

**UNITED NATIONS DEVELOPMENT PROGRAMME**  
**Global Environment Facility**

**PROPOSAL FOR PDF BLOCK B**

**Country:** Islamic Republic of Iran  
**GEF Operational Programme:** OP 2: Coastal, Marine and Freshwater Ecosystems  
**Project Title:** Conservation of Iranian Wetlands  
**Funding requested:** US\$347,400  
**Co-funding:** US\$100,000 (in kind contribution from Department of Environment) *is this all??*  
**Country Eligibility:** CBD ratified on August 6, 1996  
**Requesting Agency:** United Nations Development Programme  
**Executing Agency:** Department of Environment  
**Project Type:** PDF Block B  
**Block A Grant awarded:** \$25,000 (January – March 1998)  
**Duration:** Twelve months  
**Estimated Starting Date of PDF B:** January 1999  
**GEF Operational Focal Point:** Pirouz Hosseini, Director General for International Affairs, Ministry of Foreign Affairs.  
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**Estimated Project Size:** US\$ 2-3 million (GEF)

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**1. SUMMARY, PROJECT OBJECTIVES AND DESCRIPTION**

*Summary*

1. The Islamic Republic of Iran possesses an astonishing variety of wetlands; they range from the inlets and marshes of the Caspian lowlands to the natural inland delta of Sistan, from the vast saltlakes of the central plateau to the Mesopotamian deltas at the head of the Persian Gulf, from the lakes of the Turkoman steppes to the tidal mangroves and mudflats on the Gulf Coast.
2. Iranian cultural and religious traditions place high value on water and natural wetlands and the Department of the Environment (DoE) has been established to conserve national biodiversity through the setting up of a network of protected areas, encompassing many of the major wetlands. Furthermore, Iran has played a pioneering role in international measures for wetland conservation by hosting the conference which established the Ramsar Convention on Wetlands in 1971, and providing constant support for the Convention since then.
3. Despite these efforts, however, many of Iran's protected wetlands have experienced severe degradation, and there is a real threat of accelerating degradation and loss in the next five to ten years, unless dynamic measures are taken. The reason for this threat is the increasing conflict between conservation of wetland biodiversity and measures to promote economic development for the rapidly

increasing population. Sectoral policies, including drainage, irrigation, dam building and industrial expansion, have not taken sufficient account of environmental considerations, and notably of the conservation of wetland biodiversity. Competing demands on water resources is an important issue in the Middle East, where water is a particularly scarce and valuable resource.

4. The **objective** of the project is therefore to **conserve globally significant components** of wetland biodiversity in a **limited number of sites that are facing mounting pressures**. A National Biodiversity Strategy is under preparation, and consistency between the activities undertaken by this project and the developing National Biodiversity Strategy will be ensured. One element promoting this consistency will be the establishment of a wetland planning system and a co-ordinating mechanism between the various sectoral bodies, thus strengthening institutional capacity, raising awareness of wetlands at all levels and providing necessary specialist training.

5. The project will also serve to strengthen linkages and provide valuable inputs into the formulation and implementation of a National Wetland Policy (NWP), which will make conservation of wetland biodiversity an integral part of sustainable development. The formulation of the NWP is part of the National Biodiversity Strategy planning exercise, and an important national priority. The proposed project will provide valuable inputs into the planning and implementation of the NWP through the experiences and lessons it accumulates on conservation and wise use interventions at globally significant wetland sites.

#### *Background*

6. The Islamic Republic of Iran is one of the largest (total area 1,168,195 sq. km.) and most populous (population 58 million according to the 1992 census) states of the Middle East (Scott, 1995). Though a dry country where water resources are scarce and much sought after (60% is classified as desert or semi-desert), it has a great diversity of wetlands. Given the excellent existing network of protected wetlands and the active involvement in the Ramsar Convention (18 wetlands covering 1.3 million hectares have been designated as wetlands of international importance), the Department of the Environment, which has undergone a number of changes in organization and personnel since the May 1997 presidential elections, is anxious to prevent further wetland degradation and played a central role in the execution of the PDF Block A.

#### *Overview of Problem/Main Issues*

7. Its position at the confluence of the Palearctic, African and Indomalayan faunal regions naturally confers high biodiversity values on Iran. This is especially true in terms of wetlands and the country's location at the meeting of the arid climatic zone of the Middle East and the temperate zones make water and wetland issues of special significance. Of 286 wetlands currently identified in the Islamic Republic of Iran, 63 meet the Ramsar criteria for international importance, and 18 have been designated as wetlands of international importance. **Several wetlands are located in cross-boundary situations, thus requiring international cooperation** for their conservation (see Annex III). A large number of species dependent on wetlands, identified by IUCN as globally threatened, occur in Iran's protected wetlands (see Annex I for details). Furthermore, the country is strategically located on the flyways of migratory waterfowl, which move from breeding sites situated across a broad swathe of land from Scandinavia across Siberia, to wintering areas in Iran, or further south in southern Asia and Africa. The coastal zones of the Caspian and Gulf are important refuges for fish, amphibians and reptiles, many of them migratory; and the national protected network includes representative examples of Iran's varied wetlands. **Many of the wetlands in Iran are therefore significant in terms of conservation of globally threatened species**, and also serve to maintain populations of wetland species not currently under severe threat. Excellent faunal surveys, particularly of mammals and birds, exist already.

8. An initial analysis suggests that proximate threats to wetland biodiversity range from over exploitation of wetland biodiversity to encroachment on wetland areas by industrial, agricultural and aquaculture activities; and from urban pollution to decreases in water supply and increase in salinity due to competing water requirements from agriculture and dam construction in upstream catchment areas (see Annex II). While Iran's wetlands continue to play an important role in global biodiversity conservation, some degradation has already occurred. There is a very strong risk that the wetland situation will degrade significantly in the next five to ten years if the factors underlying the above proximate threats are not addressed.

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9. There are several underlying causes of biodiversity loss. In many wetland areas of importance there is need for practical and effective management/regulation of use of wetland biodiversity. Limited awareness among local communities of wetland values and medium to long term local benefits from conservation (such as local economic benefits from ecotourism revenues) underlies overexploitation of resources. Iranian wetlands offer a large untapped potential for ecotourism, often in breathtakingly beautiful sites, near areas of enormous cultural, historical and archaeological significance. In areas where overexploitation of resources is an issue, the relevant authorities need specific skills to manage resource use and promote wise use (specific training needs will be identified during the PDF B). In many cases legal boundaries and protected status of wetland sites are not clearly defined. Several threats originate in the wider catchment and have a significant bearing on wetland biodiversity. Existing development plans take a sectoral approach and lack coordination between different sectors. There is no guidance at a catchment level on the management and conduct of activities in the wider catchments that have an impact on wetlands. Again, relevant authorities need to develop specific skills to coordinate sectoral activities and develop alternative land and water use options that reduce impact on wetland sites (specific training needs will be identified during the PDF B).

Threats  
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underlying causes

Previous Support

10. The Islamic Republic of Iran has made considerable achievements in conservation and wise use of wetlands, through:

- the establishment in 1972 of the Department of the Environment (DOE), as a successor to the former Game and Fish Department, with offices in every provincial capital, and in many smaller towns and at protected sites;
- the enactment and implementation of environmental legislation, notably the 1974 Environment Protection and Enhancement Act;
- the setting up of a comprehensive network of protected areas, (many of them internationally important wetlands) covering nearly 5% of the surface of the country in 1991; and
- the development of a network of trained and devoted personnel, who staff both the DOE offices and the protected areas.

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11. In addition, the Islamic Republic of Iran has played a leading role in the international wetland movement by hosting the international conference that adopted the Ramsar Convention on Wetlands in the Caspian city of Ramsar in 1971, and championing the development and implementation of the Convention (which now has over 100 member countries) in the intervening period. The two major undertakings accepted by Ramsar Contracting Parties are to designate sites for the List of Wetlands of International Importance, and to promote wise use of wetlands by developing a National Wetland Policy.

