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Technical session II

The missing link
People and wetlands, together or apart ?...

Re-linking people and nature

Throughout history, wetlands, and more generally, aquatic ecosystems, have been vital for humans. It is no accident that river valleys and their floodplains have been the focus of human civilizations for over 6000 years. Wetlands, in a broad sense, are among the most productive ecosystems on the planet and are, thus, an important element in people's everyday life. Wetlands are used for water supply, food resources - including fishing and hunting, irrigation, recreation, religion and beliefs, transportation and communications, energy production, etc., but they also provide natural ecosystem services that are of tremendous importance to people, such as water production, filtration and sanitation, storm prevention and flood mitigation, shoreline stabilization and erosion control, groundwater recharge and discharge or stabilization of local climate conditions, particularly rainfall and temperature.

Perception of wetlands is key to the relationship between people and wetlands. The perception of a wetland by an inhabitant of the 35th floor of an apartment building in New York and by a villager in the Sundarbarns of Bangladesh is very different. And so the world's political perception of wetlands is also shaped by these individual perceptions, from a potential for tourism and economic development to objects of nuisance to be drained or, in some cases, sources of mosquitoes, worms and other disease-bearing organisms…

Despite the different perceptions, wetlands play an equally vital role for the inhabitant of New York and the villager in Bangladesh: while the villagers will be perfectly aware of the services they can get from the wetlands surrounding their village if they are maintained and managed appropriately (although they might not see it exactly in those terms…), the New Yorker will probably not know that 90% of New York's drinking water comes from surface catchments in the Catskill/Delaware mountains, 150Km North of the city, making New York in the only US city with a population of more than 1 million which does not need to artificially filter its drinking water. A recent study indicates that New York City avoided spending US$3-8 billion on new water treatment plants by investing US$1.5 billion in protecting land and instituting protective measures around the Catskill area and other catchments.

Many wetlands also have an important socio-cultural value. Although this aspect is still relatively unexplored, it is known that wetlands have religious and historical values for many local communities. For example, in Australia, New Zealand and other Pacific islands, many wetlands have a cultural value to aboriginal people, being places where they conduct ceremonies and semi-traditional hunting and gathering. In other parts of the world, wetlands are used to conduct initiation rites and in Hong Kong, the Mai Poi marshes are the only place where visitors can still see traditional methods of shrimp cultivation. Certain studies have shown that more than 30% of

a total of 603 Ramsar sites examined had archaeological, historical, cultural, religious, mythical or artistic/creative significance.

Many of today's important wetlands are of great antiquity and may show clear signs of early human use, whilst even areas now dry may have been wetlands in remote times and may still preserve significant evidence of human past. Along the African Rift Valley, former lake shore wetlands have preserved early hominid sites such as those in the Olduvai Gorge (which may be two million years old or more). In the bed of the River Jordan, at Gesher Benot Ya'aquov in northern Israel, the extraordinary persistence of wetland conditions has led to the survival of evidence of human activity in the valley from 800.000 years ago. Animal bones, stone tools and a great diversity of plant remains indicate that people came to the valley's wetland vegetation for food and raw material.

Looking back, we can identify various ways in which people have been associated with wetlands. In the great raised bogs of northwestern Europe, for example, wooden trails dating from prehistoric to medieval times show that people persistently sought to travel into and across the bogs. In China, Dongting Lake was the birth place of Chinese literature, due to its huge size and beauty as well as to the fact that a legend says the lake swallows the water from the Yangtze River. However, Dongting Lake has been reduced, today, to 60% of its original size.

At times, people have regarded wetlands as suitable places to bury their dead, and archaeological excavation has recovered evidence of ceremony and ritual associated with the burials. Wetlands have also been seen as a link between earthly life and other worlds, a place where it is possible to come closer to gods and spirits, a place indeed where some of those other beings "lived". In Peter Jackson's recent cinematographic adaptation of Tolkien's Lord of the Rings, a reference is made to the Dead Marshes where Tolkien's characters have to resist the call of dead spirits. The marshes in the film are Te Anu swamp, located near Queenstown, in New Zealand - maybe they will become, soon, a Ramsar site.

More recently, wetlands have also played an important role in helping to understand ecological phenomena such as global warming. The same way wetlands have kept and protected cultural values from ancient civilisations, they have also kept a record of what was happening ecologically in their surroundings. By analysing the carbon indices stored in peatlands, for example, scientists can get valuable records and data concerning climate change.

Wetlands and the economy

A WWF study published in January 2004 indicates that using the Ramsar Convention's global wetland area estimate of 12.8 million Km^2, the annual global value of wetlands worldwide is US$70 billion. This study also shows that amenity and recreation, flood control, recreational fishing and water filtration are the most valued functions of wetlands. Like this one, several other studies demonstrate that wetlands are vital for local economies in developing countries, and are similarly important for developed countries and the global economy.

Wetlands are a challenging environment for the human species. They are often physically difficult environments to live and work in, and the diseases frequently associated with them, such as malaria or bilharzia, add another dimension of difficulty. But in exchange, wetlands offer their great wealth of water, a diversity of natural resources that provide food, fibre, medicines and

shelter, and usually a high level of productivity – a compelling combination for sustaining human populations.

Fishing is a primary activity in wetlands and is associated not only with effectively designed boats (generally, wetland boats have the common characteristic of shallow drafts and rounded sterns), but also with an immense range of capture tools – nets and traps predominantly, ranging from gill nets, seine nets and cast nets to permanently constructed traps in lakes, rivers and estuaries as well as smaller, movable traps. The design of the fishing tools, as well as the design of the boats reflects local water conditions and available materials as well as the characteristics of the species being exploited.

