





Department of the Environment



Conservation of
Iranian Wetlands Project
جانم و زمینم به دستم، به دستم، به دستم



A hand is shown holding a stylized map of a wetland area. The map is composed of black lines representing water channels and land areas. Several purple circular markers are placed on the map, indicating specific locations. The hand is positioned at the bottom of the frame, with the fingers spread out to hold the map. The background is white, and there is a vertical purple bar on the right side of the image.

Executive Summary
A guideline on developing
Wetland Integrated
Management Plans

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Ecosystem approach to wetland management

Wetland habitats are one of the most important natural ecosystems on earth, playing a vital role for sustainable development of surrounding communities. The multiple benefits of wetlands put them among the most important and valuable habitats in the world for conserving biodiversity and cultural issues, regulating water quality and quantity and supporting food production. Different climatic zones and special topographic and geological conditions in Iran have caused the formation of different types of wetlands, from mangroves and coral reefs to the vast central plate of salt lakes and the Caspian coastal wetlands. Iran as a unique example contains 41 identified types of wetlands out of 42 recognized globally.

At a global level, the **Millennium Ecosystem Assessment**¹ found that in 2005 inland and coastal wetland ecosystems were lost at a rate faster than that of any other ecosystems, and the trend towards loss of wetland resources has not been reversed since then. The primary indirect drivers of this degradation and loss are identified as population growth and change in economic activity; the primary direct drivers of degradation and loss are identified as infrastructure development, land conversion, water use, eutrophication and pollution, overharvesting, overexploitation of wetland resources, climate change and invasive alien species.

1- <http://www.millenniumassessment.org/en/index.html>

A recent study² of long-term and recent trends in global wetland areas, based on a review of 189 reports of change in wetland areas finds that the reported long-term loss of natural wetlands averages between 54% and 57% but that loss may have been as high as 87% since 1700 AD. There has been a much (3.7 times) faster rate of wetland loss during the 20th and early 21st centuries, with a loss of 64% to 71% of wetlands since 1900. Conversion of coastal natural wetlands has accelerated more than that of inland natural wetlands in the 20th century and that conversion and loss is continuing in all parts of the world, and particularly rapidly in Asia.

Also Iranian Wetlands are seriously threatened by a combination of factors such as infrastructural development in upstream water resources (mostly dams), unsustainable agricultural practices and climate change. These factors have severe negative impacts on wetland dependent communities and wetland biodiversity, so most wetlands are in a critical state.

The need to protect the environment especially wetlands is a necessity, and the history of practical and organized environmental protection as an integrated system goes back more than 50 years. Thus, in 1971, the Ramsar Convention, as the oldest international treaty on the subject of nature conservation, was signed in Ramsar, Iran. During this period, different management approaches across the world have been formed and evolved. The first conservation approaches were based on preserving nature and the environment without any changes or use. Although

2- N. Davidson, How much wetland has the world lost? Long-term and recent trends in global wetland area, CSIRO Publishing, Marine and Freshwater Research, 2014, 65, 934 –942, September 2014

this approach initially prevented environmental degradation, it gradually faced serious problems because humans were not adequately considered as a component of the ecosystem.

New conservation approaches such as the CBD's ecosystem management approach, pay special attention to the role of humans and their livelihoods in the ecosystem. So along with wise use of wetlands, conservation of natural ecosystems will be achieved while the impacts of development and the correlation of components beyond the borders of the basin are considered.

In Iran, based on the fourth, fifth and sixth national development plan, the Department of Environment (DoE) in collaboration with other agencies and key stakeholders are assigned to implement ecosystem management. In this regard, the establishment of this management approach for Iranian wetlands started with the Conservation of Iranian Wetlands Project. The project which is a partnership between the Government of Iran (DoE), the Global Environment Facility (GEF) and the United Nations Development Programme (UNDP) began in 2005 and aims to reduce or eliminate the threats to, and permanently sustain, Iranian wetland ecosystems. The experience gained in cooperation with governmental and non-governmental stakeholders for project pilot sites, could then be replicated in other wetlands all over the country to introduce the ecosystem approach, establish the new management system and provide legal mechanisms for its implementation. This Guideline has been developed based on the above experiences, alluding briefly to the establishment of the ecosystem approach, describes the detailed steps

for developing an integrated management plan for wetlands (including baseline studies, planning, establishing implementation structures, implementation, monitoring and revision).

