

Risk Assessment in Drina River Basin

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Risk Assessment (1)

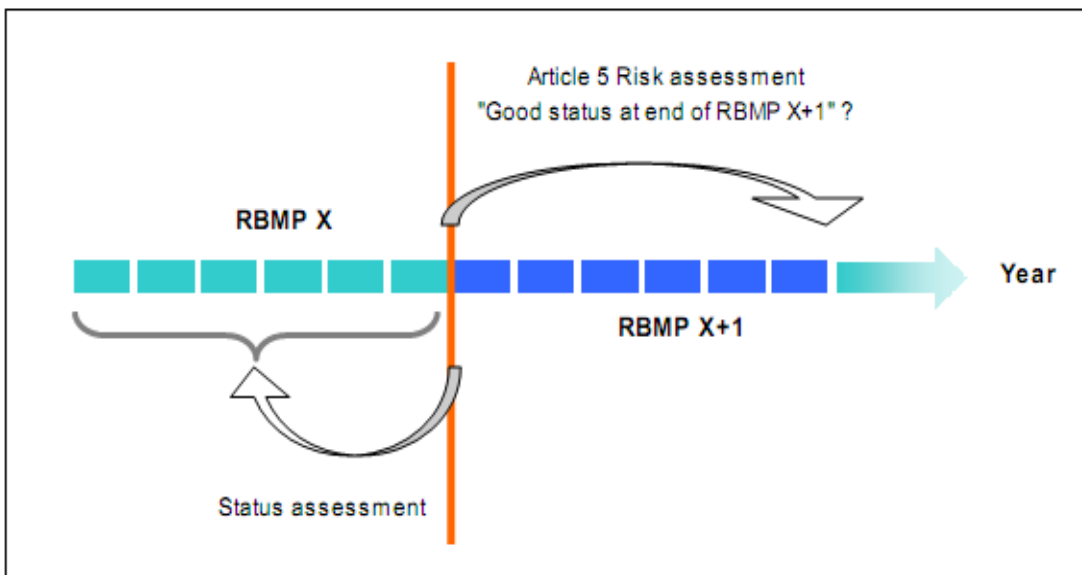
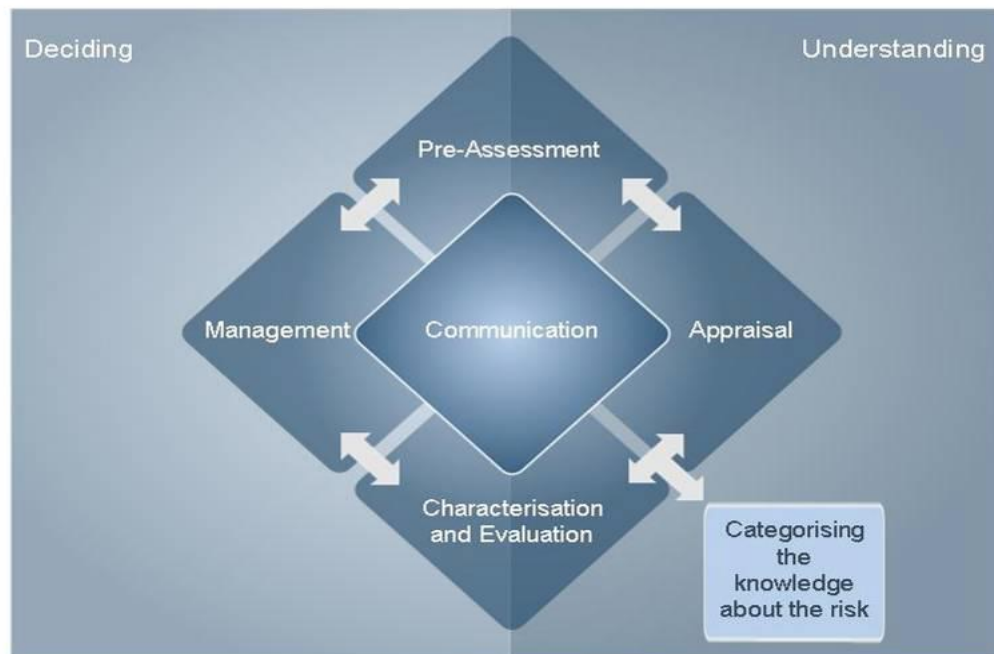
- The risk of failure to reach the environmental objectives is the **ultimate step in the pressure and impact analysis**.
- The WFD requests from the Member States to carry out an assessment of the likelihood that water bodies will fail to meet the environmental quality objectives by 2015.
- The objectives include both the overall objective to achieve good status by 2015, and possibly additional specific objectives that apply to protected areas as defined from other legislation.
- The objectives may also depend on the current status of the water body, since Member States must, in general, prevent any deterioration in the status.
- Failure to achieve the objectives on surface waters may be the result from a very wide range of pressures, including point source discharges, diffuse source discharges, water abstractions, water flow regulation and morphological alterations.
- These and any other pressures that could affect the status of aquatic ecosystems must be considered in the analysis. The risk assessment is therefore based on information collected in the pressure and impact analysis and is **highly aggregated**.

