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WP T2 Scenarios modelling and assessment in pilot regions

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ENVIRONMENT AGENCY AUSTRIA umweltbundesamt

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MISSION STATEMENT & FACTS

- As Austria´s most important environmental expert institution and one of Europe´s leading environmental consultants we stand for a transformation of the economy and society to ensure sustainable living.
- With more than 600 employees and experience in more than 60 countries our experts provide the basis for decision making at local, regional and international level.

SERVICES

- Providing the basis for implementation of sustainable strategies and measures; development of scenarios; providing quality assured data incl. monitoring, management and assessment www.umweltbundesamt.at/en/services/

ROLE IN THE PROJECT AND EXPERTISE

- Team Surfacewaters is Responsible Partner for WP T2 and has about 20 years of experience in emission modeling on local, national and international level
- Team Laboratories will organize and execute sample preparation of soils and suspended solids and do analyses of PAHs

Background & goals

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Goals

- setup the MoRE model in seven pilot regions in four countries well representing the gradient in physical- and economical conditions in the DRB
- providing a validated, actual Model adapted to the specific conditions (e.g. status of wastewater treatment and data availability) and a detailed system analysis
- Identification of mitigation measures and assessment of their efficiency based on scenario analyses

Benefits

- Acting as role model for an assessment of priority substances on EU- and national level
- Visualizing crucial system interactions, dominant pathways, sources and gaps; a precondition of a proper management
- Give guidance and build capacity to master large parts of the management cycle

How do we do it…

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- Emission modelling in seven pilot regions in Romania, Bulgaria, Hungary and Austria for the period 2015-2021 (annual base or period average)
- Evaluate, produce and implement datasets containing (best available) basic input data for pilot regions (e.g. landuse; topography; soil loss..) and outline crucial data gaps
- Complete model input data with results from own substance specific measurements
- Consider insecurities by establishing 3 model variants: (basic; minimum; maximum)
- Prepare a technical documentation of the model setup in the pilot regions (promoted in WS and in ICPDR Expert Groups for all Danube countries)
- Documented internal workshop on improved system understanding and suggestions for adaptations of transnational modelling at DRB scale (T3)
- Design a catalogue of Taylor-made mitigation measures in pilot regions considering a stakeholder participation
- Quantify and rank the effect of this measures by scenario analyses

Preselected pilot regions

How do we do it...

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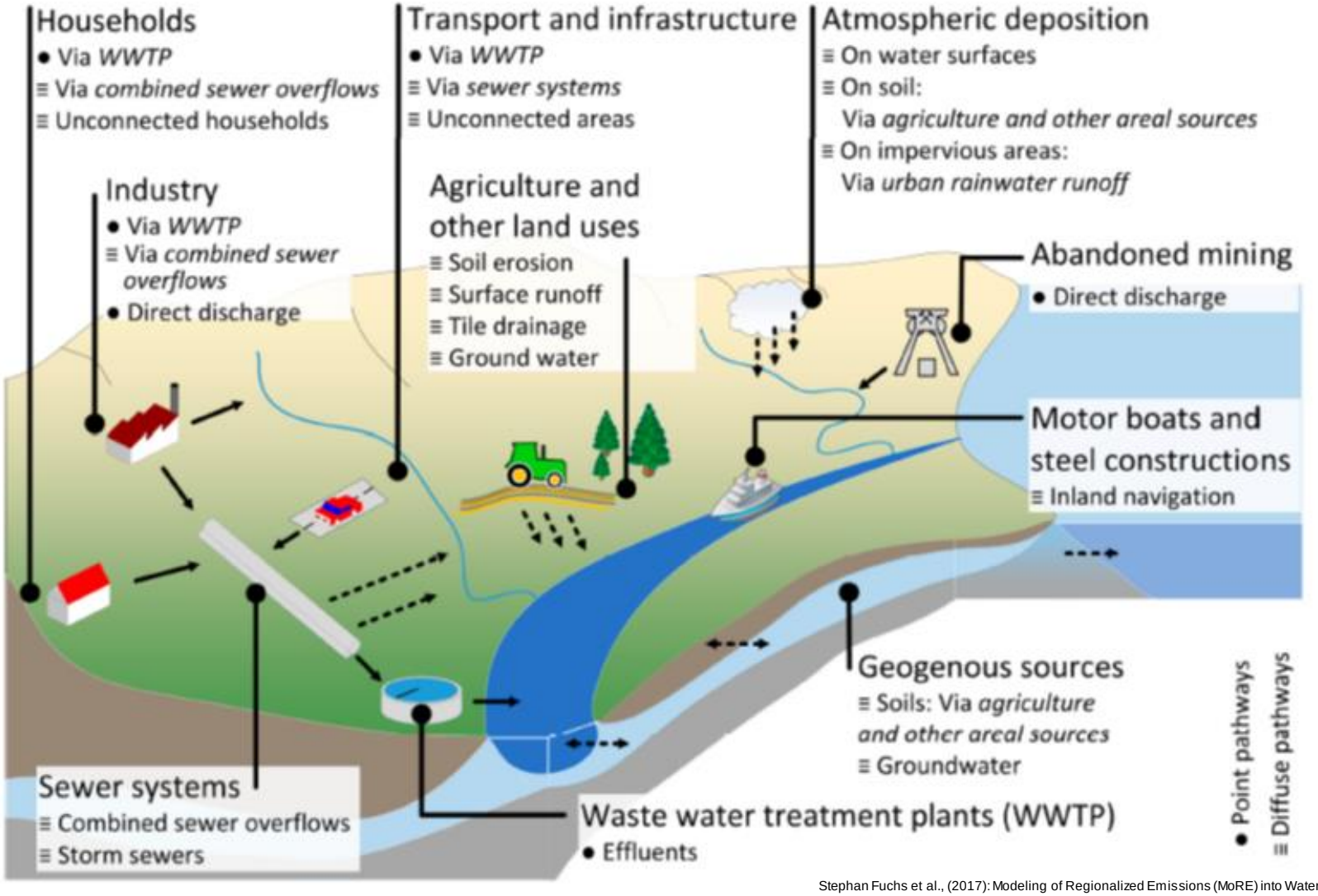

Stephan Fuchs et al., (2017): Modeling of Regionalized Emissions (MoRE) into Water Bodies: An Open-Source River Basin Management System. Water 2017, 9, 239; doi:10.3390/w9040239. © KIT

Results & Outputs

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- Setup, promote and build capacity for an emission modelling representing the pathway oriented approach described in the CIS Guidance Document No 28 “Preparation of Priority Substances Emissions Inventory”
- Improve system understanding, outline (substance specific) dominant pathways, identify serious data gaps and thus setting the scene for a proper management of priority substances in the DRB
- Establish Taylor-made catalogues of mitigation measures, raising awareness and guarantee acceptance by consultation of stakeholders
- Quantify the effect of measures to reduce pollution from selected priority substances
- Give guidance and support different steps in the management cycle, like Pressures & Impact Analyses, Risk Assessment and the Programme of measures in the DRB