

Training - Geospatial Techniques for Water Diplomacy

1. Introduction

Globally most continents are covered by transboundary water basin (particularly river basins) comprising of different countries with differing development plans for the use and management of the water resources (Figure 1) of which the largest part of the continental Africa (the Sub-Saharan region) forms part of the main river basins of Africa. Yet there are complexities in managing and use of these transboundary water sources hence need for diplomacy, where the use of diplomatic instruments, negotiations and multi-track dialogues are required to prevent, mitigate, and resolve conflicts over shared, transboundary water resources. In order to navigate smoothly through these complexities with the diplomatic endeavours, there is need for spatially explicit evidence at various scales that provides the necessary information regarding the state of play of these transboundary water resources, hence application of the geospatial analytics tools.

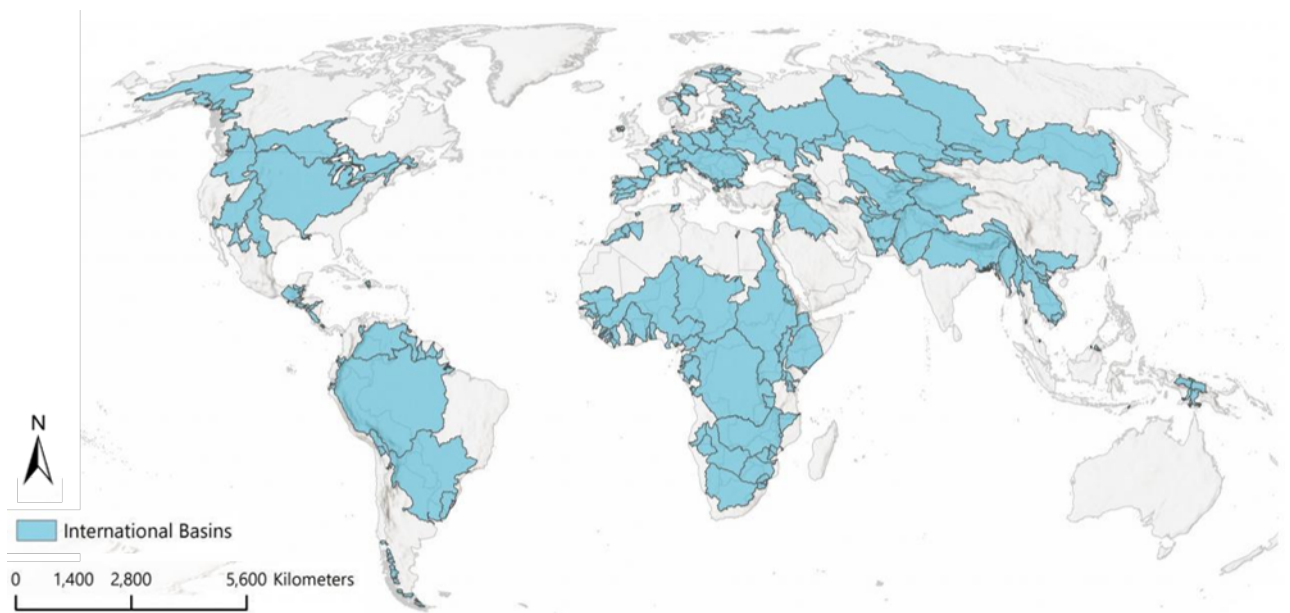
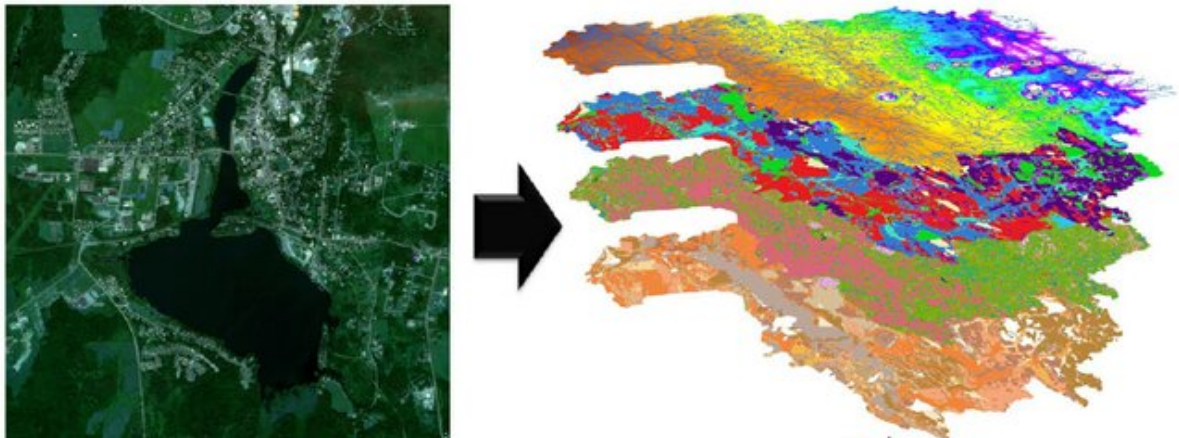


