



The Regional Training Course on
SUSTAINABLE USE AND MANAGEMENT OF COASTAL WETLANDS
5 – 20 November 2007
Faculty of Environment and Resource Studies, Mahidol University, Thailand

TOPIC 13

Wise Use of Wetlands

Monday, 12 November 2007 : 08.30 – 12.00 hrs.

Sansanee Choowaew

**Faculty of Environment and Resource Studies
Mahidol University
Salaya, Nakhonpathom 73170, Thailand**

enscw@mahidol.ac.th

WISE USE OF WETLANDS

Sansanee Choowaew
Programme Director (Natural Resource Management)
Faculty of Environment and Resource Studies, Mahidol University
Salaya, Nakhonpathom 73170, Thailand
e-mail : enscw@mahidol.ac.th

INTRODUCTION

Article 3.1 of the Ramsar Convention states that the Contracting Parties “*shall formulate and implement their planning so as to promote the conservation of the wetlands included in the List, and as far as possible the wise use of wetlands in their territory*”. However, it is not always easy to give a complete and final answer on how to achieve “*wise use of wetlands*”.

DEFINITION OF “WISE USE OF WETLANDS”

The 3rd meeting of the Conference of the Contracting Parties (COP 3 : 27 May – 5 June 1987) in Regina, Canada, adopted the following definition of “wise use of wetlands” :

*“The **wise use** of wetlands is their **sustainable utilization** for the benefit of mankind in a way compatible with the maintenance of the **natural properties** of the ecosystem”.*

Sustainable utilization of a wetland is defined as “*human use of a wetland so that it may yield the greatest continuous benefit to present generations while maintaining its potential to meet the needs and aspirations of future generations*”.

Natural properties of the ecosystem are defined as “*those physical, biological, or chemical components, such as soil, water, plants, animals, and nutrients, and the interactions between them*”.

APPLYING THE WISE USE CONCEPT

The wise use concept applies to all wetlands and their support systems within the territory of a Contracting Party of the Ramsar Convention, **both Ramsar Sites and all other wetlands** even though they are not on the List of Wetlands of International Importance. The concept of wise use seeks both the long-term process of formulation and implementation of national wetland policies and immediate actions to stimulate wise use of specific wetlands. These activities are integral parts of sustainable development.

ESTABLISHMENT OF NATIONAL WETLAND POLICIES

(excerpted from Handbook 1 : Wise Use of Wetlands. Ramsar Handbooks for the Wise Use of Wetlands. Ramsar Convention Bureau, 2000.)

National wetland policies should as far as possible address all problems and activities related to wetlands within a national context. These may be grouped in different sections:

1. **Actions to improve institutional and organizational arrangements**, including :
 - (a) establishment of institutional arrangements which will allow those concerned to identify how wetland conservation can be achieved, and how wetland priorities can be fully integrated into the planning process; and
 - (b) establishment of mechanisms and procedures for incorporating an integrated multidisciplinary approach into planning and execution of projects concerning wetlands and their support systems, in order to secure wetland conservation and sustainable development.

2. **Actions to address legislation and government policies**, including :
 - (a) review of existing legislation and policies (including subsidies and incentives) which affect wetland conservation;
 - (b) application, where appropriate, of existing legislation and policies of importance for the conservation of wetlands;
 - (c) adoption, as required, of new legislation and policies; and
 - (d) use of development funds for projects which permit conservation and sustainable utilization of wetland resources.

3. **Actions to increase knowledge and awareness of wetlands and their values**, including :
 - (a) interchange of experience and information on wetland policy, conservation and wise use between countries preparing and/or implementing national wetland policies, or pursuing wetland conservation;
 - (b) increasing the awareness and understanding of decision-makers and the public of the full benefits and values, within the terms of wise use, of wetlands. Among these benefits and values, which can occur on or off the wetland itself, are : sediment and erosion control, flood control, maintenance of water quality and abatement of pollution, maintenance of surface and underground water supply, support for fisheries, grazing and agriculture, outdoor recreation and education for human society, provision of habitat for wildlife, and contribution to climate stability;
 - (c) review of traditional techniques of wise use, and elaboration of pilot projects which demonstrate wise use of representative wetland types; and
 - (d) training of appropriate staff in the disciplines which will assist in implementation of wetland conservation actions and policies.

