Oct-Dec 2008

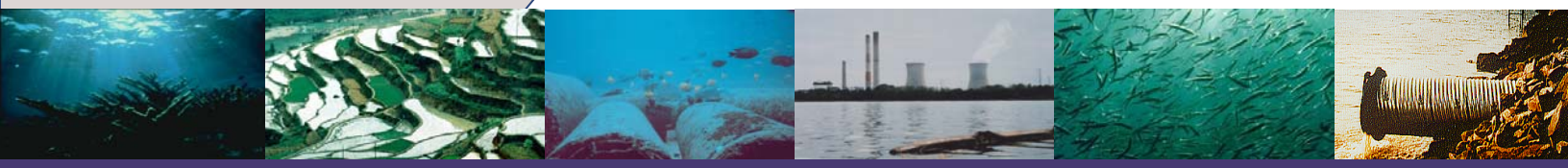
In this issue:

UNEP

STAKEHOLDER FORUM

GPA Outreach

Oceans and Coasts



GLOBAL PROGRAMME OF ACTION FOR THE PROTECTION OF THE MARINE ENVIRONMENT FROM LAND-BASED ACTIVITIES

GPA Outreach is a quarterly newsletter that helps raise awareness among a diversity of stakeholders of issues and activities relating to the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (GPA). The United Nations Environment Programme acts as the Secretariat for the GPA. Stakeholder Forum is responsible for producing GPA Outreach.

Integrated Coastal Area and River Basin Management: Progress and Next Steps

Jens Erik Lyngby, Senior Programme Advisor, UNEP-DHI Centre on Water and Environment

Ecosystems under pressure

Some of the world's most precious aquatic ecosystems such as estuaries, lagoons, mangroves, and coral reefs are located in coastal zones. But coastlines are under increased pressure resulting from human activities. Nowadays, over 60% of the world's population lives within 60 km from the coast. Within three decades, 75% of the world's population will reside in coastal zones. Consequently, unless careful environmental management and planning are instituted, severe conflicts over coastal space and resource utilisation are likely, while the degradation of natural resources will reduce development options.

Freshwater and Coastal Linkages

It is widely recognized that there are important linkages between the freshwater issues in the upstream river basins and the water issues in their adjoining coastal zones. Changes in stream flows caused by irrigation, hydropower and water supply have modified salinities in estuaries and lagoons. Landuse changes, in particular deforestation and intensive "green revolution agriculture" have increased the loads of sediment, nutrients and toxic pesticides. Discharges of household wastewater and toxic industrial chemicals have deteriorated the water quality and caused significant adverse

impact in coastal ecosystems, and on the living conditions of millions of poor people that depend on coastal fisheries. These adverse impacts are compounded by the effects of climate change, including altered precipitation and stream flow pattern, sea level rise and increased frequency of extreme weather events.

Linked management

Since the UNCED conference in Rio de Janeiro, the link between river basins and coastal areas has been increasingly highlighted in several fora. Two key management approaches have been developed for promoting sustainable development within the river-coast continuum: integrated water resources management (IWRM); and integrated coastal management (ICM). These concepts were developed independently from each other by separate management bodies and organizations. Often estuaries and coastal areas were not considered a part of the river basin. The IWRM paradigm encouraged a shift from single sector water planning to multi-objective planning and integrated consideration of land and water resources, that recognize the wider socioeconomic and development goals, and promote cross-sectoral coordination.

"In order to achieve sustainable utilization of freshwater resources without compromising the economic viability of the coastal areas, new approaches to water and river basin management are required."

In the coming millennium, demands on water resources will increase, as will the levels of pollutants. In order to achieve sustainable utilization of freshwater resources without compromising the economic viability of the coastal areas, new approaches to water and river basin management are required.

