

## SESSION OUTCOME

### Session 3.3.2 - Spreading the wealth: How to share the benefits of nature?

The Session Situation Report provides background and a detailed record of the issues discussed for specific topics. The goal of the Session Situation Report is to:

- 1) Provide an overall description of the topic and major issues discussed
- 2) List specific actions or interventions identified to improve the conditions within the sector

List the interventions in the order of importance, as identified by session participants

A number of discussion statements were presented and then recommendations were made based on these discussion statements. The first sub-session focused on “Balancing competing water needs across sectors”. Below is a summary of the discussions statements presented and then discussed in roundtables.

<p><b>Water for poverty reduction needs healthy rivers</b></p> <p>Ganesh Pangare, IUCN</p>	<p>Restoring flows to rivers is not aimed merely at improving nature for its own sake. The dialogue and negotiation process of determining water needs for the environment contributes towards allocating appropriate water for all users. Recognizing the services of river ecosystems, incorporating them into management plans, and investing in them accordingly are critical to achieving the Millennium Development Goals and alleviating poverty.</p>
<p><b>Sharing water across boundaries to sustain downstream ecosystems</b></p> <p>Engr (Ms) Reba Paul, Executive Secretary, Bangladesh Water Partnership</p>	<p>Land use and development policies in all basins including those that are transboundary, should strive to achieve a balance between sustaining vital ecosystem services and pursuing the short term goals of economic development. How can environmental flows in rivers be secured to maintain ecosystems and extract regional benefits of natural resources through cooperative development in transboundary rivers?</p>
<p><b>Managing freshwater and coastal areas to meet human and environmental needs</b></p> <p>Gonzalo Cid (NOAA) and Miriam Balgos (GFOCI), The Global Forum on Oceans, Coasts, and Islands--GFOCI-- (Working Group on Linking the Management of</p>	<p>Integrated actions to protect the balance between freshwater and coastal marine ecosystems and their uses are needed in order to maximize the benefits that can be derived from integrated water resources management (IWRM) and integrated coastal and ocean management (ICM) including improved ecosystem resilience, economic growth and efficiency, human health and security, and sustained natural adaptation to future effects of climate</p>

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<p>Freshwater, Oceans, and Coasts)</p>	<p>change.</p> <p>In order to effectively link IWRM and ICM across all levels and sectors, barriers to integrated implementation must be transcended, potential economic, social and environmental benefits of integration must be widely recognized, enabling environments must be developed, and appropriate management instruments and institutional framework have to be established.</p>
<p><b>Mechanisms for the re-allocation of water to the environment in river basins</b></p> <p>Brian Richter, The Nature Conservancy</p> <p>WWF, The Nature Conservancy and IUCN</p>	<p>The flow re-allocation mechanisms discussed in this session will be central to balancing competing water needs across sectors in the frequent case where water has been over-allocated. They will come into play when environmental needs are only recognized after most water has already been allocated, or when environmental and other societal water needs change substantially over time.</p>
<p><b>Impacts of pollution on water resources and ecosystem good and services</b></p> <p>Prof. Dr. Dr. Karl-Werner Schramm (Helmholtz Zentrum München) and Burak Karacik (İstanbul Technical University)</p>	<p>Impacts of pollution on water resources and ecosystem good and services could be reduced by providing monitoring programs and developing good co-operation between research, industry and other stakeholders</p>

The second sub-session focused on “Benefits of environmental flows beyond ecosystems”. Below is a summary of the discussions statements presented and then discussed in roundtables.

<p><b>Environmental flows and human well-being</b></p> <p>Presented by Anna Forslund, WWF and Birgitta Renöfält, Swedish Water House</p> <p>EFlowNet</p>	<p>The Global Environmental Flows Network (EFlowNet) asserts the critical need for estimating and maintaining environmental flows to ensure equitable distribution of water among multiple users and sectors including the environment, to promote long term sustainable development, and to address water provision as a core component of poverty alleviation.</p>
<p><b>Environmental flows for the sake of conservation-utilization balance...</b></p>	<p>Environmental functions constitute the very basis of economic activity. Thus, freshwater ecosystems should be</p>