12. Previous efforts to conserve wetland biodiversity have concentrated on ad hoc measures at individual sites and have proved ineffectual. The GEF project will build on existing strengths, and make a fundamental attempt to address the proximate threats and underlying causes of wetland degradation, including a lack of co-ordination between different sectors concerned with wetlands and lack of an

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integrated approach to site management. Outside funding, justified by the global importance of the biodiversity, will be required to achieve these aims.

### *Project Objectives and Activities*

13. The essential elements of the Project will involve:

- Legal establishment of reserves and demarcation of boundaries as necessary;
- formulation and implementation of integrated conservation and management plans, with input from local stakeholders and civil society organizations, at selected sites;
- development of guidance on a catchment level approach to conservation of wetland biodiversity, the use of water resources and wetland management;
- application of this catchment approach in the selected sites;
- education and public awareness campaigns on wetland values and the importance of biodiversity;
- identification of training needs, and initiation of the training programmes identified as necessary;
- establishment of an inter-ministerial coordinating mechanism, at national and provincial level, to oversee wetland conservation and management; and
- experiences and lessons from early planning and implementation phase of conservation and wise use objectives at project sites, can provide some inputs into the formulation and implementation of the National Wetland Policy.

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## 2. DESCRIPTION OF PROPOSED PDF-B ACTIVITIES BY COMPONENT

### *Need for urgent action to conserve Iranian wetlands*

14. Despite the best efforts of the Iranian authorities, there has undoubtedly in recent years been loss and degradation of some Iranian wetlands and of their biodiversity (and of their potential to support sustainable development). Details of problems at individual sites are given in Annex II. In general it can be said that there are **two major barriers to alleviating the loss of wetland biodiversity**:

- (a) The lack of recognition of the value of wetlands, both at decision-maker and local community levels. This has led both government agencies and private individuals to neglect wetland values and to seek short-term economic advantages, which cause long term ecological and environmental problems. Furthermore, there has often been a **lack of expertise** in integrated management of protected wetlands.
- (b) The lack of co-ordination between the different agencies intervening in wetlands. With the rapidly increasing population, and the need for immediate improvements in living conditions, development agencies have often made interventions with minimal consultation with the DoE or other concerned bodies, leading to sectoral policies that neglect the concerns of other sectors. Indeed, a representative of the Planning and Budget Organization suggested that the absence of a national five-year Plan in the years immediately following the revolution contributed to wetland loss.

### *Planned activities under PDF-B*

15. The principal activities will include the **preparation of a full project proposal**, to be submitted to GEF for funding; **participatory appraisals of priority sites**; **final site selection for the full project**; and the development of plans for the establishment of a **co-ordinating mechanism, training, and an education and public awareness (EPA) campaign**. For the duration of the PDF-B project, a small expert co-ordinating team will guide the work of the project and the conduct of various activities.

16. The DoE will take a leading role in the execution of the PDF-B activities. However, as one of the underlying aims of the whole project is to achieve much greater awareness of wetland conservation priorities by other ministries and organisations, a **concerted effort will be made to co-ordinate activities of other bodies that affect wetlands**. International technical input will be sought from international wetland organisations (notably the Secretariat of the Ramsar Convention and its advisors, IUCN - The World Conservation Union, and Wetlands International. The Secretariat of the Ramsar Convention (RCS) will assist in:

- Identifying and recruiting international experts;
- participating in a panel of experts, consisting of both international and national experts, to review the project's results; and
- collaborating with UNDP and the national counterpart in the co-ordination of project activities.

*Who!!*

**Activity 1: Preparation of a GEF project proposal**

17. The co-ordinating team will take the lead in preparation of this project proposal, which will essentially be a **framework for more detailed technical documents produced under the other activities**. The proposal will draw from Activities 2 to 6 below to include all essential elements including: a logical framework analysis with performance indicators for each project output; an incremental cost analysis; a detailed description of each project site with information on globally significant biodiversity represented therein, proximate threats and underlying causes of biodiversity loss at the site, socio-economic conditions and a public participation plan.

18. The co-ordinating team will also be responsible for identifying and negotiating co-financing opportunities for activities that cannot be financed through GEF resources but need to be undertaken as part of the project to secure conservation objectives. Activity 3 will identify activities that are in national sustainable development interest and for which co-financing needs to be secured.

Outputs of Activity 1:

- GEF project proposal on conservation of wetlands in the Islamic Republic of Iran, ready for submission.
- Co-financing opportunities identified and commitments secured.

*→ know the relevant by project work will raise expectation.*

**Activity 2: Participatory appraisals of conservation priorities**

19. The wetlands listed in Annex II represent a preliminary selection of possible sites based on consultations with Government agencies and experts. **Participatory appraisals** will be undertaken in these sites to establish the overall economic and social situation of local stakeholders, to **identify proximate threats and underlying causes of biodiversity loss, and to identify possible management options to address threats and each site**. These appraisals will form the basis for further review of the sites listed in Annex II to identify a smaller subset of sites that represent different combinations of human use and threats.

20. This Activity will also review the results of the participatory appraisals to identify at a national level the role of the current legislative and regulatory framework in determining the impact on biodiversity and to suggest options/recommendations for alternative regulatory interventions.

Outputs of Activity 2:

- A report on the participatory appraisals, outlining, inter alia:

- the range of proximate threats and underlying causes at the different sites including socio-economic considerations, e.g. the significance of resource exploitation in local livelihoods.
  - the attitudes of local communities towards biodiversity conservation.
  - possible management options at each site to address threats.
- (ii) A report outlining at a national level the following:
- the role of the current legislative and regulatory framework in determining impact on biodiversity at a national level.
  - options/recommendations for alternative regulatory interventions.

### Activity 3: Selection of wetland sites for biodiversity conservation

21. Annex II presents some initial ideas on pilot sites that might be selected for formulation and implementation of integrated management plans in the full GEF project. The PDF-B project will refine these initial ideas (notably with input of data on taxa other than mammals and birds), and select a few (2-4) sites for inclusion in the full project. The final selection of sites will be based on the participatory appraisals carried out under Activity 2, and will encompass a broad range of criteria, including:

- Global significance and uniqueness of biodiversity represented in the sites;
- urgency, nature and manageability of threats<sup>1</sup>;
- sites are in good condition and prospects for conservation are good;
- willingness of stakeholders, including local communities, to participate; and
- potential for ecotourism.

22. The precise number of sites selected will take account of the financial implications of activities proposed for each site that is selected. The management plans to be formulated under the full proposal will be fully integrated in the sense that they will take account of issues throughout the catchment in which each wetland is situated; they will also incorporate the views and requirements of local stakeholders, and incentives for conservation activities. The plans will also look into the need to provide trained managers to develop and implement the plans.

#### Outputs of Activity 3:

- (i) Selection of wetlands for formulation and development of integrated management plans in the full GEF project.
- (ii) Detailed assessment of the proximate threats and underlying causes of biodiversity loss at the 2-4 sites selected.
- (iii) Review of various management options for addressing threats at each site (Activity 2, Output 1), and identification of those that should form part of the sustainable development baseline and those that are incremental.

### Activity 4: Plans for the establishment of a co-ordinating mechanism.

23. Options will be developed for a mechanism to co-ordinate conservation and wise use of wetlands between ministries and other involved organizations. The resulting body would oversee the formulation and implementation of conservation measures. Legal and institutional aspects of the creation of such a structure will be investigated; so will scientific and technical requirements, including advice on the need to establish a permanent wetland advisory centre and data management centre. Attention will also be paid to the need for co-ordination in each province and at catchment level.