The last ten years have seen the advancement of the concept that coastal or river basin issues cannot be solved by ICM and river basin management (RBM) programmes, or IWRM working in isolation. The United Nations Environment Programme (UNEP) has for some years promoted the view that these two disciplines must work together and the management of the river basins must be linked to the management of the coastal and marine areas. Linked management is often the only realistic way to maintain or improve the socioeconomic viability of the coastal and marine areas.

In 2000, UNEP published the Integrated Coastal Area and River Basin Management (ICARM) Conceptual Framework and Planning Guidelines. At the World Summit on Sustainable Development in 2002, the UNEP/GPA and partner organizations launched the FreshCo partnership on linking the management approaches of ICM and IWRM. The FreshCo partnership led to the establishment of an ICARM Expert Working Group. Having supported a number of regional workshops on ICARM, UNEP/GPA, together with the UNEP-DHI Centre on Water and Environment, Denmark, assembled a considerable knowledge base on ICARM through case studies, pilot projects and guidelines. During 2003 and 2004 an ICARM Issue Paper and 12 ICARM Guiding Principles were developed. Additional outcomes from these joint activities include the development of progress markers for assessing development in linked management of river basins and coastal and marine ecosystems, which were published in: Ecosystem-based Management: Markers for Assessing Progress (UNEP/GPA, 2006). A case book including fifteen cases with different degrees of ICARM implementation has also been prepared. The selection of 15 case studies should highlight the benefits of linked coastal and RBM, and demonstrate why the resolution of linked issues is important. They identify factors contributing to success and the major challenges that must be resolved.

Mangroves in Cambodia (Photo courtesy of UNEP-DHI)

ICARM promotes a sectoral linkage at all levels of governance as a basis for a multi-disciplinary management of the larger catchment area, including the coastal and marine area. It must be stressed that ICARM should not be regarded as a new management regime but merely the inter-linking of the management approaches of coasts and river basins. ICARM simply attempts to promote the linkage between ICM and IWRM and the management of marine ecosystems as an essential step in carrying out ecosystem-based management.

Next steps

At the Fourth Global Conference on Oceans, Coasts, and Islands, which took place in Hanoi, Viet Nam, in April 2008, a freshwater-coast →

initiative was established and the following actions put forward:

1. That both IWRM and ICM communities take steps to overcome the present lack of coordination by taking actions at all levels to combine forces.
2. That awareness raising activities be carried out on the seriousness of the issue and need for integration, including the cost of inaction.
3. That particular attention be paid to non-point sources of pollution as responsible for most of the coastal/marine pollution, and that actions be taken by the agricultural community to contribute to the protection of our oceans.
4. That tools and good practices to be adopted in integrated river and coastal management be developed and tested through joint demonstration projects.
5. That the international community support capacity building efforts and projects in developing countries.

Following the conference, a meeting was held at the GEF headquarters in Washington DC, US, in June 2008, and a Working Group on Linking the management of Freshwater, Oceans and Coast was established with representatives from, among others, UNEP, UNDP, GEF, the Global Water Partnership, and the Global Forum on Oceans, Coasts and Islands. This Working Group will work for increased focus on the freshwater-coast linkages at high level conferences such as the Fifth World Water Forum in Turkey in 2009, and for visible action on the ground in application of ICARM.

Jens Erik Lyngby
Senior Programme Advisor
UNEP-DHI Centre on Water and Environment
More information:
http://www.ucc-water.org/
Contact: jel@dhi.dk

The case book on ICARM implementation and progress markers, as well as a broader collection of detailed information and analyses of the case studies can be downloaded from:
www.unepdhi.org/freshCo

From the Editor

Coastal zones are dynamic areas of natural change and of increasing human use. Although they occupy less than 15% of the Earth's land surface, they accommodate over 50% of the world population. With this proportion expected to rise to 75% by 2025, human activities originating from this small land area will lead to an increasing amount of environmental pressures. This threat is exacerbated by the fact that coastal zones host some of the world's most fragile and valuable natural habitats. Coasts also contain rich resources to produce goods and services, and are home to many commercial and industrial activities. The fishing, shipping and tourism industries often compete for vital coastal space. Coastal populations and industries require a host of natural resources to sustain them, one of the most important of which is a reliable source of freshwater. In this context, the link between freshwater and coastal waters has increasingly been recognized. As groundwater use has increased in coastal areas, so has the recognition that groundwater supplies are vulnerable to overuse and contamination, and that their misuse causes reductions in groundwater discharge to streams, wetlands, and coastal estuaries, and results in degradation of some drinking-water supplies and coastal waters.