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<p>Ceren Ayas WWF Turkey</p>	<p>conceptualized as one of the sectors in balancing the needs from agriculture, industry and domestic use, not only for the sake of the well-being of the ecosystem, but also the very basis of economic activities from an anthropocentric approach.</p>
<p><b>Civil society action to mitigate the impact of river sand mining on flows</b></p> <p>Dr.Champa M. Navaratne, Dept. of Agricultural Engineering, Faculty of Agriculture, University of Ruhuna, Mapalana, Kamburupitiya, Sri Lanka</p> <p>NetWwater</p>	<p>As unregulated, illicit river sand mining disturbs environmental flow that creates damages to human wellbeing, livelihood and agriculture that are adversely affect for the community in the long run, an urgent and sustainable solution will be needed to recover.</p>
<p><b>Water for ecosystems: Application of environmental flows for the restoration of ecosystems in the lower Senegal Delta.</b></p> <p>Amadou Matar DIOUF, Coordonnateur des programmes, UICN Sénégal</p>	<p>It is a mistake to assume the opportunity costs of altering the natural flow of a river to be zero. It is difficult to determine if local communities really benefited from the venture or were net losers. Restoring flows to ecosystems can make a difference not only to ecosystems but also to the populations in the affected areas. Ecosystem needs are often synchronised with the needs of poor people whose livelihoods are largely based on flood-dependent activities such as fishing, gathering wild products, livestock rearing, etc...</p>

### Key Themes and Topics Discussed

1. Balancing competing water needs across sectors
  - What are the competing and conflicting needs of different sectors from freshwater resources?
    - Think about way to allocate water which supports people and nature
    - What tools and initiatives do we have to help us do this?
    - Produced recommendations of actions that will support sustainable river basin management which shares the benefits of water resources
2. Benefits of environmental flows beyond ecosystems
  - What are the benefits of environmental flows for people?

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- Discuss benefits of maintaining flows for nature and how these can be shared
- What processes are in place to secure the benefits of environmental flows for ecosystems and livelihoods?
- Produce recommendations of actions that will support sustainable river basin management which share the benefits of water resources

For those discussions where the majority of the issues have been agreed upon, and the discussion is focused on identifying solutions, the following list provides a framework for classifying the solutions into four categories. Solutions may range from less concrete (recommendations) to more concrete (initiatives).

The following are the recommendations that came out of the roundtable discussions for each discussion statement.

### **Session 1: Balancing competing water needs across sectors**

#### **1. Water for poverty reduction needs healthy rivers**

- Water use allocation should reflect a balance of the needs of the river ecosystem and people.
- Water use allocation must be based on adequate water quantity, quality, timing, and ecological and public use data so as to make fair and environmentally sound decisions.
- Allocation of water must involve a participatory watershed/basin approach (at a suitable scale) where the ecological needs of the basin and people are determined; and to facilitate potential solutions for allocation including regulations, incentives, and ecosystem service markets.
- Comprehensive data collection on ecosystem characteristics and stakeholders is necessary for development of an integrated catchment management plan.
- For effective river basin management, it must be recognised that many poor people rely on the provision of ecosystem services for their daily needs including food and other natural resources.
- Implementation of river basin management plans must be undertaken with stakeholders using economic, ecological and social indicators.

#### **2. Sharing water across boundaries to sustain downstream ecosystems**

- Establish multinational negotiated agreements on equitable and fair distribution of water including ecosystems as an important water user (e.g. Rhine River Commission, Senegal River Basin Water Charter)
- Take a river basin approach to restoration that includes the mechanisms that maximise natural water production e.g. floodplains restoration, reforestation, and imposes a shared responsibility on parties to protect those areas within their own borders
- Sharing knowledge and promoting better understanding for integrated land and water use in the transboundary river basin among co-riparian countries
- Basin wide transboundary river water management following IWRM principles.
- Manage transboundary rivers as shared ecosystems according to carrying capacity (e.g. food security, etc.) and with an emphasis on instream values

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- Use a consistent framework to deal with all local specific problems, and enforcement of international laws is very important to maintain environment flows to provide water to ecosystems

