



UN 2023 Water Conference Side Event

Counting Fish from Forests for Food Security: Multidisciplinary Watershed Management

23 March 2023, 09:00 EST, on-line

Organized by: Food and Agriculture Organization of the United Nations (FAO) Forestry and Fishery Divisions, Center for International Forestry Research (CIFOR)

Background on the event

Forests and fisheries are inextricably linked by the flow of water across watersheds, requiring a cross-sectoral management approach. These forests, fish, and freshwater deliver services that influence human well-being including poverty alleviation and food security globally. This side event describes the importance of collaboration across forestry and fisheries and of considering a watershed-based approach as a foundation for launching a new eLearning course, “Resilient Rivers: Counting Fish from Forests” on integrated watershed monitoring and management.

Key Issues discussed

- Rivers and associated ecosystems contribute considerably to the SDGs especially water security, food security, nutrition, livelihoods, and life on land. The links between forests, freshwater and fish are, in fact, essential for food and water security. We must work across sectors and disciplines to ensure these resources are managed sustainably and that benefits are distributed equitably.
- Inland or freshwater ecosystems are highly dynamic and productive environments. To understand the link between forests, freshwater and fish we must take into account the tight relationships between conditions across watersheds and the aquatic ecosystems within. What goes on in the terrestrial parts of a watershed is a key driver of what goes on across river networks and in associated lakes, reservoirs and wetlands.
- The relationship between the environment and fisheries is, in fact, even stronger than what the traditional paradigm indicates. Forests have, for example, positive effects on fish habitats and forest growth improves water and sediment runoff. Forest cover and fishery production are highly correlated in many areas.

- Together fish, water and forests provide ecological goods and services, ameliorate the impacts of hydrological variability and seasonal water shortages, and provide economic and social values.
- The e-learning is launched and available now. It is free and includes innovative tools such as the Sepal Resilient Rivers and Basins application, which allows users to quantify and monitor forest cover change over time and across watersheds.
- This dialogue needs to be continued, including advocating for a better understanding of interactions and consequences forest-freshwater-fisheries linkages. The momentum for collaboration across watersheds is building globally, and we need to harness that momentum for a sustainable future – including resilient rivers, biodiversity, food security, and opportunity.

Key recommendations for action (5 - 6 bullet points)

- Management of forests and inland fisheries requires a watershed-basin focus and systematic approach, including recognition of the catchment as the basic unit of management.
- Policies that take into account forest-freshwater-fisheries linkages need to be strengthened where they already exist and developed across new areas.
- Integrated management of forest-freshwater-fisheries is vital and can be a tool to promote food security. Sustainable management requires collaboration across all sectors using or having an impact on aquatic ecosystems. The value of partnerships cannot be over-estimated. It is important to continue raising awareness of the need for collaboration and identifying opportunities to collaborate across sectors.
- Effective watershed-based management requires broad participation of stakeholders and communities; establishing cross sectoral watershed councils is one approach to this.
- Multi-disciplinary watershed-based management also requires identification of the key institutions driving change and clear organizational roles and responsibilities
- Where there is limited water infrastructure, this needs to be addressed in the context of watershed-based management.
- The eLearning can be shared widely and used as a basis for project development, initiation of monitoring plans, development of watershed councils, creation of integrated university courses and more.

Resources

- The recording of the event is available on the FAO YouTube channel: <https://youtu.be/xM59g15Qb9k> and linked at the FAO corporate page for the UN 2023 Water Conference: <https://www.fao.org/events/detail/fao-at-the-un-2023-water-conference/>.
- The eLearning launched during the event is available here: <https://elearning.fao.org/course/view.php?id=944>.
- A map poster of the upper Kafue Watershed displaying an integrated watershed assessment linking forest cover change, fisheries data analysis, community knowledge, and expected change in climate and human population growth is published and available here: <https://www.fao.org/3/cc4795en/cc4795en.pdf>. It can be used on its own or in association with the eLearning.
- The new SEPAL application, introduced inside the eLearning, which calculates forest cover change over time and across sub-catchments for any watershed in the world, is described and accessible here: <https://docs.sepal.io/en/latest/modules/dwn/basin-river.html>