This issue of the *GPA Outreach* focuses on coastal areas, and presents various views and experiences in coastal management that highlight the importance of adopting an integrated approach, as well as linkage between freshwater and the marine environment. First, Jens Erik Lyngby, Senior Programme Advisor, UNEP-DHI Centre on Water and Environment, outlines his Centre's efforts and next steps in the area of integrated coastal area and river basin management. Pasquale Steduto, UN-Water Chair, FAO, then provides an overview of UN-Water's work on the interface between fresh and seawater. Finally, Professor Chul-hwan Koh, Getbol Forum, and Richard Grimmet, Birdlife International, outline the conclusions from the International Symposium on East Asian Coastal Wetlands, which took place in Changwon, Republic of Korea, on 27 October 2008, and that highlight the importance of integrated coastal management.

Such ecosystem-based, integrated coastal management, dealing as it does with the vulnerability of coastal populations, needs to be seen as part of the response to the impacts of climate change. The international community needs to recognize this connection and direct resources and political momentum towards integrated marine and coastal management, so helping countries adapt to climate change. The Indonesian Government has taken an important initiative to this effect, and we draw readers' attention to the World Oceans Conference in Manado in May next year.

Alice Bisiaux
GPA Outreach Editor

UN-Water: Operating at the interface between Fresh and Seawater

Pasquale Steduto, Chair, UN-Water, Food and Agriculture Organization

UN-Water was established by the Chief Executive Board of the United Nations to serve as a mechanism to strengthen coordination and coherence among UN bodies dealing with water-related issues, from health to farming, environment to energy, food to climate, and sanitation to disasters. It was endorsed as the official United Nations mechanism to support the follow-up of the water-related decisions reached at the 2002 World Summit on Sustainable Development and the Millennium Development Goals (MDGs).

"UN-Water can play a role in supporting key actors involved in the implementation of the GPA"

UN-Water's scope encompasses all aspects of freshwater, including surface and groundwater resources and the interface between fresh and seawater. Given this scope, UN-Water can also play a role in supporting key actors involved in the implementation of the Global Programme of Action for the Protection of the Marine Environment from Land-Based Activities (GPA). In carrying out its mission, UN-Water will increasingly seek to strengthen the collaboration with other inter-agency mechanisms, including UN-Energy, UN-Oceans and the United Nations Environment Management Group on issues of common concern.
Below is an overview of the current and future work of UN-Water that is directly relevant to the GPA.

Water and Global Warming

One of the greatest issues of common concern is climate change. Climate change is expected to cause sea levels to rise and threaten coastal populations. In addition, as coastal cities expand, these populations will increasingly draw on local freshwater reserves to meet their agricultural, industrial, drinking water and sanitation needs. As a result, these cities may face both an increasing water scarcity, while at the same time struggling with the effects from a higher sea level. Finding solutions to such problems will progressively require that the international community develop collaborative mechanisms for sharing research results over disciplines, develop climate change scenarios focusing specifically on the effects in coastal areas and draw up integrated frameworks for action.

As a contribution to this process, UN-Water established in August 2008 a Task Force on Water and Climate Change. The Task Force, which is coordinated by the World Meteorological Organization and includes 18 UN and international organizations, provides an opportunity to address climate change and water linkages in their widest sense and respond to the challenges of climate change. Clearly, the interlinkages to coastal areas will be essential.

