



#### **Target 13**

By 2020, the genetic diversity of cultivated plants and farmed and domesticated animals and of wild relatives, including other socio-economically as well as culturally valuable species, is maintained, and strategies have been developed and implemented for minimizing genetic erosion and safeguarding their genetic diversity.

According to law the Ministry of Jihad-e-Agriculture is required to "develop sustainable production and utilization of resources, by implementation of plans like protection of genetic resources and reserves and coordination of the integrated management of the resource and institutionalization of public participation in planning, decision making and implementation.

Measures to be taken by the several ministries with respect to this goal are:

- Development of national macro-management of plant, livestock and aquaculture genetic resources which starts with the establishment of a comprehensive information, coordination and management network of biological and genetic resources of the country .



#### **Target 14**

By 2020, ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, indigenous and local communities, and the poor and vulnerable.

For more than 100 regions, the management plan has been done. In which the ecological study of the area, management zones including the safe zone, sustainable use boundaries, and restoration zones were determined. Also the Environment department, to increase the local communities involvements, is developing guidelines and granting protected area benefits to local communities.

To improve indigenous and local community participation a complete new chart has been included in area management plans and the guidelines have been prepared, but for some legal ambiguity also because it's a new concept in Iran the trend is slow. In any case, one of the main plans of the Environment Department is to improve this goal in protected regions .Some limited work has been done too in regions with international projects like the Zagros Woodland Project, the Asiatic Cheetah Project and the Wetlands Projects. For example The Environment Department has set up Wetlands working groups chaired by the Governor of the provinces with the most important wetlands and the participation of all executive agencies and representatives of NGOs, local communities and academics of every province.





#### **Target 15**

By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced, through conservation and restoration, including restoration of at least 15 per cent of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification.

The government has a wide range of conservation programs implementing by Environment Department and Forest, Rangeland and Watershed Management Organization. Generally it is increasing forestry and green space development, restoration of zones within forest damaged area and increased funding for adapting to climate changes.



#### **Target 16**

**By 2015, the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization is in force and operational, consistent with national legislation.**

A good effort has been taken place recently and the Cabinet has approved the Nagoya Protocol bill in 2014 which has been submitted to Parliament by the President.



#### **Target 17**

By 2015 each Party has developed, adopted as a policy instrument, and has commenced implementing an effective, participatory and updated national biodiversity strategy and action plan.

Revision and updating of the first NBSAP of Iran for incorporating biodiversity indicators, targets and specific strategies for implementing priority elements of the CBD is in the process.



#### **Target 18**

By 2020, the traditional knowledge, innovations and practices of indigenous and local communities relevant for the conservation and sustainable use of biodiversity, and their customary use of biological resources, are respected, subject to national legislation and relevant international obligations, and fully integrated and reflected in the implementation of the Convention with the full and effective participation of indigenous and local communities, at all relevant levels.

One of the most important targets of Environment Department is the local community participation in sustainable management of protected areas, for example coordinating with local authorities and NGOs to save the Parishan lake ecosystem in central Iran or Implementation of sustainable agricultural development and training of 85 village communities bordering the national park Lake Urmia. Some of other Department activities are: Education and public awareness through small workshops in areas, film production and advertising teaser, brochure production, awareness of children and adolescents in school, including environmental issues in textbooks.



#### **Target 19**

By 2020, knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improved, widely shared and transferred, and applied.

The Environment Department in Iran has established a network of several Natural History Museum units within its deputy of natural environment. One of the most important tasks of the central museum, called the Biodiversity Museum is the creation of a comprehensive and integrated taxonomic information system.



#### **Target 20**

By 2020, at the latest, the mobilization of financial resources for effectively implementing the Strategic Plan for Biodiversity 2011-2020 from all sources, and in accordance with the consolidated and agreed process in the Strategy for Resource Mobilization, should increase substantially from the current levels. This target will be subject to changes contingent to resource needs assessments to be developed and reported by Parties.

Measures taken by Environment Department in connection with this goal are :

- Increasing Environment Department budget by 25 percent for 2015-2016.
- Launching of the annual general meeting of the National Fund for Environment and obtaining credit to finance the initial fund in the budget year.
- Procurement, integration and operations planning activities for the budget in the form of approved programs which has been promulgated by the government vice president of strategic planning and monitoring office.