Risk assessment (2)

- Integrated Risk Assessment for WFD Ecological Status
- Risk Assessment related to the RBMP objectives
- WFD abstraction Risk Assessment
- Risk Assessment related to the reaching of the good status/good ecological potential of a water body

Risk Assessment and the precautionary principle

- Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation
- Risk assessment can also identify where impacts are unlikely to occur and/or be serious
- The prevention of the input of hazardous substances to groundwater is an example of where a precautionary approach has been adopted



Conceptual model overview(1)

- Developing and complementing understanding of the water system
- Communication with the public and decision makers: making non-experts understand how water system is working
- Understanding and visualization of both simple and complex water bodies depending on the purpose
- Assessing risks related to water status
- Visualization of how, where and when risks may impact water
- Planning of monitoring systems and measures to protect or remediate water status

Conceptual model overview(2)

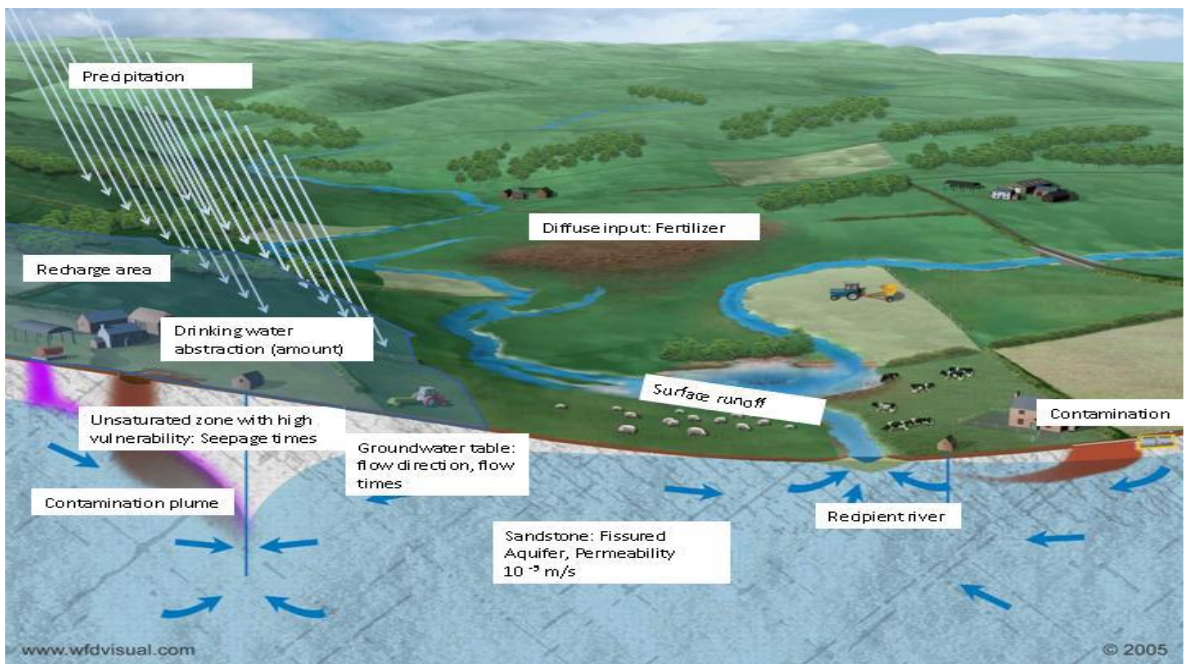
- Prediction of the effects of measures;
- Providing a reliable basis for simulating and predicting processes in water system with mathematical or numerical (computer) models to help an assessor identify whether a water body achieves its Article 4 objectives;
- Identify the reasons why a water body fails any status objectives;
- Allow short-listing of the potential measures that are most likely to remedy the situation in an effective and sustainable manner;
- Justifying exemptions/alternative objectives where there is a risk of failing to achieve good water status.