"UNEP estimates that in many developing countries over 80% of sewage entering coastal zones is raw and untreated."

Sanitation and coastal and marine ecosystems

Sanitation is another area of common concern for both the management of freshwater resources and the sustainable development of coastal and marine ecosystems. The United Nations Environment Programme estimates that in many developing countries, over 80% of sewage entering coastal zones is raw and untreated.

The International Year of Sanitation (IYS), which is being celebrated in 2008, has provided an opportunity to highlight the relationship between sanitation and the coastal environmental degradation. The UN-Water Task Force on Sanitation, which is coordinated by UNICEF, has played an important role in the preparations and development of the communication strategy for the Year. The IYS website provides information on the impact of wastewater

on coastal and marine ecosystems, as well as links to resources on sustainable wastewater management.

Building international cooperation

International cooperation is essential if progress is to be made in managing water resources so that they contribute to the MDGs and the implementation of the GPA. History has shown how international agreements on freshwater resources can have a direct impact on the health of marine ecosystems and the coastal zone environment. For example, an agreement among European countries to reduce by half the levels of nitrogen being discharged into the Rhine has cut by 37% the quantities of this chemical entering the North Sea.

"During 2009, fostering international cooperation on transboundary water management will continue to be a major area of activity for UN-Water"

Recently, the UN-Water Task Force on Transboundary Waters, which is coordinated by the United Nations Educational, Scientific and Cultural Organization and the United Nations Economic Commission for Europe, published a thematic paper titled "Transboundary Waters: Sharing Benefits, Sharing Responsibilities." Apart from UN-Water members, the Global Environment Facility, the Ramsar Convention on Wetlands and the Stockholm International Water Institute provided important inputs to the document, illustrating the necessity for broad partnership approaches.

During 2009, fostering international cooperation on transboundary water management will continue to be a major area of activity for UN-Water and the Task Force on Transboundary Waters. The World Water Forum to be held in Istanbul, Turkey, and the World Water Day 2009 both focus on international cooperation in managing water resources. In preparation for these events and for the World Water Week in Stockholm in August, the Task Force is drafting a mapping report of the activities being carried out by UN-Water members and partners in the area of transboundary waters. This is an essential first step for improving and promoting coordination in the field.

Opportunities abound

There is always a risk that certain areas of activity falling in the 'interface' of different specialized organizations will not be addressed in a coordinated manner. This is potentially the case for topics related to the interface between freshwater, coastal zones and marine ecosystems. However, as the above examples indicate, it is clear that a stronger collaboration among existing UN coordinating mechanisms, such as UN-Water and the GPA, are capable of addressing these 'borderline' issues. It is also clear that considerable opportunities exist for these mechanisms to expand their collaborative efforts in the future.

Pasquale Steduto
UN-Water Chair
UN Food and Agriculture Organization

More information: www.unwater.org
Contact: unwater@un.org

UN WATER

Conserving Intertidal Wetlands in the Yellow Sea Eco-Region

Professor Chul-hwan Koh, Getbol Forum, and Richard Grimmet Birdlife International

The International Symposium on East Asian Coastal Wetlands was held on 27 October 2008, in Changwon, Republic of Korea, as an Associated Event of the 10th Conference of Parties (COP 10) to the Ramsar Convention, which took place at the same venue from 28 October-4 November 2008. The Symposium was organized by the Getbol ('tidal flats') Forum, Republic of Korea, in collaboration with BirdLife International, the Common Wadden Sea Secretariat, the United Nations Development Programme/the Global Environment Facility Yellow Sea Large Marine Ecosystem Project, and the Tidal Flat Research Center of the National Fisheries Research and Development Institute. Wetlands International and WWF also provided considerable support through their presentations on coastal wetlands and the flyway. The Symposium was hosted by the Ministry of Land, Transport and Maritime Affairs, and the Province of Gyeongsangnam-do, Republic of Korea. Participants from East and South-east Asia, Australasia and Europe attended the event.
Below are some of the main conclusions from the Symposium, based on a consideration of scientific and wise-use principles:

Global Importance for Biodiversity Conservation

The intertidal wetlands and associated habitats of the Yellow Sea Ecoregion are of **global importance for biodiversity conservation,** with outstanding economic, cultural and landscape values.

