



An emerging Multi-level and Multi-function SPI for the implementation of the Water Framework Directive in Romania

The Brief in brief

This SPIRAL brief highlights the rationale and process of restructuring and developing the institutional arrangements for policy support in the field of water protection and management, into a multilevel and multifunction SPI supporting the implementation of the WFD at large river catchments across Romania (WFD-SPI/Ro).

Setting the scene

The water Framework Directive (WFD)

The quality of surface and ground waters and the health of inland and coastal water ecosystems are the results of long term integration of the cumulated stress of both human and natural pressures, acting in or across watersheds. Based on such scientific interpretation of the complex relationships across space and time, among human and natural systems, the adaptive and integrated water resources management at watershed scale or sustainable watershed management has been chosen as major strategic target for the Water Framework Directive (WFD)¹.

WFD in Romania

During the preparatory phase for EU accession (2000/2006), the Romanian authorities transposed the WFD and other related directives into national legislation². Thus by early 2007, the domestic legal framework required the implementation of basic WFD's standards and targets in the integrated water policies and management plans established for large watersheds. In the first phase the mandate to implement WFD measures has been allocated to former Water department / Ministry of Environment, Water and Forests and National Water Authority (NWA) in charge of water policy implementation on one hand, and two research institutes: the National Institute of Hydrology (NIH) and the National Institute for Environment (NIE), in charge of scientific and technical support and acting as policy driven SPI like components, on the other hand.

In order to cope with so diverse and urgent tasks, new water – SPI components have been formally established (e.g. scientific

and technical advisory council (STAC), River Basin Committees (RBC), Inter-ministerial Water Committee (IWC)) and specific collaborative works were launched among former WFD:SPI and other research organisations. In this context the research team in systems ecology and sustainability of the University of Bucharest (UB) worked closely with NWA and NIE, and had a strong representation in STAC.

However the former and emerging institutional arrangements showed some limitations related to:

i) understanding and implementing innovative concepts, approaches and tools such as biodiversity, ecosystem services, Good Ecological Status (GES) and Potential (GEP), ecological indicators, integrated or holistic approach, extended economic valuation by including critical ecosystem services; ii) the capacity to deliver reliable and relevant inter and transdisciplinary knowledge; iii) the capacity to involve a wide range of stakeholders, both from science and non-science sectors; iv) **weak connectivity and coordination among former and newly established SPI components**; v) the absence of well defined and effective processes to bridge between science and people on one hand, and between science and key policy bodies on the other hand.

By the end of 2009, the need for institutional consolidation and integration and for operational improvement of the existing SPI components has been perceived, by most of those involved in WFD implementation, as a major priority. The selection of “WFD implementation/Romania” as a test case in the SPIRAL project created an opportunity, for the UB team, to trigger collaborative work on: i) development of a comprehensive vision on the structure and functions of WFD–SPI/Ro; ii) building an integrated and dynamic WFD-SPI and iii) testing and improving the operational capacity.

The proposed WFD-SPI/Ro consists in two complementary sets of organisations: i) on the policy side: all relevant agencies / organisations in charge for integrated water, water-related and biodiversity policies development, coordination and implementation, and, ii) on the science side: a range of interconnected supply- and demand-driven or mixed organisations, networks and platforms.

The WFD-SPI/Ro has several major functions: i) multi and transdisciplinary knowledge generation and delivery to all levels of policy cycle; ii) developing and promoting the holistic vision and operational tools for integrated water policies and adaptive management in and across watersheds; iii) identification and use of the reliable and relevant data sets for assessing the environmental flows and ecological status of the inland and coastal water ecosystems and; iv) capacity building and fostering broad participation of the science and non-science actors in the policy development and decision making.

Approach taken in SPIRAL to study the test case

The UB team involved in the SPIRAL project has initiated and guided the collaborative work carried out during the Test Case analysis with representatives of policy making organisations from central (6), regional (8) and local level (15); scientists from universities, research institutes and natural museums (>20), and other stakeholder groups (>20), in particular fishermen, farmers, householders, NGOs, conservationists or those from

¹ WFD60/2000/EC: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2000:327:0001:072:EN:PDF>

² Law n° 310/2004 and Law n° 112/2006

inland water navigation and hydropower generation sectors. The consolidated SPI conceptual framework³, and the set of criteria for SPI analysis⁴ as well as set of recommendations concerning communication⁵ have been or will be extensively used.

Key lessons learned from the Test Case

The test case analysis revealed several significant achievements and needs for more improvement. A series of aspects concerning the WFD-SPI/RO conceptual framework (vision), structure and functions are particularly striking.