Integrated management plan: necessities and functions

An integrated management plan is a document that specifies the wetland management approach and goal to shift from the current situation towards a favorable condition in the future. It provides a framework for management decisions and action plans. The plan can be a mandatory guideline depending on the regulation it is based on or the implementing institutions. The management plan considers roles and responsibilities of stakeholders in wetland management, moreover, by planning at the basin (watershed) level it tries to find the right balance between conservation, development and wise use of the wetland and its sustainable management.

A management plan could / should have numerous functions, including the following:

- A reference document for the current situation
- A tool for analyzing the environmental, social and economic functions of the wetland
- Offering a long-term vision for the wetland
- A document to identify and prioritize goals for conserving the wetland
- Assisting wetland managers in decision-making
- Identifying mandatory roles for stakeholders in executive tasks

- A reference working and planning document for all activities and actions related to the wetland and its basin

Key features of participatory management planning process

The management planning is a totally collaborative process and all the stakeholders who affect or are affected by this management will cooperate in it from the very first steps. Participation of two groups of people in this process is essential. The first group is all stakeholders such as local people, tourists or other people who have any dependency on the wetland, and the second group is people who have authority in wetland management. Obviously people who participate on behalf of the local communities in the planning process, should discuss the views of the local community and consider their needs in setting goals and planning the priority actions. Participation of people in the planning process increases their sense of ownership towards the plan which leads to a greater success in implementation.

The planning process should gather all essential information such as values, threats and facilities for consideration by all participants. Even the first draft of the management plan should be made available to all stakeholders for open consultation. The broader the ranges of opinions that are gathered, the more holistic and accepted the management plan will be. According to the participatory planning process and the need to obtain stakeholder comments in the different steps of the process, an appropriate timeframe ranging between 12-18 months is usually required to develop the plan. During this period, at least four 1-2 day consultative

workshops with stakeholders should be held.

Considering some requirements and prerequisites in the early stages of developing the integrated management plan process, facilitates this process and helps to implement steps in time. After the initial consensus of stakeholders to cooperatively develop the plan, one of the main prerequisites for the planning process is the establishment of an ecosystem management secretariat in the province. A secretariat with a specified Terms of Reference (TOR) is very important to support the stakeholders in taking the steps to develop and implement the management plan. Also choosing a technical advisory group to help scientific research, work programs and collaborative activities can support the implementation of tasks foreseen for the secretariat. This group can be selected from non-governmental organizations, academic departments or related consulting engineer companies, after administrative formalities and based on the determined TOR.

Stakeholder analysis is another activity which should be carried out in the first step to better understand human societies, governmental and non-governmental stakeholders associated with the wetland and their impact and influence. This has a significant impact on determining the role of stakeholders and the development and implementation of the integrated management plans. Since the issue of participation of stakeholders in the wetland habitats management process has been emphasized, this would not be possible without a clear picture of wetland stakeholders.

Steps to development of integrated management plan for wetlands

The executive team in partnership with other stakeholders should develop the management plan through a seven-step process:

• Step 1: Inception step

This is one of the most important stages in the process in which the following issues are defined: the goal and purpose of the process; defining the wetland and ecosystem boundary to be covered by the plan; how to implement it; what is the timeframe; who will collaborate in the process. The main part of this planning takes place in the initial workshop and in partnership with the stakeholders. The main activities at this stage include gathering data and literature and assessing and analysis of information.

o Gathering data and literature

The planning process should be based on reliable information. Indeed data collection and analysis is fundamental for describing and choosing management objectives. The contents needed at this stage include ecological and cultural resources, social and economic condition, rules and regulations and aesthetic aspects of landscapes.

It is not necessary to put all this information in the plan but to summarize it, and include further details as an appendix, as necessary.

This process should benefit from local people's information, in particular traditional knowledge and practices. In some cases they can help to gather data, which will strengthen and insure their participation as

well. Lack of information should be pointed out, but information gaps should not postpone the planning process.

o Assessing and analysis of information

The goal of this stage is to identify and introduce wetland sensitivities. This analysis will show wetland values and the benefits to local people and to wider society. These values are important from two perspectives: first, wetland natural values which reveal wetland importance; and second, values and importance of the wetland for local people (eg economic and cultural values).

Since local people have an essential role in the planning process we have to use their information and consider their concerns. Most wetland assessments focus on the ecological characteristics of wetlands. However, the other social and economic aspects must not be neglected. A broader approach is required for better collaboration with local people.

