

GLOBAL INTERNET-BASED TRANSBOUNDARY WATERS INFORMATION SYSTEM: PROPOSED CONTENTS AND DEVELOPMENT

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1. Background and Objectives

Almost four billion persons on 30% of the world's populated area suffered globally in 1990 from few to severe water problems, according to recently published UNEP's "Global Environmental Outlook" report. Importantly, a significant amount of the currently available water resources is shared regionally and internationally. It is obvious that the successful implementation of an integrated approach towards the sustainable use of shared transboundary water systems requires a common attitude to exchanging and reporting information on the state of their environment.

The regional, and increasingly global, nature of transboundary issues calls for a stronger, while realistic and cost-efficient, harmonisation of existing information systems and reporting products, as well as improving their linkages and information accessibility. Decision-makers on national, regional and international levels, as well as research and academic community and the general public, would greatly benefit from an improved access to data and information on transboundary waters which would be:

- aggregated and easily understandable,
- scientifically credible,
- harmonised regionally and internationally,
- based on a variety of existing sources,
- accessible in a number of different formats.

To address some of these needs, the Stockholm International Water Institute and UNEP/GRID-Arendal have suggested the elaboration of the global Internet-based TRANSboundary Waters Information System (TRAWIS) as an electronic and institutional network, with two-fold objective:

- facilitate access to data and information related to the state of transboundary water systems world-wide, using the Internet as the primary dissemination tool, and
- establish a sustainable personal and institutional global network of the providers and users of information on the state of transboundary waters.

BALLERINA cooperative network (BALtic Sea Region On-Line Environmental Information Resources for INternet Access) is proposed as the primary model for TRAWIS.

2. Electronic System

As a distributed electronic system, TRAWIS should provide access to a variety of existing data and information on transboundary waters. The primary audience of TRAWIS will be decision-makers on national, regional and international levels, therefore the provided information will normally be of aggregated nature. It is however also expected that research and academic communities and NGOs will benefit from the increased accessibility of data

and consistency of presentation. TRAWIS should aim at becoming an internationally-recognised provider of:

- links to international, regional and national institutions maintaining data and information related to transboundary waters on the Internet (“switchboard”),
- core sets of key environmental indicators on a basin level in a uniform format (“information base”)
- references to on-line, as well as off-line and non-digital, data-sets and publications on transboundary waters (“catalogue”),
- standards and methodologies for the state-of-the-art compilation, analysis, presentation and dissemination of information on transboundary waters (“knowledge base”),
- Internet services for organisations which lack technical capacities for making their data on transboundary waters available (“Internet host”),
- communication tools, such as publication of a newsletter and support to thematic and regional discussion groups (“bulletin board”)

3. Institutional Framework

One of the main objectives of TRAWIS, and a necessary condition for its success as an international distributed system, is the establishment of a sustainable network of cooperating institutions. This is particularly important if TRAWIS is to become

- internationally recognised,
- updated and reliable,
- cost-efficient and economically feasible,
- acceptable for a wide range of users.

International and regional institutions and leading experts in the field of global and transboundary waters should be offered an opportunity to participate in the TRAWIS network. The list of institutions should include the secretariats and executive bodies of international and regional agreements, organisations involved in the assessment and management of water resources, research and academic institutions, NGOs. The involvement of key inter-governmental international organisations, such as UNCSD, UNDP, UNEP, UNESCO, UNICEF, WHO, WMO, World Bank, and regional organisations is of high importance, as this will help to avoid possible confusion and misunderstanding in relation to TRAWIS objectives and ambitions, as well as to highlight opportunities for joint activities in disseminating information on transboundary waters.

The central coordination of the system’s development and maintenance should be performed by the TRAWIS secretariat with staff and resources sufficient to maintain communication with TRAWIS partners and other (e.g. donor) institutions, arrange periodic meetings and workshops, operate the central Internet server, update and maintain links, core data-sets and the catalogue, issue a TRAWIS newsletter, and support discussion groups. Some of these tasks can at a later stage be delegated to, or shared with, other TRAWIS partners or external organisations be made a regional responsibility.

A Board of TRAWIS composed of the representatives of partner institutions should be established to guide the contents and development of the system. The Board can further establish additional advisory/experts bodies on a thematic and/or regional principle. Regular meetings of the TRAWIS network with broad participation should be held to allow for a comprehensive discussion on the status of the system and its prospects. These meetings can

as well be called up on a thematic or regional principle and collocated with major international events related to water management and protection.

It will be in the interest of the TRAWIS network to support and facilitate the process of building capacities of both producers and users of TRAWIS information. This can be achieved by attracting investments for improving the availability of technologies regionally (Internet connectivity, data processing, information presentation), training staff of partner institution in the relevant fields (cataloguing, analysis, presentation of data and information), and broadly distributing public and educational materials based on TRAWIS information.

The accomplishment of many of these activities will ultimately depend upon the ability of TRAWIS to define and pursue a successful long-term funding strategy. This will in its turn require the upon establishment of a continuous dialogue with donor institutions and the user community.

4. Implementation Approach

Based on inputs from the discussion of this paper and a draft prototype, a proposal for a feasibility study and a full prototype development should be formulated.

The feasibility study should consist of:

- specification of the system's objectives and contents,
- identification of major potential partners,
- identification of key indicators, data requirements and availability,
- specification of technology requirements for the system's implementation,
- formulation of the full implementation proposal.

The prototype system should be an operational Internet site containing main sections of the TRAWIS electronic system as described earlier, and several regional and basin-level case-studies.

The full implementation will include:

- the development of a fully operational and populated Internet-based information system,
- the consolidation of the institutional network,
- the establishment of a coordination mechanism (board and secretariat),
- the initiation of network-wide projects (in particular related to data and information production, presentation and capacity-building).

It is expected that upon the completion of the two-three year implementation phase TRAWIS will become a fully functional electronic and institutional network capable of maintaining and providing harmonised information and links related to transboundary waters, and raising funds in support of its continuous operation.