

# GOVERNING AND MANAGING KEY FLOWS IN A “SOURCE-TO-SEA” (S2S) CONTINUUM



## WHY THE NEED FOR SOURCE-TO-SEA THINKING?

The intensification of human activities to meet societal demands has led to a cascade of impacts on ecosystems that extend from land to coastal zones and to the open sea. In parallel, anthropogenic alterations and activities such as energy production, mineral extraction and food production are expanding offshore into the marine environment, where management regimes are typically weak or even non-existent. Current governance and management arrangements are often poorly suited to balance the diverse and potentially conflicting management objectives, stakeholder priorities, and institutional arrangements in different geographical segments of S2S systems. Instead, issues tend to be dealt with segment by segment, or sector by sector, aiming for outcomes that may or may not be optimal for the system as a whole.

## WHAT DEFINES A SOURCE-TO-SEA SYSTEM?

An S2S system includes the land area that is drained by a river system or systems, its lakes and tributaries (the river basin), connected aquifers and downstream recipients including deltas and estuaries, coastlines and near-shore waters, the adjoining sea and continental shelf as well as the open ocean. Water, sediment, pollutants, biota, materials, and ecosystem services key flows connect the sub-systems in the source-to-sea continuum and their geographies (Figure 1).

## WHAT IS A SOURCE-TO-SEA APPROACH?

An S2S approach consolidates analysis, planning, policy-making, and decision-making across sectors and scales. It considers the entire social, ecological, and economic system, from the land area that is drained by a river system to the coastal area and even the open ocean it flows into.

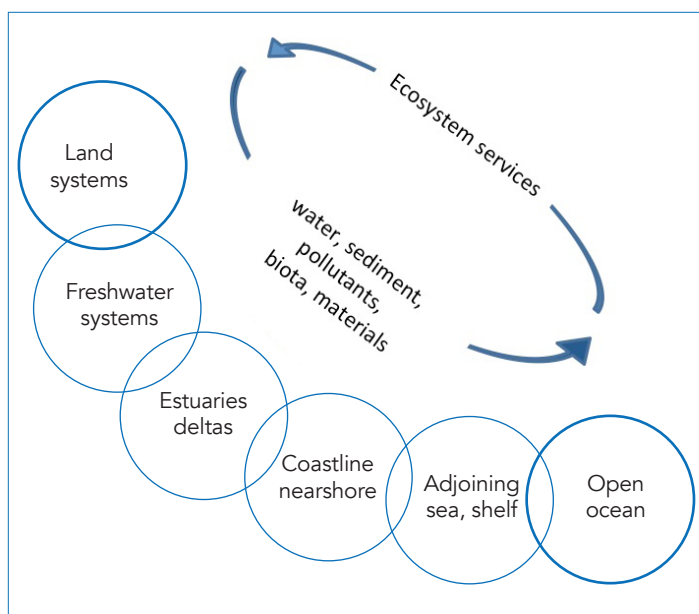


Figure 1: Key flows connecting geographies from source-to-sea: ecosystem services, water, sediment, pollutants, biota and material flows

## HOW CAN A SOURCE-TO-SEA APPROACH BE APPLIED?

The application of an S2S approach requires understanding the characteristics of the S2S system in question. For example, what are the priority issues in different geographical segments and in the system as a whole? What are the dynamics of the key flows that create negative impacts or benefits in the system? What are strengths and weaknesses of the existing governance and management system in terms of addressing system linkages looking at the past and into the future? What are the triggers to engage the key stakeholders in different geographical segments? Based on such an understanding, a theory of change can be designed to guide a desired course of action with positive outcomes throughout the whole system. The S2S conceptual framework offers a way to recognize system linkages and to support sustainable results in S2S systems and is an aid to develop operational methods and tools to put S2S governance into practice.

## WHY IS THIS RELEVANT TO THE GEF?

The Global Environment Facility (GEF) is unique in supporting investments in parts of the S2S continuum. A range of S2S issues are already being addressed in the GEF's extensive portfolio of programs and projects in its different focal areas and through multifocal projects. The successful experience of building multi-country initiatives and institutions through its International Waters (IW) portfolio today targeting river basins, aquifers, large marine ecosystems including S2S oriented projects such as ridge-to-reef and integrated coastal and river basin management puts GEF in a unique position to scale up S2S initiatives at the transboundary level.

## RECOMMENDATIONS TO THE GEF PARTNERSHIP

The policy recommendations of the Scientific and Technical Advisory Panel (STAP) are intended to provide guidance as to how GEF investments can be further scaled up to assist the efforts of countries to address S2S priorities and support the delivery of the 2030 Agenda for Sustainable Development. The recommendations have been prepared through a highly consultative process with GEF partners and other stakeholders.



## RECOMMENDATIONS TO SCALE UP FUTURE GEF INVESTMENTS:

1. Design strategies and courses of action based on a thorough understanding of the governance dimensions of a given S2S system.
2. Engage key stakeholders early on and throughout the planning and implementation processes.
3. Give systematic consideration to key S2S flows in the development of IW projects.
4. Capitalize on the existing thematic and spatial linkages between GEF focal areas in S2S systems to build stronger multifocal interventions.
5. Apply a robust, coherent theory of change for GEF interventions across the S2S segments from upstream to downstream areas.
6. Consider developing an integrated programmatic effort to better address S2S linkages across GEF'S portfolio.
7. Invest in knowledge generation and exchange to speed up learning and accelerate progress towards sustainable use of the S2S Commons across the wider GEF portfolio.

*This policy brief is based upon STAP Document GEF/STAP/C.50/Inf.05/Rev.01: "A Conceptual Framework for Governing and Managing Key Flows in a Source-to-Sea Continuum: Summary and Policy Recommendations for the GEF Partnership", prepared on behalf of GEF/STAP by Granit, J., Liss Lymer, B., Olsen, S., Tengberg, A. Nömmann, S.; and Clausen, T. Available at: <http://www.stapgef.org/publications>*

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The Scientific and Technical Advisory Panel (STAP) comprises seven expert advisors supported by a Secretariat, who are together responsible for connecting the Global Environment Facility to the most up to date, authoritative and globally representative science. <http://www.stapgef.org>

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