<sup>1</sup> The site selection process will ensure that prospects for addressing threats at the chosen sites through the project must be good and threats must not be insurmountable, particularly for cross-boundary areas.

24. Such a co-ordinating structure would not only ensure effective implementation of project activities, particularly those that require inter-sectoral co-ordination, but also provide valuable inputs to the elaboration of a National Wetlands Policy, which is an important national priority.

Outputs of Activity 4:

- (i) Final report on the form, roles and responsibilities of national, provincial and catchment level co-ordinating structures, to be established during the full GEF project.

**Activity 5: Preparation of Education and Public Awareness (EPA) campaigns on wetlands.**

25. Lack of awareness of the value of wetlands is one of the key causes of wetland degradation. It is likely that the participatory appraisals (Activity 2) will also demonstrate a lack of awareness of the importance of wetland resources to local people. Targeted campaigns to explain the value (and, in particular, the economic value) of biodiversity, and the role it plays in local livelihoods need to be organized. These campaigns need to target not only decision-makers and communities in the immediate surroundings of wetlands, but also the broader general public. EPA experts, working closely with the teams under Activities 2 & 3 and consulting with stakeholders to ensure their support, will draw up plans for EPA campaigns on wetlands, carefully directed at the most relevant target groups, to be implemented in the full GEF project. Broader campaigns through the media, and taking account of ecotourism possibilities in wetlands, will also be planned.

Outputs of Activity 5:

- (i) Identification of key target groups.  
 (ii) Plan for EPA campaigns tailored to specific needs and requirements of target groups.  
 (iii) Plan for broader information campaigns for the general public.

**Activity 6: Identification of training needs**

26. Implementation of the full GEF project will require significant training of specialist staff. For example, Iran currently lacks trained staff capable of drawing up and executing management plans. Likewise, there is a dearth of adequate trained staff to carry out the EPA campaigns. Special training may be necessary if a Wetland Advisory Centre is to be established. Training needs must therefore be identified, taking note of available training opportunities in the universities of Iran and of the DoE training school at Karaj. The need for exchanges with foreign centres also needs to be studied.

Outputs of Activity 6:

- (i) Needs assessment of training required by different target groups for the implementation of conservation and wise use objectives at project sites.

**3. ELIGIBILITY**

*Project Eligibility Criteria*

27. The project is eligible for GEF funding based on the following criteria:

- Many Iranian wetlands are important for conservation of globally significant biodiversity (see Annex I). The threat to the biodiversity of Iranian wetlands is severe; without dynamic activity along the lines proposed, the loss and degradation of Iranian wetlands already noted will intensify and become irreversible.

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 ✓ but not of global importance  
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- Proximate threats include activities affecting wetlands, both upstream (dam building, diversion of water supplies) and on the spot (drainage for agriculture, increased aquaculture, reclamation of land for industrial purposes). The impact of these activities will increase dramatically in the next 5-10 years, but the severity of the impact can be reduced **through improved inter-sectoral co-ordination**.
- These problems of co-ordination are common to many countries where a site-based approach to conservation of biodiversity has hitherto held the upper hand. They are also common to many developing countries where the need for economic development is paramount, and where global environmental concerns can only be addressed if support from GEF is available.
- At a regional level, the problem is common to many states situated in the arid Middle East and Central Asian area, few of whom have the national conservation infrastructure or expertise needed to find solutions, whereas this infrastructure is well advanced in the Islamic Republic of Iran.
- The project will complement existing plans for conservation of biodiversity under the National Biodiversity Strategy by **removing barriers to effective inter-sectoral co-ordination**.
- The project is strongly country-driven, with enthusiastic support from the Department of the Environment.
- It is totally consistent with the Iranian Constitution and the National five-year Plans, and will provide a new impetus to carry out environmental intentions, which have not so far been put into practice.

#### *Global benefits*

28. Global benefits derived from the project will include:

- Conservation of a wide range of **globally threatened wetland species**.
- Maintaining the favorable conservation status of other wetland species (particularly migratory species using wetlands) that are not currently under threat, but could become threatened in case of loss or further degradation of Iranian wetlands. Such species are those to which the Ramsar 1% criterion is usually applied.
- Conservation of a **representative sample of wetlands typical of Central and Western Asia**.
- Development of a process of strategic co-ordination of **wetland conservation and wise use activities** of relevance to many other states, in the region and beyond.

#### *Incremental costs*

29. An analysis of the Incremental Costs associated with the full project will constitute part of the output under Activity 1, above, i.e. preparation of a full project proposal. The **realistic baseline is determined by the national structures and conservation measures** already established by the Islamic Republic of Iran. The sustainable development baseline will be developed during the PDF-B (under Activity 3) and used to calculate the incremental funding required to remove barriers to effective application of sustainable structures and measures, thus bringing global benefits through better on-the-ground biodiversity conservation measures, improved public understanding of wetlands, and greater institutional capacity to achieve these ends.

#### *Membership of relevant international conventions*

30. The Islamic Republic of Iran ratified the Convention on Biological Diversity (CBD) on 6 August 1996, and has participated actively in Conferences of the Contracting Parties (COP) to the CBD. Iran's leading role in setting up the Ramsar Convention has already been mentioned. The Islamic Republic of Iran was closely involved in discussion of inland water systems at COP3, which resulted in CBD Decisions III/10 and III/21 on giving priority to work on inland water systems, and on inviting the Ramsar Convention to be a lead partner in this field of inland water ecosystems. It should be noted that

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the very broad Ramsar definition of wetlands adopted in the present proposal includes both inland water systems and coastal water systems that were the subject of the Jakarta Mandate adopted at COP2 in Indonesia in 1995.

#### 4. NATIONAL LEVEL SUPPORT

##### *Present structures for wetland conservation in the Islamic Republic of Iran*

31. There is in Iran a strong religious and cultural basis for environment issues in general and wetland conservation in particular. Thus, the Holy Qur'an and the Hadith contain many references to conservation of the environment and of animals and plants, such as:

- "Do they not see the earth, how many of every noble kind we have caused to grow in it? Most surely there is a sign in that, but most of them will not believe" (Chapter The Poets, Verses 7 & 8).
- "And do not make mischief in the earth after its reformation" (Chapter Yusef, Verse 56).
- The Prophet (peace be unto him): " He who has water and a piece of land and is still poor, his God will avoid him his blessing".

32. Similarly, water and gardens play a major role in traditional Iranian culture. Many of Iran's most famous historical buildings incorporate water gardens, with running water as a symbol of perfection and heavenliness.

33. This concern for the environment and wetlands is reflected in legal and planning measures. Article 50 of the Constitution states that objectives of sustainable development, with regard to environmental standards and regulations and potential environmental capacity, should be taken into account to maintain environmental equilibrium. The Second National Five Year Plan (which covers the Iranian years 1374-1378, i.e. April 1996-March 2000) places emphasis on preservation, development and optimal uses of natural resources, endemic species and their natural habitat. Furthermore, all economic and social activities, as well as any use of natural resources, must respect environmental considerations.

34. The **Department of the Environment** is a long-established organization, attached to the Office of the President of the Republic. The Director of DoE has the rank of Vice President. There is a countrywide network of offices, with branches in every province, and sub-offices in every major town. A number of experts of worldwide renown work for the DoE on a full time basis. Over the years, the DoE has established a **representative network of National Parks, Protected Regions, Wildlife Refuges and No-hunting areas**, all of which have at least one office with trained game guards on the spot. Since the presidential election in 1997, there have been many changes in personnel, and the new team (headed by the highest-ranking woman in the Iranian administration) has adopted a dynamic approach to ensure the effective functioning of the DoE and its interaction with other departments.