### **3.2 Contribution towards the 2015 targets of MDG goals**

**Iran has taken great step in terms of MDG specially goal NO. 7 (environmental sustainability ) As follow:**

- Reviving a Council which the president is the head of the committee, and comprises important ministries and head of Environment Department to control the development of the country according to environmental goals
- Increasing the protected areas. Saving the endangered species for example Asiatic Cheetah from extinction
- Establishment and enforcement of necessary laws and establishment of National Sustainable Development Committee.

In respect to other but relevant MDG goals, in the Fifth National Development Plan and the Economic Transformation Plan, poverty reduction has been identified as a key development priority.

### **3.3 Lessons Learned**

The Environment Department in Iran has grasped and implemented many of the Convention goals practically, specially the first and second main goals. Indicators like percent of protected areas, establishment of breeding centers and gene banks, revival of Environment Supreme Council, saving the Asian cheetah and creating a better situation for Lake Urmia are examples of these success of Convention. In respect to the third goal or access to genetic resources and fare sharing of it, the Environment Department has taken a great step and acquired the approval of the administration .The result has been broader and better than expected.

Globally The Convention has found its way and is acting very well. To continue and gain the final results the world needs peace, security and stability.

## Acronyms

CBD	Convention on Biological Diversity
CEP	Caspian Environment Programme
CHM	Clearing House Mechanism
CITES	Convention on the International Trade in Endangered Species
CIWP	Conservation of Iranian Wetlands Project
CGIAR	Consultative Group on International Agricultural Research
CGRFA	Commission on Genetic Resources for Food and Agriculture
CMS	Convention on Migratory Species
CoE	College of Environment
CSP	Carbon Sequestration Project
CWANA	Central and West Asia, and North Africa
DoE	Department of Environment
ECO	Economic Cooperation Organization
ECO-IEST	ECO Institute of Environmental Science and Technologies
EIA	Environmental Impact Assessment
ESDRC	Environment and Sustainable Development Research Center
FAO	Food and Agriculture Organization of the United Nations
FRWO	Forest, Rangeland and Watershed Management Organization
GIS	Geographic Information Systems
GTI	Global Taxonomy Initiative
IT	Information and Technology
IUCN	International Union for Conservation of Nature
MAB	Man and Biosphere Reserves
MEA	Multilateral Environmental Agreement
MIM	Ministry of Industries and Mines
MAJ	Ministry of Jihad-e- Agriculture
MoE	Ministry of Energy
MoU	Memorandum of Understanding
NBSAP	National Biodiversity Strategy and Action Plan
NCSA	National Capacity Self Assessment
NCSD	National Committee for Sustainable Development
NDP	National Development Plan
NEPA	National Environmental Plan of Action
NGO	Non-Governmental
Organization NRGB	Natural
Resources Gene Bank	
NSESD	National Strategy for the Environment and Sustainable
Development	
Ramsar	Ramsar Convention on
Wetlands	
SBSTTA	Subsidiary Body on Scientific, Technical and Technological
Advice SGP	Small Grants Programme
UNCCD	United Nations Convention to Combat Desertification
UNDP	United Nations Development Programme

## **Appendix I - Information concerning the reporting party**

### **Reporting Party**

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*Natural History Museum and Gene Resources office*  
*Conventions and International Relations office*  
*Conservation of Iranian Wetlands Project office*  
*Conservation of Zagros Mountain Project office*  
*Conservation of Asiatic Cheetah Project office*  
*Protected Area Guard office*  
*Rangers and Game Guards office*  
*Waste management office*  
*Marine Pollution office*  
Ministry of Jihad-e- Agriculture  
*Iran Fisheries Organization*  
*Forest, Rangeland and Watershed Management Organization*



*Seed and Plant Improvement Institute*  
*National Plant Gene Bank of Iran*  
Ministry of Foreign Affairs  
Ministry of Science, Research & Technology  
*Academic Center for Education, Culture and Research*  
*Iranian biological Resource Center*  
Ministry of Energy  
Ministry of Economic Affairs and Finance  
*Non Governmental Organizations*

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## Appendix II – Some Further sources of information:

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