• Step 2: Identifying limitations, threats and opportunities

In this stage all of the limitations/barriers and threats which exist for effective wetland management are identified as well as the values, functions and opportunities. According to the participatory planning process and the necessity of taking into account the interests and needs of various governmental and non-governmental sectors, identifying threats and values from the perspectives of different stakeholders is very important. Therefore, it is attempted to address these issues from the perspectives of different sectors in the inception workshop.

• Step 3: Developing the vision, goal and strategic objectives

o Vision

Vision is the ideal / desired situation for the future state of the wetland. In fact, the vision identifies the ideal situation which specifies management plan policies. It should be noted that the vision illustrates the route and direction of objectives in the management planning.

The significant point about the vision is that it should include key concerns of all stakeholders usually expressed in a short statement.

o Goal

The Goal of the management plan is something that if it could be achieved will increase the possibility of meeting the vision. In fact, the goal is formulated with the same viewpoint as the vision and is the basis of developing the management plan.

The goal will be between the strategic objectives and the vision and shows the route to achieve the goal. The main difference between the vision and goal is that the vision is more idealistic while the goal is more realistic and executable.

Reaching an agreed vision and goal at the first workshop, can be the first step towards establishing unity and integrated determination of stakeholders in conservation and management of the wetland.

o Strategic objectives

Strategic objectives usually express titles of special management activities which are defined in the framework of the goal and illustrate the

nature of executive activities. In other words, strategic objectives provide titles for priority actions which are classified based on key issues, facilities and opportunities. Using analytical and participatory methods such as the problem tree technique in the second workshop helps to analyze problems and develop strategic objectives.

Strategic objectives with regard to issues related to wetlands usually cover subjects like: water and soil resource management, empowering sustainable livelihoods, increasing public awareness, conservation of biodiversity etc.

• **Step 4: Determining priority actions**

After specifying strategic objectives, the required actions to meet the objectives should be defined. For instance, the priority actions which should be carried out to manage water resources in the basin or raise public awareness. The scale of these actions are broad and different choices may exist. Hence, by assessing executive potentials (easiness, quickness, cost, and adaptation with local condition) the best choice can be selected. Specifying the actions and responsible institutions and partners to implement the activities usually will be done in the second workshop with participation of all stakeholders. However, due to the extensive matters relating to this part, additional meetings to determine all of the priority actions and responsible institutions and partners may be required. The objectives and actions need to be as SMART³ as possible

3- SMART stands for Specific, Measurable, Achievable, Relevant/Realistic and Time-bound

to ease the implementation and monitoring.

• **Step 5: Determining implementation structures and developing the monitoring plan**

At this step the inter-sectoral structures for implementation of the management plan are defined. These may include the Local Committee, provincial and national support structures and the Secretariat for the plan. These structures are defined based on current condition with collaboration of all stakeholders. Budget suppliers and necessary equipment accessories for management will also be proposed in this chapter.

Furthermore, methods of management assessment and monitoring and frequency of revising the plan, will be specified in this section. Frequency and diversity of measurements, and the parameters which should be monitored will be defined at this step. The monitoring plan and protocols (based on a limited number of indicators that can be easily measured) include general scopes which are developed in line with strategic objectives including water quality and quantity, biodiversity and socio-economic issues.

• **Step 6: Zoning map and codes of practice**

In management plans which focus on natural and cultural resources, different land-uses like tourism, fishing, business, science and research, construction, and so on may be identified. Each of these uses are allowed in specific zones of the site which is illustrated in the zoning map. This kind of zoning will help implementation of plans and achieving man-

agement goals. Obviously, zoning maps and reaching an agreement on borders of each zone will be carried out during a workshop with the participation of all stakeholders.

• **Step 7: Conclusion and finalization of the management plan**

Developing the management plan means combining the results all of the previous stages into a single document which is a time-consuming task. In the first step, an initial draft will be developed. The technical advisory group plays an important role in preparing the draft document based on the workshop outcomes and finalization of the plan.

