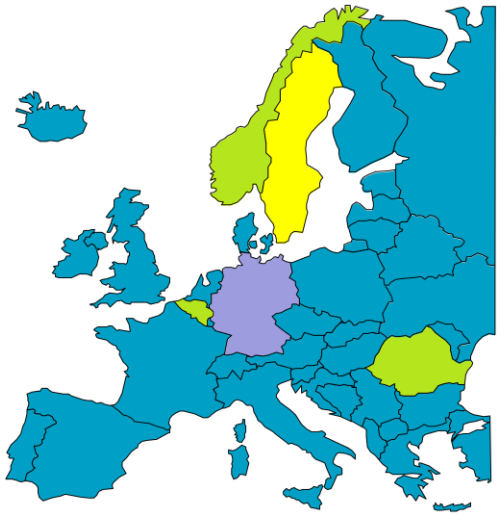

Map of the participant countries in CROSSLINK. Sweden in yellow is coordinating the project, and along with Romania, Norway, and Belgium in green is also involved in data collection and analysis. Germany in purple contributes a management optimization framework.

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formas
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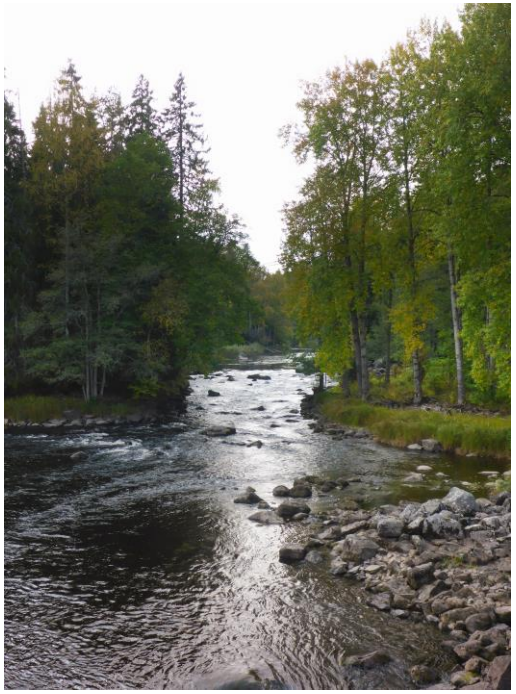
Please also visit the CROSSLINK website:

www.slu.se/Biodiversa_Crosslink

CROSSLINK



CROSSLINK

Cross-habitat linkages in coupled stream and riparian networks: optimizing management strategies for multiple uses

An ecological research project funded through BiodivERsA

Riparian zones influence lateral connections in streams

CROSSLINK is a research project aiming at improved understanding of lateral and longitudinal linkages in stream networks. These linkages are essential for sustaining biodiversity and key ecosystem services relating to nutrient cycling, flood mitigation, freshwater provision, and recreational values.

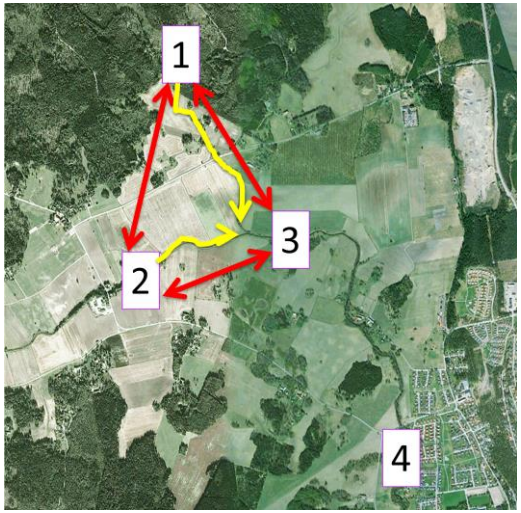
However, human activities such as agriculture and hydropower generation degrade these coupled ecosystems. Results from CROSSLINK will be used to optimize management of biodiversity, ecosystem services, and human uses at the land-water interface.

CROSSLINK aims to:

1. Evaluate how the connectivity of riparian-stream *green-blue infrastructure* (GBI) affects biodiversity and ecosystem processes in forested, urban and rural settings.
2. Produce an optimization framework capable of balancing multiple needs with longer-term resilience in riparian-stream GBI.

To do this, a portfolio of "ecosystem assets" will be constructed for the stream networks. The optimization framework then identifies spatial configurations for GBI that minimize management trade-offs and maximize *multifunctionality*.

Dams can impede longitudinal connections in river networks



Landscape features can influence stream and riparian ecological integrity. Here 1) forested and 2) agricultural landuses might affect 3) downstream habitats. 4) Urban landuses often place additional pressure on riparian-stream habitats.

Case studies to be used:

CROSSLINK will conduct field studies and analyze existing data in four case-study basins:

1. Norway (forested and urban stream reaches in the Oslo Fjord basin),
2. Sweden (forested and agricultural stream reaches in the Lake Mälaren basin),
3. Belgium (forested, agricultural and urban reaches in the Scheldt river basin), and
4. Romania (forested and agricultural reaches in the Arges catchment)