Use of conceptual models within the WFD

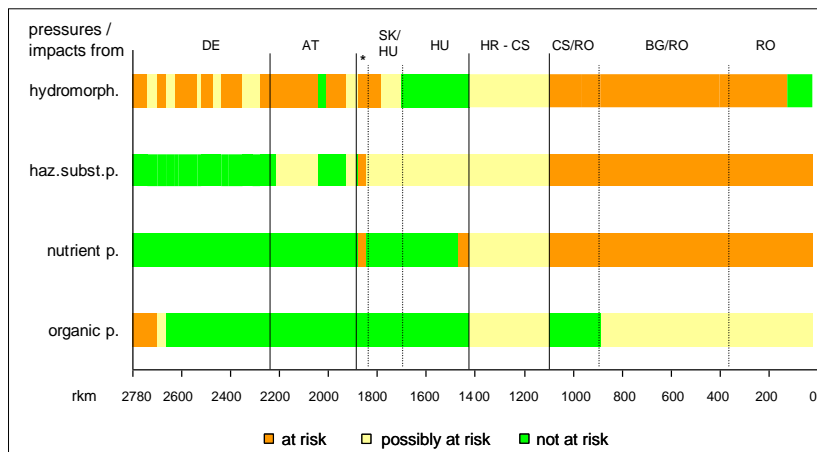
- In the case of a good correlation between the conceptual model assumptions and the measured data usually there is no further need to refine the conceptual model or collect additional data.
- Where there is significant divergence, this has to be explained. This requires the collection of more data or additional data
- Resolving the uncertainty sufficiently may be difficult, but it is better to invest in a good conceptualization than to base measures on a weak conceptual model, with the risk that those measures may be ineffective in meeting WFD objectives or are simply unnecessary

‘Conceptual models’ in guidance documents

- Understanding the significance of pressures;
- Design of a monitoring network;
- Interpreting monitoring data;
- Evaluating the monitoring network;
- Establishing threshold values;
- Status assessment;
- Trend assessment



Identification Significant Water Management Issues



Risk assessment related to RBMP

- Make sure that your existing risk assessment covers the all water bodies under WFD.
- Demonstrate that an activity supports the objectives of the River Basin Management Plan (RBMP).
- If is not reached a high level of confidence that an activity supports the objectives of your RBMP then is necessary carry out more investigation into the risks on WFD receptors and possible ways of managing those risks.
- If the conclusion is that an activity does not support RBMP objectives than is necessary to apply Article 4(7) of the WFD

Main risks in the Drina River Basin

- Lack of reliable monitoring data for water body characterization (particularly biological parameters)
- Lack of proper assessment methodologies for defining water status
- Lack of information on the possible impacts (hydromorphology)
- Limited number of skilled personnel for the risk assessment
- Lack of the conceptual models calibrated to the countries' specific water bodies conditions