35. The DoE is committed, as part of Iran's obligations under the Ramsar Convention, to an integrated approach to multiple and wise use of wetlands. The incorporation of biodiversity values for wetlands management, as one of the goals of this project, is therefore fully consistent with the DoE's approach. The DoE was closely involved at all stages of execution of the PDF Block A grant, and has been in permanent consultation in the preparation and formulation of the PDF Block B request.

36. Many agencies other than the DoE have actual or potential impacts in wetlands. Among the most influential are:

- Ministry of Jihad Sazandagi (Construction Crusade), to which the Forest and Rangelands Organization and the Fishery Company are affiliated;
- Plan and Budget Organization, attached, like DOE, to the President's Office;

- Ministry of Energy, to which the Water Organization is affiliated;
- Ministry of Agriculture;
- Ministry of Culture and Guidance (which is responsible for tourism);
- Universities and Research Institutes;
- Civil society (i.e. non-governmental) organizations; and
- Community organizations in the individual wetlands.

37. Support for a co-ordinated approach to conservation and wise use of wetlands exists, but needs to be harnessed and given greater purpose and direction.

*Existing state of knowledge of Iranian wetlands*

38. Basic surveys of Iranian wetlands and of their fauna and flora have, to a large extent, already been carried out by the excellent network of specialists in universities and research institutes. At least 280 wetlands have been identified in Iran, and the "Directory of Wetlands in the Middle East" identifies 63 of them as being of international importance under the Ramsar criteria; it may be that more will prove to merit international ranking, notably on the basis of taxa other than birds and mammals. The Research Institute of Forests and Rangelands has extensive botanical data in its national network of research stations and this information needs to be incorporated into existing matrices. Much remains to be done on management and conservation of the national wetland resource.

*Contribution of the Islamic Republic of Iran to international work on conservation and wise use of wetlands*

39. Iran, through the DoE, played a fundamental role in the establishment of the Ramsar Convention on Wetlands, the first of the modern inter-governmental conventions on management of natural resources, and still the only one devoted to a specific habitat, wetlands. The Conference that adopted the text was held in 1971 in Ramsar on the Iranian coast of the Caspian, and the anniversary of the adoption, 2 February, is now celebrated globally as World Wetland Day. States that join the Convention (now numbering over 100) accept two major obligations:

- To designate wetlands in their territory for the List of Wetlands of International Importance; and
- To make "wise use" of all wetlands in their territory by developing a national wetland policy.

40. Iran was one of the seven original Contracting Parties that brought the Convention into force in 1975. It has so far designated 18 wetlands (covering over one million hectares) for the Ramsar List, and has included seven of them on the Convention's "Montreux Record", which identifies Ramsar sites in need of priority action. It has twice welcomed missions under the Convention's Management Guidance Procedure (Ramsar Convention Bureau, 1992 and 1997b). The Islamic Republic of Iran was elected Alternate Representative for Asia on the Convention's Standing Committee from 1991 to 1993 and again from 1997 to the present. It played a major role in the drafting of the Ramsar Strategic Plan 1997-2002, which identifies a series of Objectives and Actions for the Convention and its Contracting Parties in the period up to 2002.

41. The Islamic Republic of Iran has been instrumental in developing links between the Ramsar and Biodiversity Conventions (see under Eligibility). The Islamic Republic of Iran is an active member of the Regional Organization for the Protection of the Marine Environment (ROPME), which considers, *inter alia*, problems of pollution in the Persian Gulf, where many Iranian wetlands of international importance are situated.

*National contribution to the execution of PDF-B*

42. The DoE will provide extensive support to PDF-B through provision of services (data, office facilities, transport, accessibility to its nationwide network, and salaries of counterpart staff). Other ministries and organizations involved in the development of a co-ordination mechanism (e.g. the Plan and Budget Organization, the Ministry of Jihad) will be approached for similar "in kind" contributions, as will the productive corporate sector in Iran. It is estimated that the value of this "in kind" support is at least \$100,000.

43. In the current world situation, it is not very likely that bilateral support will be available to the Islamic Republic of Iran for co-financing activities under the full GEF project. Co-financing will therefore be sought through other ongoing international projects (e.g. the current World Bank project on irrigation, UNDP's Land and Water Programme, which includes Watershed Management, Irrigation and Desertification, or UNIDO's project on water quality in the Zaindeh Rud at Isfahan), through funding from the Government of the Islamic Republic of Iran, and through the productive corporate sector in Iran. Search for counterpart funding for the full GEF project will be one of the aspects of work under PDF-B.

## 5. JUSTIFICATION FOR PDF-B GRANT

44. As noted in the previous section, extensive work has been done in the Islamic Republic of Iran with national funding, to establish a national conservation authority and a network of protected sites. These efforts risk failure in the field of wetlands in the next few years, with consequent loss of biodiversity of global importance, unless targeted measures are undertaken at specific sites accompanied with a broader institutional system to co-ordinate interventions by other sectoral interests. SL.  
→? proposal.

45. The PDF-B grant will make it possible to draw up the blueprints for an integrated co-ordination system to obviate sectoral interventions in wetlands. It will also establish a series of on-the-ground pilot projects at specific wetland sites, where the co-ordinating mechanism will be tested at local level, with input from local authorities, local stakeholders and civil society organisations. The full GEF project will devote itself to developing the concepts produced in the PDF-B project and to embarking on their implementation

## 6. ITEMS TO BE FINANCED

46. The central co-ordinating team will contribute to all six major activities. Each expert consultant would provide input into several activities. Thus, the Environmental Economist would contribute to the Participatory Appraisals (Activity 2), and to the Education and Public Awareness Campaigns (Activity 5). It is intended that there should be some flexibility in the budget, allowing transfers from one activity to another.

Activity/Item	Cost	Total GEF contribution	Total Iranian contribution
<b>Activity 1. Management of PDF-B activities and preparation of a GEF project proposal</b>	<b>70,000</b>	<b>45,000</b>	<b>25,000</b>
Salaries of co-ordinating team*	40,000	40,000	
Office accommodation and operational costs	25,000		25,000
Production of final document*	5,000	5,000	
<b>Activity 2. Participatory appraisals of conservation priorities</b>	<b>70,000</b>	<b>55,000</b>	<b>15,000</b>
International expert @ 1 month	15,000	15,000	
2 National consultants @ 2 months each	10,000	10,000	
Local roundtables/workshops	23,000	8,000	15,000
Collection/processing of information	14,000	14,000	

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 - Most analysis  
 - done by DoE  
 - in the  
 - early stages  
 - of the project

Activity/Item	Cost	Total GEF contribution	Total Iranian contribution
Reporting & miscellaneous	8,000	8,000	
<b>Activity 3. Selection of wetland sites for integrated management plans</b>	<b>120,500</b>	<b>80,500</b>	<b>40,000</b>
Field surveys	23,000	23,000	
International expert on environmental economics (0.5 months)	7,500	7,500	
International expert on management planning (1 month)	15,000	15,000	
Sociologist (national expert, 2 months)	5,000	5,000	
National expert input	15,000		15,000
Meetings of local stakeholders at selected sites	20,000	10,000	10,000
Travel costs	15,000	15,000	
Operational costs	10,000		10,000
Production of final report	10,000	5,000	5,000
<b>Activity 4. Plans for the establishment of a coordinating mechanism.</b>	<b>77,000</b>	<b>67,000</b>	<b>10,000</b>
National legal expert (2 months)	10,000		10,000
RCS experts @ 11,000/mo	22,000	22,000	
National expert input	15,000	15,000	
Consultations and meetings	15,000	15,000	
Production of final documentation	10,000	10,000	
Operational costs	5,000	5,000	
<b>Activity 5. Preparation of Education and Public Awareness (EPA) campaigns on wetlands</b>	<b>42,500</b>	<b>37,500</b>	<b>5,000</b>
International expert on environmental economics (0.5 months)	7,500	7,500	
International EPA expert (1 month)	15,000	15,000	
National expert input	10,000	10,000	
Operational costs	5,000		5,000
Production of final document	5,000	5,000	
<b>Activity 6. Identification of training needs</b>	<b>40,000</b>	<b>35,000</b>	<b>5,000</b>
International expert on training needs (1 month)	15,000	15,000	
National expert input	15,000	15,000	
Operational costs	5,000		5,000
Production of final document	5,000	5,000	
Miscellaneous/contingency	10,000	10,000	
Administrative costs for recruitment of international experts (RCS @ 10%)	7,500	7,500	
Support costs (to CO @ 3%)	9,900	9,900	
<b>GRAND TOTAL</b>	<b>447,400</b>	<b>347,400</b>	<b>100,000</b>