There is an important cultural heritage in the permanent structures that have been associated with wetlands, and several major cities, such as Bangkok, Venice, Amsterdam and part of Caracas have been built upon them. In these urban/wetland landscapes, canals blend in with temples, palaces and houses. In the case of Venice, its location is, in fact, partly responsible for the economic wealth and prosperity the city has known throughout history. Another example is Lake Victoria, shared by Uganda, Kenya and Tanzania, and being one of the most important means of transport and communication within and between these countries – and hence between eastern and western Africa, throughout millennia.

Exploitation of salt has led to the creation of ports, docks and warehouses that date from the Roman period or the middle Ages in many coastal marshes in the Mediterranean. Management of the water resource itself, as well as the need for efficient communication, has also created a broad range of water-related structures. Around the great rivers, such as the Nile, Tigris, Euphrates or the Hwang-Ho (the Yellow River), former civilizations created systems of dams, dykes and canals in order to use the water most efficiently, a practice observed in many other parts of the world as well, sometimes to the detriment of the wetland environment.

Dams have been the focus of attention in recent years following an intense period of dam building in the latter half of the 20th century. In the 30 years from 1950 to 1980, no fewer than 35,000 large dams were built around the world. The building of dams can have serious effects on the environment, on people and on local cultural heritage, but it also shows the usefulness of wetlands in producing energy. China is, again, probably the symbol of this with the world famous Three Gorges Dam being built.

One might think wetlands are more important for developing countries, or for people directly depending on their resources. In reality, a recent study from WWF and Ramsar indicates the Dutch Wadden Sea in the Netherlands is worth US$2.329.614.000 and includes economic benefits such as flood prevention, storage and recycling of organic matter, storage and recycling of nutrients, habitat and nursery, nature protection, aquaculture, recreation, food, raw materials for construction, spiritual/historical information, education and scientific information, etc.

Food is another example of how wetlands are crucial to people. Archaeological remains like elephant bones from the Torralba marshes in Spain offer dramatic evidence from the early Palaeolithic era that our remote ancestors were already hunting, fishing and gathering in wetlands. Fishes, water birds, water chestnuts, frogs, snakes and turtles are some of the wetland products exploited around the world for food. But the iconic example is certainly rice. The annual production of rice in the world is around 600 million tonnes, and developing countries account for 95% of this total (China and India together are responsible for more than half the global

output). Out of this production, only 4% is exported internationally, the rest being used for domestic needs. More than 1 billion people work directly or indirectly in the rice industry and rice cultivation is the main income for 100 million families in Asia and Africa, making rice the world's premier wetland crop.

The relationship between people and wetlands is so close that many wetlands would not exist without human intervention. In the oases of Southern Morocco, for example, these "desert wetlands" allow nomadic people to survive in the Sahara desert and non-nomadic people to cultivate some products for their survival. In fact, this agriculture can even become an important source of income in some areas, as with the cultivation of dates for example. Because the desert is highly mobile the oases need to be maintained. They would cease to exist without human intervention. In fact, many of them are currently disappearing because of the typical drift of rural populations to the Moroccan cities.

A global approach to these concerns

The Ramsar Convention uses a very broad definition of wetlands, ranging from swamps and peatlands to, virtually, any water body, from mountain lakes, ice and snow fields, inland deltas, fish ponds and even coral reefs. It also articulated or developed several powerful scientific bases such as the "wise use principle", an integrated approach including not only ecological factors but also human, social, economic or cultural aspects. In this way, the Ramsar Convention was designed to provide the perfect framework for aquatic ecosystem management.

The Ramsar Convention was the first international agreement to promote the idea that human societies are an inextricable part of nature, and that human use of ecosystems, on a sustainable basis, is entirely compatible with the conservation of biodiversity and natural resources. The wise use principle encourages integration of human factors into landscape management schemes, instead of simply and ineffectively attempting to protect the environment from human influences. This integrated approach is vital to ensuring that ecosystems can continue fully to deliver their vital role in supporting the maintenance of biological diversity and human wellbeing. In other words, the wise use principle indicates that no efficient conservation policy can be based on the separation of ecological aspects and human, social, institutional, economic and cultural factors. The principle thus is based on establishing or, as said at the start, re-linking people and nature.

At COP8, in 2002, the Contracting Parties to the Ramsar Convention agreed on general guiding principles for taking into account the cultural values of wetlands for the effective management of sites (Resolution VIII.19). Complementarily, the Scientific and Technical Review Panel started an analysis on the definition of cultural and socio-economical values from the point of view of the Ramsar Convention. An informal working group on Cultural Values has been established in the Mediterranean Region, under the patronage of the Ramsar's MedWet Initiative, and with the agreement and observatory role of the Ramsar Secretariat. This working group is now preparing a technical session on cultural values in wetlands for the upcoming COP9. The aim of the session is to demonstrate the importance of cultural values through sound examples from around the world. Given the origins of the working group, a big part will be illustrated by Mediterranean examples, but we are also looking for, from the Secretariat, other examples from other regions. One potential site, the Paroo River, has already been identified in Australia, and Uganda, in Africa, has been asked for proposals, we're still looking for the best example to

showcase from the Americas and Asia regions. In parallel to the technical session there will be an exhibition sponsored by the Spanish Government, on cultural values of wetlands.

In its efforts to conserve wetlands and alleviate threats to their natural functions and values, the Ramsar Convention is progressively incorporating cultural values as a significant part of wise wetland conservation and management planning, because we are coming to understand the necessity to conserve this irreplaceable cultural heritage as well. COP9 will be another step in this integration and we kindly invite you to participate in the technical session on cultural values to express your views and bring your experience on these issues and allow us to move forward in the protection of the cultural heritage of wetlands.

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