- The first aspect highlights the **improved vision which framed the structural and functional integration and consolidation of the water and biodiversity SPI components**. In that regard a couple of critical elements received special consideration: i) the appropriate space and time dimensions for identification and understanding the complex and dynamic interactions within and between social and natural systems; ii) stakeholders mapping and their involvement in transdisciplinary integration of scientific and traditional knowledge, and in policy and decision making; iii) co-existence of dynamic and competing water, biodiversity and water related policy objectives inside and across watersheds; iv) multi-level organisation of the policy cycle and the importance of a consistent hierarchy of decisions; v) multi-level, spatial distributed and dynamic institutional arrangements and; vi) dependence of successful operation on a combination of diverse tools - indicators, methods, models and scenarios – for GES/GEP assessment, systems modelling and multi-criteria analysis.

- The second striking aspect of the current WFD-SPI/RO is the **multi-level architecture and involvement of various scientific disciplines as well as non scientific expertise, with major policy levels and nodes of decision cycle**. Such architecture proved to better facilitate: balancing membership and power relations; multi-disciplinary and transdisciplinary integration of relevant scientific and traditional knowledge and expertise; and flexible combinations among science and policy driven functions.

The WFD-SPI/RO showed also, a significant potential to interact with the emerging SPIs focused on biodiversity conservation and sustainable development.

- The third striking aspect concerns which and to what extend some of the key features of effective SPIs as identified by SPIRAL⁶ were present in the "Test case". *Horizon scanning*: some bad experience gained during first phase of WFD implementation revealed the need for long term planning of both integrated water policies and retrospective and prospective inter and transdisciplinary research.

Continuity and adaptability: composition and multi-level structure of the WFD-SPI/RO enables continuous and iterative policy support, maintenance of high networking potential and dynamic membership which assure adaptation to the changing policy and economic context.

Conflict management: Open scientific and policy debates among: science experts of the STAC; policy experts of the IWC; and diverse stakeholders (RBC) are the main mechanism used to manage cross sectoral conflicts or to buffer power relations

Capacity building: By 2007 most of the policy makers and scientists who were involved in WFD implementation shared

sectoral and short term vision, reductionist approach and conventional tools. Main reasons for that situation reside in the low potential or motivation of most academic organisations to adapt their interdisciplinary curricula in accordance with the WFD needs; preservation of discipline based experts of former organisations in charge of water management and; emigration of most skilled experts. It has been noticed also that many sources of required data and information were owned by a large variety of experts and research organisations, and usually in different formats and difficult to access. **Thus building and improving specific capacity for WFD implementation at and across watersheds, has been viewed as a long term objective**. In that regard, two initiatives were launched: i) designing and development of a cyber-infrastructure and information system which is aimed for integration and flow of the reliable data and knowledge in the policy cycle, and; ii) development and implementation of transdisciplinary curricula (in particular master and PhD) and short training courses aiming at education and training a new generation of policy and decision makers, and scientists better skilled to understand complexity and to address water and related policies issues at large space and time scales.

A recent one-day workshop was organised in Romania to present, discuss and validate the test case results. Twenty key representatives from the policy and science components of the WFD-SPI/RO attended the workshop and endorsed the striking aspects mentioned above. Although participants recognised that the test case created opportunities for improving the SPI components and helped to clarify concepts and build the operational framework, they acknowledged that much is still to be done to strengthen connectivity among SPI components and increase of its functioning capacity and efficiency. In that regard it has been proposed that in the next couple of months similar workshops will be organized at the watershed level.

Looking for more information on science-policy interfaces?

For more SPIRAL results, including separate briefs focussing on results from other test cases, see companion SPIRAL briefs at <http://www.spiral-project.eu/content/documents>

This brief is a result of research and interactions within and around the SPIRAL project. This brief was written by: Angheluta Vadineanu, Magdalena Bucur and Nicoleta Geamana / University of Bucharest.

The **SPIRAL** project studies Science-Policy Interfaces between biodiversity research and policy to improve the conservation and sustainable use of biodiversity. SPIRAL is an interdisciplinary research project funded under the European Community's Seventh Framework Programme (FP7/2007-2013), contract number: 244035.

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³ http://www.spiral-project.eu/sites/default/files/SPIRAL_I-1_all.pdf

⁴ See companion SPIRAL brief "SPI under the spotlight"

⁵ See companion SPIRAL brief "Recommendations for improving science-policy communication".

⁶ See companion SPIRAL brief "Key features of effective SPIs"