\* Additional contribution from RCS in the form of in-kind support

## 7. OUTPUTS

47. The outputs of each individual activity are given in section 2, but they may be summarized as follows:



Identification of training needs								
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## 9. SPECIAL FEATURES

50. In recent years, it has been recognized that a habitat protection approach is insufficient to guarantee conservation and wise use of wetlands. This is because wetland reserves, however large they may be, are affected by activities outside their own boundaries in the wider catchment, both upstream and downstream. As a result, there has been a move towards a planning approach, incorporating all stakeholders and all institutions that have an impact on wetlands.

51. The present project represents one of the first attempts anywhere in the world to put this theory of a planning approach into practice. It is particularly relevant, given that it takes place in a dry country, where water resources are few and of particular value.

52. But it does not represent a "top down" approach, since an essential part is the development of integrated management plans at specific sites, where participation of local stakeholders will be actively sought. Campaigns of public awareness form an essential element of the project.

53. Success of the project will not only prevent loss and degradation of a number of Iranian wetlands with biodiversity of undoubted global value, but will also provide a blueprint of value to other arid zone and developing countries.

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## 10. IMPLEMENTING AGENCY

54. The implementing agency will be UNDP. The need for a Steering Committee or some other form of co-ordination will be investigated in the course of the PDF-B.

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## ANNEX I

### DETAILS OF GLOBALLY THREATENED SPECIES IN THE ISLAMIC REPUBLIC OF IRAN

#### Globally threatened species

IUCN's 1996 Red List of Threatened Animals gives for Iran 20 threatened mammal species, 14 threatened birds, eight threatened reptiles, two threatened amphibians seven threatened fish and three threatened invertebrates. It also indicates a number of Iranian subspecies that are threatened, and several species that are classified as "Lower Risk: near threatened".

#### Threatened species of mammal

Two threatened mammals are categorized as CR, critically endangered (Persian Mole *Talpa streeti*; and Firouz's Jerboa *Allactaga firouzi*), three as EN, endangered (Shush Shrew *Crocidura susiana*; Kerman Vole *Microtus kermanensis*; and Persian Mouse-like Dormouse *Myomimus setzeri*), and 15 as VU, vulnerable (seven species of bat: Mediterranean Horseshoe Bat *Rhinolopus eurayle*; Lesser Horseshoe Bat *R. hipposideros*; Mehely's Horseshoe Bat *R. mehelyi*; Sind Bat *Eptesicus nasutus*; Bechsteins's Bat *Myotis bechsteini*; Long-fingered Bat *M. capaccinii*; and Geoffroy's Bat *M. emarginatus*; Cheetah *Acinonyx jubatus*; Caspian Seal *Phoca caspica*; Asiatic Black Bear *Ursus thibetanus*; Dugong *Dugong dugon*; Onager or Wild Ass *Equus hemionus*; Wild Goat *Capra aegagrus*; Wild Sheep *Ovis orientalis*; and Mouse-like Dormouse *Myomimus personatus*). Several of the Iranian subspecies of the above threatened species are considered as belonging to higher categories of threat; thus the Asiatic Cheetah *A. j. venaticus* Baluchistan Bear *U. t. gedrosianus* are critically endangered, the Onager *E. h. onager* is endangered. The two Iranian subspecies of Wild Goat *C. a. aegagrus* and *C. a. blythi* and the five subspecies of Wild Sheep (*O. o. arkal*, *O. o. cycleros*, *O. o. gmelinii*, *O. o. ispahamica* and *O. o. laristanica*) are all separately listed as vulnerable.

#### Threatened subspecies of mammal

Among mammals whose Iranian subspecies are threatened, the Persian Fallow Deer *Dama dama mesopotamica* and the North Persian Leopard *Panthera pardus saxicolor* are both classed as endangered.

#### Mammals at lower risk

The following mammals are classified as "Lower risk: near threatened": Blasiu's Horseshoe Bat *Rhinolophus blasii*, Bobrinsky's Bat *Eptesicus bobrinskoi*, Schreiber's Long-fingered Bat *Miniopterus schreibersi*, Giant Noctule Bat *Nyctalus lasiopterus*, Lesser Noctule *N. leisleri*, Goitered Gazelle *Gazella subgutterosa*, Persian Squirrel *Sciurus anomalus*, Euphrates Jerboa *Allactaga euphratica*, two hamsters (Grey Hamster *Cricetulus migratorius* and *Calomyscus mystax*), Forest Dormouse *Dryomys nitedula* and Fat Dormouse *Myoxus glis*. The Iranian subspecies of Pallas's Cat or Red Manul *Otocolobus manul ferrugineus* is also considered as near threatened.

#### Threatened mammals in wetlands

Several of these endangered mammals are ecologically dependent on wetlands: Caspian Seal, Dugong and several of the bats which feed on insects over wetlands. Others occur in appreciable quantities in national parks and protected areas which contain both wetlands and adjacent hilly or arid areas: Wild Goat, Wild Sheep, Persian Fallow Deer. Many of the smaller mammals also occur in wetlands and their occurrence will be further documented in later stages of the project.

#### Threatened birds

Among the bird species, one is listed as critically endangered (Siberian Crane *Grus leucogeranus*) and 13 as threatened (Dalmatian Pelican *Pelicanus crispus*; Lesser White-fronted Goose *Anser erythropus*;

Ferruginous Duck *Aythya nyroca*; Red-breasted Goose *Branta ruficollis*; Marbled Teal *Marmaronetta angustirostris*; White-headed Duck *Oxyura leucocephala*; Greater Spotted Eagle *Aquila clanga*; Imperial Eagle *A. heliaca*; Lesser Kestrel *Falco naumanni*; Corncrake *Crex crex*; Great Bustard *Otis tarda*; Sociable Lapwing *Vanellus gregarius*; and Aquatic Warbler *Acrocephalus paludicola*).

#### Birds at lower risk

The following Iranian birds are classified as "Lower risk: near threatened": Pygmy Cormorant *Phalacrocorax pygmaeus*, Cinereous Vulture *Aegypius monachus*, Pallid Harrier *Circus macrourus*, White-tailed Eagle *Haliaeetus albicilla*, Caucasian Grouse *Tetrao mlokosiewiczzi*, Little Bustard *Tetrax tetrax*, Black-winged Pratincole *Glareola nordmanni*, Great Snipe *Gallinago media*, Iraq Babbler *Turdoides altirostris* and Cinereous Bunting *Emberiza cineracea*.

#### Threatened birds in wetlands

Of the 14 threatened birds, 11 are ecologically dependent on wetlands, and the same is true for six of the near threatened species.

#### Threatened reptiles

These include one critically endangered species (Hawksbill Turtle *Eretmochelys imbricata*), two endangered species (Green Turtle *Chelonia mydas* and Euphrates Softshell Turtle *Rafetus euphraticus*), and five regarded as vulnerable (Mugger *Crocodylus palustris*; Latifi's Viper *Vipera latifii*; Wagner's Viper *Vipera wagneri*; Spur-thighed Tortoise *Testudo graeca*; and Central Asian Tortoise *T. horsfeldii*). European Pond Turtle *Emys orbicularis* is classed at Lower risk: near threatened. Nearly all these reptiles are obviously dependent on wetlands, and their occurrence at specific sites will be further documented as the project proceeds.

