



Impact of agriculture on water quality and quantity

The FATE project

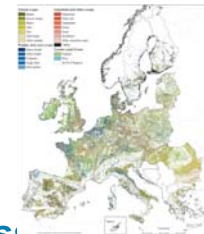
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Nitrogen and phosphorous are essential nutrients for growing crops. However, many European rivers face however high loadings of these essential elements, with visible consequences on the quality of surface and groundwater resources. Agriculture is one of the main sources of nutrient loading to water bodies.

The objective of the FATE project is to provide scientific and technical support through a step-wise approach for the implementation of environmental European policies aiming at reducing the impact of agriculture on water resources

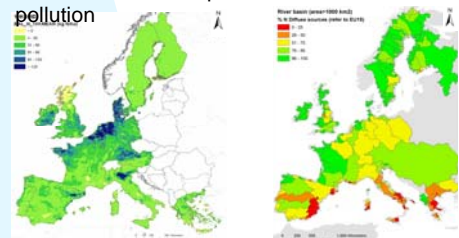
Data

Collection and development of Europe-wide harmonised Geospatial Data, needed for the assessment



Assessment

Assessment of the actual conditions: Estimation of agricultural pressure and main processes and pathways responsible for water pollution

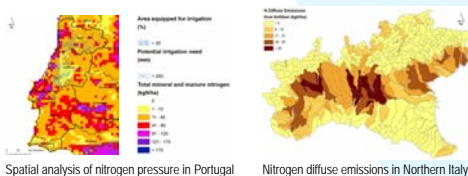


Spatialised gross nitrogen balance per total surface

Nitrogen source apportionment

Recommendations

- Delineation of areas of high nitrogen pressure for aquifer and surface waters
- Pressure and impact analysis at river basin scale
- Evaluation of agri-environmental measures
- Environmental impact of growing biofuel crops
- Identification of possible trend in water quantity and quality due to climate change



Spatial analysis of nitrogen pressure in Portugal

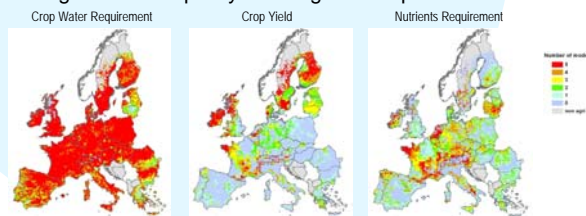
Nitrogen diffuse emissions in Northern Italy

Policy

- Nitrate Directive
- PPPs Directive
- Water Framework Directive
- Groundwater Directive
- Soil Thematic Strategy
- Rural Development

Scenario Analysis

Evaluate the impacts of agricultural practices and climate change on water quality and irrigation requirements



Global Climate Models agreement in increase > 10% (Story Line A1)

Contact

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