4. **Actions to review the status of, and identify priorities for, all wetlands in a national context**, including :
 - (a) execution of a national inventory of wetlands including classification of the sites;
 - (b) identification and evaluation of the benefits and values of each site;

(c) definition of the conservation and management priorities for each site, in accordance with the needs and conditions of each Contracting Party.

5. Actions to address problems at particular wetland sites, including :

- (a) integration from the outset of environmental considerations in planning of projects which might affect the wetland (including full assessment of their environmental impact before approval, continuing evaluation during their execution, and full implementation of necessary environmental measures). The planning, assessment and evaluation should cover projects upstream of the wetland, those in the wetland itself, and other projects which may affect the wetland, and should pay particular attention to maintaining the benefits and values listed above;
- (b) regulated utilization of the natural elements of wetland systems such that they are not over-exploited;
- (c) establishment, implementation and, as necessary, periodic revision of management plans which involve local people and take account of their requirements;
- (d) designation for the Ramsar List of wetlands identified as being of international importance;
- (e) establishment of nature reserves at wetlands, whether or not they are included in the List; and
- (f) serious consideration of restoration of wetlands whose benefits and values have been diminished or degraded.

ADDITIONAL GUIDANCE

(excerpted from Handbook 1 : Wise Use of Wetlands. Ramsar Handbooks for the Wise Use of Wetlands. Ramsar Convention Bureau, 2000.)

1. Social and economic factors are the main reasons for wetland loss and therefore need to be of central concern in wise use programmes.
2. Special attention needs to be given to the local populations who will be the first to benefit from improved management of wetland sites. The values that indigenous people can bring to all aspects of wise use need special recognition.
3. Although one agency may be responsible for coordinating national action to conserve wetlands, other public and private institutions have expertise which is of importance for effective long-term wetland management. Wise use programmes should seek to involve and, where appropriate, work through these partners.
4. Specific site projects may often demonstrate the need for more general institutional requirements for the wise use of wetlands.
5. Where wetlands form an integral part of a wider coastal zone or catchment, wise use must also take into account the problems of the surrounding coastal zone or catchment.
6. While comprehensive understanding of the ecological constraints of a wetland system should be sought, activities affecting wetlands need to be governed by the “*precautionary principle*” when such knowledge is not available. In other words, if the impact of specific actions is not clearly understood, then these actions should be prohibited even if there is insufficient evidence to prove a direct link between the activities and resulting wetland degradation.

ACTIONS AT PARTICULAR WETLAND SITES

1. Ecological aspects

Wetland management should

- be an integrated process, taking into account time, space, long term sustainable goals, and the catchment approach.
- incorporate different uses and activities that are compatible with sustainability.
- incorporate an interdisciplinary approach (biology, economics, policy, social sciences, etc.).
- respond to global concerns, relating to shared species, shared water systems, and the issue of global change.

2. Human activities

- In order to achieve wise use of wetlands, it is necessary to attain a balance that ensures the maintenance of all wetland types through activities that can range from strict protection to active intervention including restoration.
- Wise use activities can be varied in nature, ranging from very little or no resource exploitation, to active resource exploitation as long as it is sustainable.
- Wetland management should be adapted to specific local circumstances, sensitive to local cultures, and respectful to traditional uses.

3. Integrated management planning

- Monitoring is an integral part of the planning process.
- Management plans should incorporate both traditional and modern technologies, reflect the overall carrying capacity of the system.
- Implementation of the plan should optimize the sustainable use of existing resources.