#### Threatened amphibians

The two species listed are salamanders, both in the vulnerable category: *Batrachuperus gorganensis* and *B. persicus*. European Tree Frog *Hyla arborea* is classed at Lower risk: near threatened. These reptiles are dependent on wetlands, and their status will be better defined at individual sites in future.

#### Threatened fish

The seven fish include no less than five species of sturgeon, all classed as endangered (Russian Sturgeon *Acipenser gueldenstaedti*; Ship Sturgeon *A. nudiventris*; Persian Sturgeon *A. persicus*; Stellate Sturgeon *A. stellatus*; and Beluga *Huso huso*), as well as two vulnerable fish, Blind Cave Fish *Iranocypris typhlops* and *Nemacheilus smithi* recorded from Baq-e-Loveh pool. They are all, by definition, dependent on wetlands.

#### Threatened invertebrates

The three globally threatened invertebrates are insects, all classed as vulnerable: Cerambyx Longicorn *Cerambyx cerdo*; Rosalia Longicorn *Rosalia alpina*; and the Apollo Butterfly *Parnassius apollo*. Two further butterflies (the Large Blue *Maculinea arion* and a papilio *Archon apollinaris*) are listed as at lower risk: near threatened.

#### Threatened plants

For the threatened plants of Iran, it is proposed, at a future stage of the project, to consult the forthcoming IUCN volume on globally threatened plants. A high proportion of the flora of Iran (some 20% of all species) is made up of endemics. The Research Institute of Forests and Rangelands has a network of stations covering the country, which holds exhaustive data on Iranian flora.

**ANNEX II**  
**LIST OF CANDIDATE WETLANDS FOR PREPARATION OF INTEGRATED MANAGEMENT PLANS**

*Presentation of each wetland*

Under each site, a short introduction gives a thumbnail sketch of the site and its protection status, followed by a description of its global biodiversity value and a summary of current management challenges and opportunities. The comments on management are based on the literature, and on information gathered during visits to the sites carried out under the PDF A work. At the end of this section some tentative suggestions on priority sites are put forward.

**1. Hamouns of Sistan (Sistan and Baluchistan Province)**

- An inland delta with a complex of lakes situated at the lower end of the River Hirmand catchment, still functioning naturally as a flood plain with an annual flood (like the Nile delta), on the border with Afghanistan. The flooding varies cyclically from year to year, according to inflow from Afghanistan. Two Ramsar sites of 60,000 hectares in a Protected Region of 193,500 ha.

- Biodiversity values: Globally threatened birds include wintering Dalmatian Pelican, Imperial and Greater Spotted Eagles, White-headed, Marbled and Ferruginous Ducks (plus near threatened Cinereous. Major stopover and wintering site for 11 species under the 1% criterion.

- Issues/Threats: Both Ramsar sites are included in Ramsar's "Montreux Record" of sites requiring **priority attention**. Legal boundaries and protected status of part of the wetland are unclear. There is a long term international issue of water supply from Afghanistan (see Annex III), but some water will always arrive, so there is a need for a water management plan for the whole area, and for an integrated management plan for the protected area. A good start has already been made through excellent cooperation between the local DOE office and the Sistan Development Organization, to promote replanting of reeds (for conservation purposes and fodder for local people's animals), and to control introduced exotic fish.

**2. Hara Protected Region (Hormuzgan Province)**

- Tidal mudflats and mangroves on either side of the Khouran Straits, near Qeshm Island on the Persian Gulf. A Ramsar site of 100,000 ha in a Protected Region of 85,000 ha.

- Biodiversity values: Globally threatened species include wintering Dalmatian Pelican and feeding Green Turtle, and probably Dugong. Eight water birds occur in numbers exceeding the 1% criterion. The area holds many species of Indo-Malayan origin and, as the **outstanding example of mangrove ecosystems** in Iran, of great importance for **fish species, qualifies under the representative category**. Mangroves are identified as a wetland type of global priority in the Ramsar Strategic Plan 1997-2002.

- Issues/Threats: the precise boundaries of the Protected Area and Ramsar site need to be clarified. In view of the rapid industrial development of nearby Bandar Abbas (the principal Iranian port on the Persian Gulf) and of Qeshm Island Free Trade Zone, there is a need to establish and implement a management plan to ensure that the current favourable conservation situation is maintained, and the activities of local people, (mainly fishing and cutting of mangroves for fodder) can be carried out in a sustainable fashion. Another important consideration is the danger of pollution from oil tankers cleaning their tanks as they move up the Gulf. Interaction with ROPME is therefore important.

**3. Shadegan Marshes and mudflats of Khor El Amaya and Khor Musa (Khuzestan Province)**

- The floodplain marshes of the River Jerrahi and coastal mudflats at the head of the Persian Gulf. A Ramsar site of 400,000 ha, (included on the Montreux Record because of war damage) and Wildlife Refuge of 296,000 ha.

- Biodiversity values: Shadegan Marshes are the most important site in the world for the globally threatened Marbled Duck, since 30-60% of the world population winter there. Other globally threatened wintering water birds include Dalmatian Pelican, Ferruginous Duck, Imperial and Greater Spotted Eagles. At least 19 species occur in numbers exceeding the 1% criterion. The whole large area is of major importance as a breeding and nursery ground for fish, and for the hydrological functioning of the northern Persian Gulf.

- Issues/Threats: The area is reported to have suffered from oil pollution during the Iran-Iraq and Kuwait wars, but appears to be recovering well. The respective boundaries of the Ramsar site and Wildlife Refuge are unclear. The Province of Khuzestan plans to build dams on the River Jerrahi in the Zagros Mountains, and to divert two small streams from the Karun River towards Shadegan. Shilat (the Fishery Company in Ahwaz) plans to develop aquaculture, but has no plans for introduction of exotic fish. The World Bank project to improve irrigation in Iran is active in the Shadegan area. These activities are likely to affect the ecological character of the site by affecting water inflow and require co-ordination through an integrated management plan.

#### **4. Haur El Azim Marshes (Khuzestan Province)**

- A large lake and marsh area, two thirds of which is situated in Iraq and one third in the Islamic Republic of Iran. Eighty per cent of the water comes from the River Karkheh on the Iranian side, and the area also receives inflow through Iraq from the Euphrates and Tigris. At present the site has no protected status. It is of extreme political sensitivity because of recent history, and has been less well surveyed biologically than other wetlands in the region. Nevertheless, it is undoubtedly one of the most important wetlands in the whole of the Middle East, and used to provide (and may still do) wintering habitat for some of the largest concentrations of water birds in the world.

- Biodiversity values: Globally threatened water birds which almost certainly occur in numbers include Dalmatian Pelican, Lesser White-fronted and Red-breasted Geese, Ferruginous, Marbled and White-headed Ducks, Greater Spotted and Imperial Eagles, and Aquatic Warbler. Near-threatened water birds include White tailed Eagle and Iraq Babbler. Meets the 1% criterion for a very large number of species, and is certainly one of the main reservoirs of wetland biodiversity in the Middle East.

- Issues/Threats: Major construction activities (drainage and aquaculture) are reported on the Iraqi side of the border. The Khuzestan provincial authorities in Ahwaz are considering similar activities, including possible construction of a physical boundary. Such constructions undoubtedly affect the hydrological functioning of the wetland, and therefore the livelihood of local people. While recognizing the extreme difficulty of achieving consensus over a recent theatre of war, many people in Khuzestan indicated a strong desire for consultations with the Iraqi authorities to integrate management measures.