Figure 1: Global transboundary river basins (Source: *Transboundary Freshwater Dispute Database*, Oregon State University)

This course will provide the necessary skills and geospatial tools necessary for water diplomacy and negotiations leading to sustainable utilization and management of the transboundary water sources. The course consists of action-packed 5 modules, featuring lectures and practical sessions by numerous prominent and seasoned experts in legal and geospatial analytics, transboundary water sources and use, as well as water diplomacy. The training will increase the participants understanding of what geospatial analytics, transboundary water sources management and how these water resources can be used without conflicts, the legal and diplomacy issues in transboundary or trans community water resources use. The participants will learn more about conflict and cooperation over transboundary water sources, as well as international law and water diplomacy in shared water resources. The participants will be exposed to geospatial analytics and learn how to use these tools for obtaining the necessary spatial information needed for diplomatic negotiations. In the last modules, you will learn about negotiations and dispute resolution regarding transboundary water resources and uses.

2. Learning Objectives

- Build capacities of young professionals on the approaches and tools for water diplomacy, with a particular emphasis on transboundary aquifers, lakes, rivers among others.
- Provide a primer/requirement for more advanced courses on water conflict management, water cooperation and water diplomacy, allowing a measurable increase in capacities as well as spatial analysis of the challenges and conflicts.
- Contribute to the long-term knowledge-base for capacity building of individuals and organization on the integration of spatial analytic techniques as an evidence-based tool for Water resource quantification and conflict resolution in their use with spatial information.



3. Course load and duration

The course is comprised of 5 modules with a duration of 2-3 hours each. The course can be completed in a total of 15 hours (3 days).

4. About Water Diplomacy

Water diplomacy is the use of dialogue, negotiation, cooperation, and international relations to prevent and resolve disputes over water resources and promote the peaceful, equitable, and sustainable management of water.

It is especially important when water resources cross political boundaries, such as transboundary rivers, lakes, and aquifers or communities of differing socio-economic cultures such as farmers who rear livestock verses farmers who carry out cultivation of crops yet all of them rely on the water sources.

5. Why water diplomacy?

- Prevent water conflicts: Resolve disagreements before they develop into serious disputes.
- Promote equitable water sharing: Encourage countries and communities to share water resources fairly.
- Support cooperation: Establish agreements for joint management of shared water resources.
- Protect water security: Ensure adequate water for domestic use, agriculture, industry, ecosystems, and other needs.
- Manage upstream–downstream relationships: Address situations where activities upstream affect people and ecosystems downstream.

- Address climate change and variability: Coordinate responses to droughts, floods, changing rainfall, and increasing water demand.

6. Why Geospatial Analysis:

- Shared spatial understanding
- Independent monitoring
- Testing management scenarios
- Understanding upstream–downstream effects through hydrological modelling
- Cross-border information sharing through web GIS applications
- Field data collection using the GPS and other geospatial tools
- High resolution mapping using the developing technologies such as drones
- Stakeholder inclusion through available participatory GIS approaches
- Detection of spatial temporal trends and hot spots in the water resource
- Maintaining shared spatial datasets and corporation.



The key contribution of geospatial techniques to water diplomacy is therefore not simply producing maps. Their greater value is providing credible, spatially explicit and, where possible, independently verifiable evidence that can help countries move from competing claims toward joint fact-finding and cooperative water management.

7. Target Group:

This course suits professionals government agencies, agencies dealing with water, NGOs, Diplomats and the private sector working in Water and Natural Resources Management.