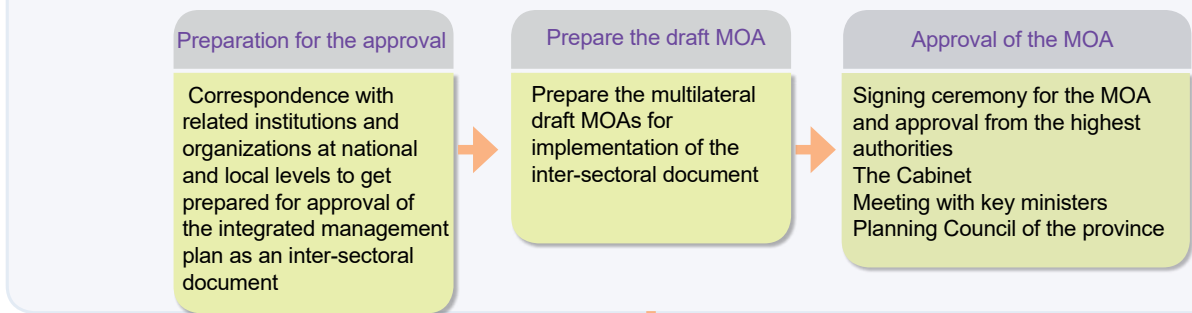
There is no standard or general rule for the document in terms of framework and format, but it should contain goals, management needs, requirements, and commitments of responsible organizations, facilities and available resources. Sharing the draft plan with stakeholders and getting their views at this stage is very important.

If the plan is published in the local language and made available to local people there will be more interest for acceptance and cooperation.

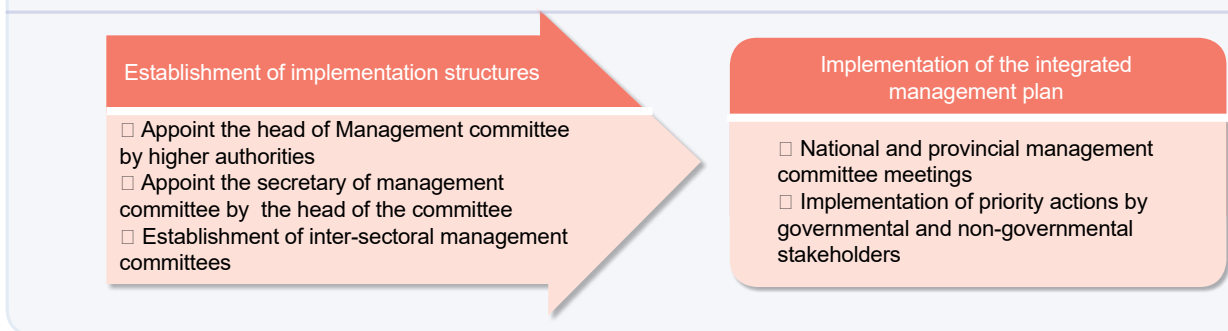
The following diagram illustrates the process of development, approval and implementation of wetland integrated management plan.



Approval and enforcement of the integrated management plan for wetlands



Establishment of implementation structures and starting implementation of the integrated management plan



Approval, implementation and review of the integrated management plan

A wetland management plan is an inter-sectoral program in which different groups of stakeholders have roles and responsibilities accordingly. Therefore to be implemented well, it will require strong support from the relevant authorities. Otherwise, unbalanced and uncoordinated actions and cooperation among relevant parties can impair the progress towards objectives. For the provision of such support, high provincial officials (the Province Governor) and the national authorities must endorse the plan and share it with relevant organizations for implementation.

In order to implement the integrated management plan, management structures and secretariats of wetlands ecosystem management are formed with the following key TOR:

- planning to run and monitor the implementation of the integrated management plans
- efficient management of primary resources and human activities in the basin
- coordination between different executive sectors
- strengthen inter-sectoral collaboration
- leading the implementation of the integrated management plan for wetlands
- assess the achievement of the envisaged objectives in the plan.

Another key point in the implementation of the integrated management plan is the need to establish sustainable financial mechanisms for implementation of the measures. These mechanisms should involve

each of the stakeholders with their expected responsibilities in the management plan, to provide financial resources and consider related measures in their annual projects and activities and submit progress reports to the management committee. This can be achieved through the operating budgets of responsible agencies, Governor planning council or submitting proposals to the national institutions and organizations.

After several years of development and implementation, for various reasons, including ecological changes in basin as well as successes and failures in implementation, it will be necessary to review the plan and define new targets and measures. Reviewing the program in the range of 3 to 5 years is essential according to short-term goals and modifying based on new conditions of basin as well as analyzing the results of the monitoring. Reviewing the integrated management plan is an opportunity to extract the strengths and weaknesses of the program.