#### **5. Neyriz Lakes and Kamjan Marshes (Shiraz Province)**

- Large lakes and marshes at the lower end of the drainage basin of the Kur River, just downstream of Persepolis, with surrounding mountains of the Zagros range. This is one of the most spectacularly beautiful wetlands in the world. A Ramsar site of 108,000 ha (included on the Montreux Record, because of damage to Kamjan Marshes by drainage), in a protected area of some 327,800 ha, protected partly as a National Park, partly as a Wildlife Refuge.

- Biodiversity values: Globally threatened water birds include Lesser White-fronted Goose, Ferruginous and Marbled Ducks, Greater Spotted and Imperial Eagles, and near-threatened Pallid Harrier and White-

tailed Eagle. The National Park and Wildlife Refuge hold populations of the globally threatened Wild Goat and Urial, while Cheetah and Wild Ass are found nearby. The lakes qualify under the 1% criterion for at least 19 species, and are the major wintering area for up to 100,000 Greater Flamingos, the vast majority of the population of this species nesting in Iran and Kazakhstan.

- Issues/Threats: Water inflow to the area is likely to be affected by proposed dams upstream on the Kur and Sivand Rivers; representatives of the Water and Planning Organizations in Shiraz have expressed a willingness to take account of environmental factors in the planning and construction of these dams. Kamjan Marshes has already been affected by a drainage project that has in places created highly saline soils, unusable for agricultural purposes. There is a need to ensure that any future agricultural projects avoid this effect, and to consider restoration of the marshes. Given its natural beauty and proximity to the cultural centre of Shiraz and the archaeological sites around Persepolis, the site has enormous potential for ecotourism. The exact limits of protected areas and Ramsar sites need clarification. An integrated management plan is urgently needed to co-ordinate all these activities. It would include a major public awareness element for tribal people, who winter in the area with their flocks, and farmers who have recently torn down National Park fencing. Nearby Kaftar Lake, where there has recently been successful co-ordination between agricultural and conservation interests, may serve as a valuable precedent.

#### **6. Dasht-i-Arjan and Lake Perishan (Shiraz Province)**

- Two lakes, west of Shiraz, Dasht-i-Arjan sited in a high valley of the Zagros, surrounded by mountain peaks and exposed to severe climatic factors, and Perishan at a lower elevation in more clement surroundings. Both are of outstanding natural beauty and striking landscape value. Both are included in the same Ramsar site of 6,600 ha, and larger Protected Region, originally 52,800 ha, but now reduced in size.

- Biodiversity values: Globally threatened species include six threatened water birds, (Dalmatian Pelican, Marbled, Ferruginous and White-headed Ducks and Imperial and Greater Spotted Eagles), together with several threatened mammals, notably Wild Goat and Urial and some of the endangered bat species. Special measures have been taken at Dasht-i-Arjan for protection of the globally endangered Persian Fallow Deer. Nineteen water birds meet the 1% criterion. The lakes are outstanding representative examples of lakes of the highlands of western Iran, and it was proposed at the 1971 Ramsar Conference that the site be established as an international reserve administered by an international committee.

- Issues/Threats: A number of uncertainties remain to be resolved about the exact boundaries of the Ramsar site and Protected Region. At Perishan, there is pressure from agricultural activities within the Protected Region, from farmers who wish to reduce water levels, and from uncontrolled use of motor boats. At Perishan there are already some facilities for receiving visitors: these could be developed, since the two lakes (like the Neyriz Lakes) have high potential for ecotourism and as centres to illustrate and demonstrate wetland values to local people, students and the general public.

#### **7. Gavkhouni Lake and marshes of the lower Zaindeh River (Isfahan Province)**

- A large salt lake with associated marshes at the lower end of the catchment of the Zaindeh River, which flows through the city of Isfahan. Designated as a Ramsar site, but has no national protected status as yet.

- Biodiversity values: Globally threatened species in the surrounding mountains include Wild Goat and Sheep. Water bird populations meet the 1% criterion for eight species. The wetland is an excellent representative example of the salt lakes of the central basin of Iran.

- Issues/Threats: Some form of national protected status needs to be conferred in support of the Ramsar site. UNDP has been involved in a UNIDO implemented project on water quality management of the Zaindeh River (UNIDO, 1997). Local community organizations in the area and the Governor General of

Isfahan have expressed enthusiasm for development of an integrated management plan. The site naturally lends itself to development of cultural and ecotourism, given its proximity to Isfahan, already a popular destination for tourists.

#### **8. Lake Uromiyeh (West Azarbaijan Province)**

- An extremely large, shallow, highly saline lake in northwest Iran, with a series of freshwater marshes in the floodplain to the south. A Ramsar site of 483,000 ha, protected under national legislation as a National Park of 463,600 ha, with other Ramsar sites among the freshwater lakes to the south.

- Biodiversity values: Globally threatened water birds include Marbled and Ferruginous Ducks. The islands in the lake are of great importance as a nesting site for White Pelican and Great Flamingo and some support almost pristine stands of Azarbaijan Pistachio forest, now greatly reduced elsewhere. The lake meets the 1% criterion for at least seven species of water bird. It is an outstanding example of a saline and, in places, hypersaline lake. The smaller lakes in the floodplain also support globally threatened water birds and should be included in any conservation measures.

- Issues/Threats: The principal management issues are co-ordination of agriculture and conservation issues, and control of inflow of polluted water from the cities of Tabriz and Uromiyeh. Need to establish links with the World Bank programme to improve irrigation in Iran that is active in the Zarin river area, near Lake Uromiyeh.

#### **9. Anzali wetland complex (Gilan Province)**

- A complex of freshwater lagoons and open marshes in the southwest Caspian, with a narrow outlet to the sea. A Ramsar site of 15,000 ha, (included on the Montreux Record, because of changes in the level of the Caspian, and eutrophication problems), which includes a Wildlife Refuge of 360 ha and a Protected Region of 4500 ha.

- Biodiversity values: Globally threatened birds include Ferruginous Duck, Greater Spotted and Imperial Eagles, and among near-threatened species that breed are Pygmy Cormorant and White-tailed Eagle. It qualifies under the 1% criterion for at least 18 species of water bird, and is of immense importance as a breeding ground and nursery for Caspian fish.

- Issues/Threats: There is a need to clarify the status of those parts of the Ramsar site unprotected by national legislation. The area has been affected by changes in the level of the Caspian Sea, and by eutrophication, notably through the invasive weed *Azolla*. There is a need to integrate agricultural activities, the heavy hunting pressure and conservation measures. The area is one of the best researched in the Islamic Republic of Iran, and therefore research results are available for immediate implementation in an integrated plan.

#### **10. Fereydoon Kenar Marshes (Mazandaran Province)**

- A complex of three artificial duck-trapping stations ("damgah" in Persian) at the villages of Fereydoon Kenar, Esbaran and Sorkhe Rud, amid rice-fields in the central Caspian lowlands. No legal conservation measures, either at international or national level, but the sites are jealously guarded by local communities, who create ideal habitat conditions for wintering water birds, and catch some of them for commercial purposes.

- Biodiversity value: Of extreme importance as one of the only two wintering places in western Asia (the other is at Bharatpur in India) for the critically endangered Siberian Crane, up to a dozen of which regularly winter. Also of value for other water birds since the excellent conditions allow the site to meet the 1% criterion for ten wintering species.

- Issues/Threats: The three areas currently have no formal conservation status, and consideration should be given to whether such status is required, or whether current protection by local people is adequate. In any case there is a need to protect the cranes from local shooting, and to encourage local people to maintain their traditional protection of the site, perhaps by providing incentives.