### 3. Managing freshwater and coastal areas to meet human and environmental needs

- Need to educate and empower people in delta areas so they can become a focused political force to manage ridges to reefs to sustain environmental and economic activities
- Build water governance capacity to have institutional arrangements in place to manage water resources across all sectors (implement IWRM and ICM)
- Ensure existence and sharing of transparent data (and awareness raising), to understand the impacts of upstream developments on downstream communities including coastal areas
- A priority is to identify successful cases of linking upstream and downstream management processes and to replicate such practices in other areas and regions.
- Application of the IWRM approach needs to give consideration to the issues related to coastal zones and oceans, particularly in small island states.
- Governments/regions should identify the ecosystem services in their coastal zone (terrestrial and marine) and assess the impact of climate change on those ecosystem services

### 4. Mechanisms for the re-allocation of water to the environment in river basins

- River Basin Authorities in which all sectors are represented (which has real power)
- Include valuation, assessment of values, trade-offs, knowledge on links between water and lifestyles, etc.
- Clear legislation for environmental protection
- Through a participatory process, identify all potential water users, prioritize allocation of water among users, develop a cascade of priorities (ideally done during in non-crisis time), and formalize this cascade and allocation to law or some other formal means.

### 5. Impacts of pollution on water resources and ecosystem good and services

- Separation of rain water and wastewater from the water which is used in households
- Improving the carbon balance in the treatment system
- Pollution monitoring of the environment is really important for public awareness and reducing the source of the pollution.
- Political commitment and consensus
- Public awareness and coordination among civil society, NGO, community leaders , etc.
- Investments for software (monitoring, formal education. informal education) and hardware (infrastructure)

## Benefits of environmental flows beyond ecosystems

### 1. Environmental flows and human well-being

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- Collection and analysis of scientific data is needed across all sectors that are affected by the flow regime within a basin - fisheries, energy, agriculture, tourism - so that informed decisions can be made.
- Include environmental flow indicators within countries' work to alleviate poverty, eg. PRSPs. Indicators can include fish stock, agricultural products, human population, biodiversity, tourist numbers, sediment/nutrient data, etc.
- Make environmental flow assessment an integral part of water resource and river basin planning and water resources legislation.
- Environmental flow assessment is a tool for decision-makers to balance competing human needs by ensuring that the ecosystem continues to provide services that meet those human needs.

### **2. Environmental flows for the sake of conservation-utilization balance**

- Considering that water is limited and we can not satisfy all the needs of the relevant sectors for each basin, decisions on water use will have to be made. This should be done in a transparent and participatory process on basin and national level with scientific classification systems.
- Management plans of wetlands should be more efficiently and strictly implemented and monitored.
- We need effective environmental flow assessments and we need to determine the ecological production functions of environmental flows
- Financial mechanisms must be created which take environmental requirements into account

### **3. Civil society action to mitigate the impact of river sand mining on flows**

- Use IWRM to ensure sector coordination and proper impact assessment before issuing licenses to mine sand
- Better enforcement of legislation for illegal miners (fight corruption)
- Establish and empower river basin organizations

### **4. Water for ecosystems: Application of environmental flows for the restoration of ecosystems in the lower Senegal Delta**

- Diversify water resources management agencies with multidisciplinary teams
- Continuous monitoring of the river ecosystem health to apply adaptive flow regimes especially with a changing climate
- Apply awareness raising, stakeholders involvement and public participation
- Exchange experiences and best practices across basins, sectors and levels of government

## Proposals

Two resolutions came out of the sessions which were derived from the above recommendations.

1. Resolving conflicting needs for water resources demands political commitment as well as leadership that champions use of participatory dialogues to negotiate water allocations throughout a basin among sectors (including the environment), supported by enabling actions including: (i)



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building of water governance capacity, (ii) monitoring and sharing information and data, and (iii) assessment of values for water resources and trade-offs

2. Water for socio-economic development and poverty reduction needs healthy rivers (from mountains to deltas including coastal areas), requiring action to encourage application of environmental flows in development, including: (i) employing multidisciplinary teams within water resources management agencies; (ii) using environmental flow indicators within countries' work to alleviate poverty (eg PRSPs); (iii) developing financial mechanisms which take environmental requirements into account; and (iv) enforcement of legislation through building water governance capacity

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