

Identifying Goals: Integrative environmental policy objectives

WHAT ARE INTEGRATIVE ENVIRONMENTAL POLICY OBJECTIVES, AND WHY ARE THEY IMPORTANT FOR A LOCAL POLICY MAKER?

Clearly defined local targets for biodiversity protection are important to motivate effective action. They also enable policymakers and stakeholders to evaluate the effectiveness of potential management measures, monitor progress, and adapt as needed.

The European Commission sets numerous environmental goals, which Member States transpose into national law to be met locally. Key to the protection of aquatic biodiversity are the targets of the EU Biodiversity Strategy to 2020. However, the strategy does not provide clear environmental objectives for the purposes of managing aquatic ecosystems at different scales. At local level, objectives need to be defined to respond to a well-defined environmental challenge, which also depends on those responsible for implementation.

For the successful achievement of its targets and actions for aquatic ecosystems, the EU Biodiversity Strategy to 2020 relies on other EU environmental directives, including the Water Framework Directive, the Marine Strategy Framework Directive, as well as the Birds and Habitats Directives. EU environmental policy objectives are often formulated in terms of conservation, preservation, protection, enhancement of biodiversity, habitats, water bodies, etc. While primary environmental policy objectives mostly address the ecological system, ecosystem-based management ([see Introducing Ecosystem-based Management \(EBM\)](#)) goes beyond this approach, by also focusing on society and how it interacts with the ecosystem. This brief covers how to integrate multiple environmental objectives to identify and set local-level, measurable targets for policy action to protect aquatic biodiversity.

Integrative environmental objectives are more effective at protecting biodiversity. By simultaneously meeting other environmental and societal goals, they also avoid duplication and can help in the identification of appropriate responses. To complement these policy objectives, it is important to elicit stakeholders' goals ([see Mobilising stakeholders for supporting EBM](#)).

HOW CAN INTEGRATIVE ENVIRONMENTAL POLICY OBJECTIVES BE DEVELOPED?

1 Step 1: Understand the relevance of EU environmental policy objectives for the local scale
 To support the achievement of the EU Biodiversity Strategy targets, it is necessary to consider the implementation and achievement of other environmental directives and their respective targets. The first step is familiarising yourself with the targets and objectives of the EU environmental directives relevant to the protection of aquatic ecosystems:

TIP! Relevant for the management of aquatic ecosystems are the targets of the Habitats and Birds Directive – e.g. achieving favourable conservation status, status of bird populations, Water Framework Directive – e.g. Good Ecological Status and Marine Strategy Framework Directive – Good environmental status for marine waters. But beware of the many accompanying policies that help with implementation and that may also include environmental targets.

Example: To manage invasive species in Lough Erne, (see Case Study: Lough Erne, Ireland), many competing management objectives from a range of European directives and policies as well as sectoral activities are relevant. In terms of environmental objectives, the Upper Lough Erne is designated a Special Area of Conservation under the Habitats Directive, and as such must achieve favourable conservation status. Under the Water Framework Directive, the lakes are designated as heavily modified water bodies due to the physical alteration caused by the hydroelectric dam. Under the directive, the lakes must reach good ecological potential, but currently achieve moderate ecological potential due to eutrophication.



Figure: Policies relevant for the management and impacts of Invasive Alien Species in the Lough Erne

2 Step 2: Understand local environmental and societal conditions to set local targets

Specific conservation and biodiversity policy objectives at local level that are consistent with EU objectives need to take into account local ecosystem and societal conditions, i.e. how the ecosystem functions to deliver benefits to society, and how society affects the ecosystem (i.e., ecosystem services used by socio-economic systems). This requires knowledge and understanding of the main human activities placing pressures on the local ecosystem, and the drivers of those activities, which are often human demand for nature's goods and services.

TIP! The AQUACROSS Linkage Framework can be a useful tool to understand the system (see [Linkage Framework](#)).

TIP! You can find many open data and information in the national reporting related to the progress reports of EU directives. Member State assessments and reports for the different Directives can help guide the identification of relevant descriptors and are the best sources of information within a region or area in terms of drivers, pressures and status indicators (see [Developing relevant indicators](#)). This not only connects the local level to the national level, but also provides an opportunity to integrate higher-level national objectives into local-level environmental decision-making processes

3 Step 3: Integrating environmental objectives

Once objectives for the analysis have been identified based on the identification of local needs, there is still a further step needed across aquatic ecosystems, which is to reconcile and integrate the objectives of different Directives. This is particularly relevant for the management of those aquatic ecosystems that fall under the influence of several Directives at the same time (e.g., coastal areas). Relevant EU Directives are not easily integrated as they include different terminology for the characterisation of drivers and pressures, promote different indicators to measure status, etc. See AQUACROSS reports [D4.1](#) and [D5.1](#).

TIP! AQUACROSS promotes a framework for the integrative assessment of aquatic ecosystems, which includes integrative typologies across EU Directives. The application of the framework will assist the analyst to consider aquatic ecosystems as a whole and reconcile objectives across separate targets. Thus, facilitating the selection of those relevant indicators across Directives that are important for the achievement of integrative objectives in the local area.

Example: The Vouga coastal watershed comprises the freshwater to marine continuum of the Vouga river coastal watershed under classification of Natura 2000 network, i.e., the Ria de Aveiro Natura 2000 site (see [Case Study: Ria de Aveiro, Portugal](#)). For the identification of integrative environmental policy objectives in this local case study, relevant policies were first individually identified and characterised according to their relevant drivers, pressures and state available information. This information was then brought together in the development of the AQUACROSS linkage framework to characterise the entire study area. This helped to reconcile different policy objectives into measurable indicators relevant for the management of ecosystem services in the watershed.