#### **11. Miankaleh (Mazandaran Province)**

- A peninsula in the south-east corner of the Caspian Sea, including shallow coastal waters on the seaward side, and freshwater marshes on the landward, which is much affected by Caspian sea level rise. The jewel in the crown of Iranian wetlands for migratory birds. Ramsar site of 100,000 ha, Wildlife Refuge of 68,800 ha.

- Biodiversity values: Globally threatened birds include wintering Dalmatian Pelican, Imperial and Greater Spotted Eagles and White-headed Duck, and formerly Lesser White-fronted Goose (affected by sea level) plus near-threatened Pygmy Cormorant and Little Bustard. The sea off Miankaleh supports the Caspian Seal and endangered species of Sturgeon. The area meets the 1% criterion for two breeding and 32 wintering species of water birds, and is an outstanding example of a natural sand spit and coastal lagoon formation.

- Issues/Threats: Miankaleh has experienced severe problems of conflicting land uses in recent years: in addition to unclear boundaries of the protected area and Ramsar site, the site has experienced uncoordinated extension of agriculture, aquaculture, diversion of water inflow, construction of harbours and railways, and plans for road-building, in addition to fluctuations in the level of the Caspian Sea. The need for establishment and implementation of a co-ordinated management plan is nowhere more urgent.

#### **12. Gomishan Marshes (Golestan Province)**

- Coastal marshes in the southeast Caspian, adjoining the border with Turkmenistan, on the edge of the very dry Turkoman steppes, covering some 35,000 hectares, in a very largely pristine and natural state, though affected by fluctuations in the level of the Caspian. No current protected status, either under international or national legislation, though the Ramsar Convention has given a small grant to enable the Iranian authorities to carry out surveys with a view to Ramsar designation.

- Biodiversity values: Globally endangered water birds include Dalmatian Pelican, Greater Spotted and Imperial Eagles and formerly Lesser White-fronted Goose, which could return if Caspian levels fall again. Near threatened species include White-tailed Eagle and Pallid Harrier. The globally endangered Caspian Seal and the five threatened species of sturgeon are likely to occur offshore. The site meets the 1% criterion for at least 16 species of water birds, and is of particular value as one of the very few Iranian wetlands still in a near-natural state.

- Issues/Threats: There is a need to give the area protected status, and to develop a management plan integrating conservation with possible agricultural development (taking special account of the possibility of salinization of soils) and fishing activities in the shallow waters of the Caspian.

#### **13. Lakes of the Turkoman steppes (Golestan Province)**

- A complex of fresh/brackish lakes fed by the River Atrak, which forms the border with Turkmenistan, in a very dry area on the edge of the Turkoman steppes. Lakes Alagol, Ulmagol and Ajigol are designated as Ramsar sites covering 1400 ha, (though their area has in fact increased, following added water inflow),

and several other lakes figure in the complex: Incheh Borun 50 ha, Voshmigir Dam 500 ha, Lake Bibishervan 300 ha, Lake Eymar 250 ha. None of the lakes have any protection under national legislation.

- Biodiversity values: Globally threatened species include Dalmatian Pelican, Lesser White-fronted Goose, Ferruginous and White-headed Ducks, Imperial and Greater Spotted Eagles and Lesser Kestrel. Near-threatened species include Pallid Harrier and White-tailed Eagle.

- Issues/Threats: The three lakes listed under Ramsar have undergone considerable change in the last few years, because of engineering works intended to control the increased inflow of water from the River Atrak. The site maintains its biodiversity values (indeed the increased water inflow means that it is actually larger than before) but has become largely artificialized. Some form of national protection measures are urgently needed to guarantee the ecological character of the Ramsar site, and an integrated management plan is needed to establish a balance between use of the area for agriculture, and more particularly aquaculture, and conservation requirements.

*Priority sites for consideration in the full project.*

All the sites mentioned above merit management action under the proposed GEF project, and it will be the task of PDF B to make a selection. Some very tentative guidance is offered below. It is suggested that the PDF B might aim to identify conservation interventions for perhaps five to seven sites, with a mixture of "easier" and "difficult" sites. Those not included in the final selection might nevertheless be given attention and assistance as part of national measures developed by the DoE.

- Wetlands of overwhelming importance for biodiversity conservation: Hamouns of Sistan, Shadegan, Haur El Azim, Neyriz Lakes, Miankaleh.
- Wetlands still in a pristine, near-natural condition: Hara, Gomishan.
- Wetlands requiring urgent management action: Shadegan, Haur El Azim, Miankaleh, Turkoman Lakes.
- Wetlands with great potential for wise use: Hamouns of Sistan, Hara, Shadegan, Neyriz lakes, Dasht-i-Arjan and Perishan, Uromiyeh, Anzali wetlands, Fereydoon Kenar, Miankaleh.
- Wetlands with outstanding possibilities for ecotourism: Neyriz Lakes, Dasht-i-Arjan and Perishan, Gavkhouni.

In developing the integrated management plans, assistance should be sought from experts in such disciplines as hydrology, environmental economics (to calculate the economic values of wetland functions in the various sites), and social sciences (to ensure that the concerns of local people are properly addressed) and regional planning.

*Legislative measures needed.*

As indicated above, the legal status of several designated Ramsar sites (or parts of sites) is not clear, and legislative action is needed at a national level to grant them some protected status. In addition, a number of sites are listed as wetlands of international importance under Ramsar, but do not as yet figure in the protected areas system. They are: Persian Gulf river deltas with mangroves (Rud-i-Shur, Rud-i-Shirin, and Rud-i-Minab; and Rud-i-Gaz and Rud-e-Hara); Lake Kobi; Bandar Kiashahr Lagoon and mouth of Sefid Rud on Caspian. The project will help the Iranian authorities in providing protected status to those sites that are selected for inclusion in the final project and that may not as yet be designated as protected areas.

**ANNEX III**  
**CROSS-BOUNDARY WETLANDS IN THE ISLAMIC REPUBLIC OF IRAN**

Article 5 of the Ramsar Convention stipulates that "Contracting Parties shall consult with each other about implementing obligations arising from the Convention especially in the case of a wetland extending over the territories of more than one Contracting Party, or where a water system is shared by Contracting Parties". Several of the internationally important wetlands which fall under the scope of the present proposal are in cross-boundary situations, and their conservation could benefit from input by international organizations, including UN bodies:

*Sistan wetlands.* The Sistan wetlands are fed by the River Hirmand, which rises in the Hindu Kush mountains in Afghanistan and flows into eastern Iran. An agreement exists between the Islamic Republic of Iran and Afghanistan on sharing of Hirmand waters, but there has long been concern in Iran about the possible long-term effects of dams which might be built in Afghanistan, and the need to avoid an Aral Sea type situation (Ramsar Bureau, 1992).

*Changes in sea level of the Caspian.* Wetlands in the five countries around the Caspian are affected by variations in the level of the sea, which dropped until 1978, rose by 1.8 meters over the next 15 years, and may now have stabilized. Sea level rise is a phenomenon of world importance, affecting many coastal communities and wetlands, and the Caspian example could provide guidance for other areas of the world.

*Wetlands of the Turkoman Steppes.* Inland of the Caspian, a number of wetlands along the River Atrak are situated virtually on the border with Turkmenistan. They are affected by arrangements for sharing of river water, which requires cross-border cooperation.

*Wetlands on the border with Iraq.* The wetlands of Mesopotamia, partly in the territory of Iraq, partly in the territory of the Islamic Republic of Iran, are fed by the Tigris and Euphrates which rise in Turkey, and by several rivers rising in the Zagros Mountains of Iran. One of the most important is the Haur El Azim, called Haur Al Hawizah in Iraq, (AMAR, 1994). The area is of extreme political sensitivity, but the wetlands are of such great importance that every effort should be made to develop cross-boundary contacts, so that biodiversity and sustainable use values are not lost.

**ANNEX IV: Letter of endorsement**