Suncheon Bay Ramsar site, Republic of Korea, (Photo courtesy Suncheon-si)

Outstanding Socioeconomic Values

The Yellow Sea has **outstanding socioeconomic values.** Tens of thousands of artisanal fishers depend on the area, catching fish, and collecting shellfish and other marine resources (e.g. sea grass for housing). The region is **a vital spawning ground and nursery for fish and other commercially-exploited species.** These wetlands also provide other crucial but often ignored services for coastal populations, such as acting as a barrier to prevent erosion, flooding and salt-water intrusion. They also act as a carbon sink and hence are important in climate change regulation, and they are vital in absorbing nutrients and sediments that would otherwise end up in the open sea.

Diversity of Waterbirds indicates healthy wetlands

A good indication of **healthy wetlands is a high diversity of waterbirds** since different species feed on different parts of the food chain. **The Yellow Sea is a critical region for migratory shorebirds**, providing an irreplaceable stop-over and re-fuelling hub for birds on migration between their breeding grounds in Siberia and wintering grounds in South-east Asia and Australasia. These migratory shorebirds link countries and peoples along the flyway, and their conservation is a matter of international importance and concern.

Threats to the Yellow Sea are Numerous

The Yellow Sea is **facing a multitude of threats**, from pollution, siltation, and particularly past and ongoing large-scale conversion of tidal flats for agriculture and urban and industrial development. Socioeconomic and ornithological studies have demonstrated the **significant negative impacts of wetland conversion** in the Yellow Sea on local livelihoods and migratory shorebird populations.

Nature Reserves fall short of Targets

Although progress has been made in designating some critical intertidal areas as nature reserves, **this falls well short of the 10% target agreed upon** at the Convention on Biological Diversity and only a few areas have been designated as Ramsar Sites.

Importance of Integrated Coastal Zone Management

Conservation of the Yellow Sea intertidal wetlands and associated habitats should be **advanced at an ecosystem scale through integrated coastal zone management and international cooperation**. Conservation measures should include the designation of the highest priority sites as Marine Protected Areas, and/or their listing as Ramsar Sites in recognition of their outstanding international importance. The contribution of wetlands towards a healthy society should be acknowledged.

The Symposium thereby highlighted the importance of international cooperation and the application of integrated coastal management of coastal wetlands. Habitat destruction and land-based pollution were identified as some of the main causes of adverse environmental impacts not only within the wetlands, but in the adjacent coastal waters.

During Ramsar COP10, parties adopted a decision on promoting international cooperation for the conservation of waterbird flyways (Ramsar COP 10 Resolution 22), which notes the intense pressure on intertidal wetlands in the East Asia-Australasian flyway and the outcomes of the International Symposium on East Asian Coastal Wetlands. In addition, during the Conference, the Government of the Republic of Korea reaffirmed its commitment not to approve any further large-scale conversion of intertidal wetlands.

The Upo Wetland Ramsar site, Republic of Korea, (Photo courtesy Ha U Yeon)

More information:
http://www.ramsar.org/index_cop10_e.htm

Contact: chulhwankoh@gmail.com

EDITORIAL TEAM

Editor: Alice Bisiaux
Editorial Advisor: Hannah Stoddart
Strategic Advisor: Felix Dodds

CONTACTS

- GPA enquiries: Anjan Datta a.datta@unep.nl
- Further information about Stakeholder Forum: hstoddart@stakeholderforum.org
- Questions relating to this newsletter and to subscribe to GPA Outreach: abisiaux@stakeholderforum.org