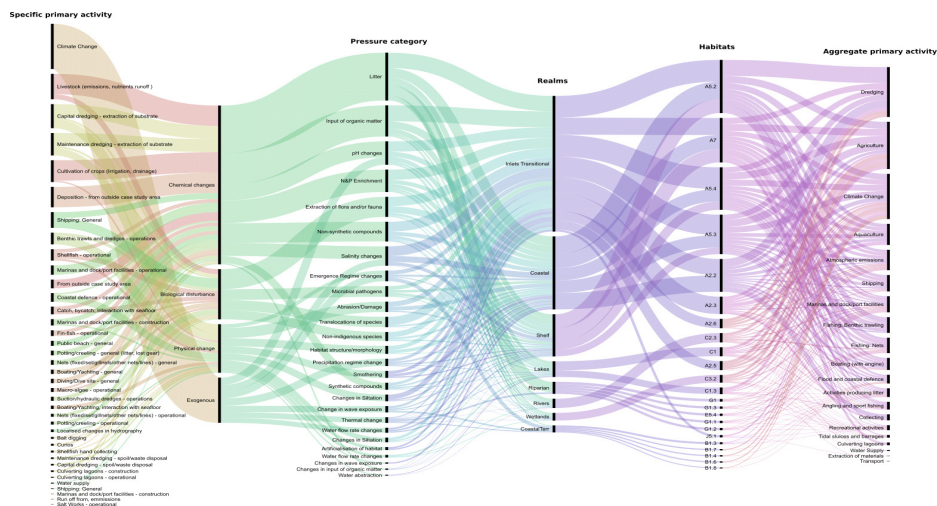


Figure: Linking drivers and pressures in the Vouga river coastal watershed

4 Step 4: Describing objectives

Local administrators and stakeholders can jointly develop tailored objectives to address the local-level problem previously identified. Then, to make these operational, those descriptors and indicators that are relevant for the case study area can be selected. These allow the objectives to be defined in measurable and monitorable terms.

TIP! Reviewing the respective national transposition of the main Directives may be one useful step to get informed about how EU objectives have been detailed at a national and local level. The step consists of specifying the general objective of the Directive by describing the characteristics used to describe targets. For instance, the MSFD describes the ecological status of a marine ecosystem by using 11 descriptors. The WFD describes the ecological status of a water body by referring to a wide array of descriptors grouped into three categories (biological, chemical and hydro-morphological status) and each one of these descriptors can be characterised by a set of indicators that can eventually be measured qualitatively or quantitatively so as to allow for the comparison of the ecological status and the characterisation of the baseline.

Example: In the North Sea ([see Case Study: North Sea](#)), a risk-based approach to identify the main human activities and their pressures that compromise biodiversity was undertaken. The basis of the approach was the AQUACROSS Linkage Framework ([see Linkage Framework](#)), which follows the Driver–Pressure–State–Impact–Response (DPSIR) framework consisting of single so-called impact chains of causal links. Based on the assessment, the case study was also able to identify relevant objectives. The analysis showed trawl fisheries to be among the main activities causing risk while wind energy is still mid-range in terms of its contribution to risk, but may be moving up as it further expands.

Further information

This is one of 38 short briefs summarising the key results of the AQUACROSS Project. For more detailed information on the topics covered in this brief, see the following:

- Rouillard et al. (2016) Synergies and Differences between Biodiversity, Nature, Water and Marine Environment EU Policies. Deliverable 2.1, European Union's Horizon 2020 Framework Programme for Research and Innovation grant agreement No. 642317. ([Deliverable](#) and [Executive Summary](#))
- Rouillard, J., Lago, M., Abhold, K. et al. (2017) Protecting aquatic biodiversity in Europe: How much do EU environmental policies support ecosystem-based management? *Ambio*. DOI: [10.1007/s13280-017-0928-4](https://doi.org/10.1007/s13280-017-0928-4)
- Rouillard, J., Lago, M., Abhold, K. et al. (2018) Protecting and Restoring Biodiversity across the Freshwater, Coastal and Marine Realms: Is the existing EU policy framework fit for purpose? *Environmental Policy and Governance* 28: 114-128. DOI: [10.1002/eet.1793](https://doi.org/10.1002/eet.1793)
- Gomez et al. (2016) Developing the AQUACROSS Assessment Framework. Deliverable 3.2, European Union's Horizon 2020 Framework Programme for Research and Innovation grant agreement No. 642317. ([Deliverable](#) and [Executive Summary](#))
- Pletterbauer et al. (2016) Drivers of change and pressures on aquatic ecosystems. Deliverable 4.1, European Union's Horizon 2020 Framework Programme for Research and Innovation grant agreement No. 642317. ([Deliverable](#) and [Executive Summary](#))
- Costea et al. (2018) Assessment of drivers and pressures in the case studies. Deliverable 4.2, European Union's Horizon 2020 Framework Programme for Research and Innovation grant agreement No. 642317. ([Deliverable](#) and [Executive Summary](#))
- Nogueira et al. (2016) Guidance on methods and tools for the assessment of causal flow indicators between biodiversity, ecosystem functions and ecosystem services in the aquatic environment. Deliverable 5.1, European Union's Horizon 2020 Framework Programme for Research and Innovation grant agreement No. 642317. ([Deliverable](#) and [Executive Summary](#))
- Teixeira et al. (2018) Assessment of causalities, highlighting results from the application of meta-ecosystem analysis in the case studies. Deliverable 5.2, European Union's Horizon 2020 Framework Programme for Research and Innovation grant agreement No. 642317. ([Deliverable](#) and [Executive Summary](#))