4. Technical issues

- Wise use is not a new concept. Humans have been building civilizations around wetlands for thousands of years, and have developed technologies of utilization. Many of these technologies are sustainable, and should therefore be identified, studied and promoted.
- In the cases where these technologies are not sustainable, they should be refined and adapted to optimize their sustainability.

SOME CONSIDERATIONS FOR WISE USES / UNWISE USES

- Although wetland protection has been made on a national level (e.g. declaration of protected areas, nature reserves or national parks) as well as an international level (e.g. designation of Ramsar Sites, Biosphere Reserves, World Heritages), the ecological entity and quality of the ecosystem needs to be improved in order to restore and maintain its natural potential, as required by the wise use concept.
- The concept of increasing natural values, may mean a decrease in actual uses. The extent to which such concept is implemented is determined by policy-makers or decision-makers.
- The wise use concept combines the conservation of the system's natural values and resources with its sustainable utilization. The concept of wise use demonstrates the need to develop measures for assessing the state of the

ecosystem, followed by the practical implementation of wise use principles. The development of the “*reference situation*” may prove to be a powerful instrument for the setting objectives, including the balance between conservation and sustainable utilization, as well as determining appropriate measures (Enemark, 1993).

- The *ecological references* (values assigned to parameters describing the reference situation) describe the potential natural values of a wetland. The ecosystem parameters must provide relevant information about an aspect of wetland ecosystem. The parameters should also be easy to measure and be based on sufficient information, should have political and social appeal, and be indicative of human influences on the wetland ecosystem. The complete set of parameters must provide sufficient information about the quality of the ecosystem, while at the same time must be limited in order to be applicable in practice. Basic conditions may include : concentrations of chemical substances should be equal to or close to the natural background values; the present hydrodynamic / geomorphological situation should be maintained; the present level of disturbance should be reduced. By comparing the actual situation with the reference situation, it can be assessed how far the actual situation is diverging from the reference (Enemark, 1993).
- Wetlands can be wisely used by protecting them against drainage and infilling and maintaining the regime of their feedwaters throughout the ecological unit formed by the watershed, catchment or river basin.
- Drainage, pollution, urban encroachment and introduction of alien species often damage wetlands, either individually or on a cumulative basis.
- Fishing, plants and non-timber forest products harvesting, wildlife hunting or gathering, water withdrawal, agriculture, integrated farming, forestry, aquaculture, transportation, and nature tourism, for examples, may be consistent with wise use within certain limits, but can damage wetlands *and become unwise uses* if they exceed the carrying capacity of the concerned wetland systems.
- Wise use is a complex task which takes time to yield lasting results. Wise use also requires actions at several levels, adjusted to national conditions. Ideally, wise use should be pursued through a comprehensive national programme addressing information, awareness, policy, planning, management and institution building. Wise use, whether at national or site specific level, will not be achieved by applying some ready-made package, but by measures which are freshly designed to meet the specific conditions of the country and site in question.
- Steinar Eldoy, Chairman of the Ramsar Convention Wise Use Working group, stated that wise use under one particular circumstance or in one particular wetland might not be wise use under other circumstances, and changes over time might change wise use to unwise use. Wise use is therefore as much a question of focusing on the way of thinking, planning, organizing, verifying and adjusting, as to focusing on actual use itself (Davis, 1993).

REFERENCES

- Davis, T.J. (ed.). 1993. *Towards the Wise Use of Wetlands*. Wise Use Project, Ramsar Convention Bureau, Gland, Switzerland.
- Enemark, J.A. 1993 . Wise Use of the Wadden Sea. ***In*** Davis, T.J. (ed.). 1993. *Towards the Wise Use of Wetlands*. pp. 25-34. Wise Use Project, Ramsar Convention Bureau, Gland, Switzerland.
- Ramsar Convention Bureau. 2000. *Ramsar Handbooks for the Wise Use of Wetlands. Handbook 1 : Wise Use of Wetlands*. Ramsar Convention Bureau, Gland, Switzerland.