

An international perspective on interdisciplinary research

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A Swedish perspective on interdisciplinary research

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To be discussed

- MISTRA / RELU
- Why interdisciplinary research?
- The VASTRA experience
- How starting up and running a programme?
- Some down-to-earth advice
- My list to Santa



Why interdisciplinary research?

- Important to have a reason to cooperate – a common theme or problem to solve such as a complex environmental problem, innovation of a new product, synthesis of data and knowledge to support political negotiations.
- Superficial interdisciplinarity are bound to fail!



MISTRA, the Foundation for Strategic Environmental Research

Interdisciplinarity

Stakeholder involvement

Strategic





Bridging science
and society

Dialogue about future water management



VASTRA

Vattenstrategiska
forskningsprogrammet

The Swedish Water Management Research Programme as an example

The main goal of VASTRA:

To develop knowledge, methods and tools that will contribute to finding sustainable solutions to the eutrophication problem

The evolution of the VASTRA research process:

from disciplinary research -
to interdisciplinary research -
to mutual learning processes with
stakeholders

from natural science to social science



Important to create common research arenas where researchers meet

Common goals

- A case study
- A book or thematic scientific publication

Creating team philosophy

- Arrange common workshops for the researchers
- Arrange common ID-courses for PhD students



VASTRA, phase 2: An integrated study developed by social- and natural scientists in co-operation



**A stakeholder dialogue
in a catchment area
based on management
scenarios**

Aims of focus group discussions in the Rönne river catchment area

- Test models and methods for river basin management
- Test social acceptability for various IWRM tools
- Discuss stakeholders view on the value of water, PPP, public participation, cooperation, organisation...
- Test the focus groups as a method for mutual learning between stakeholders and researchers

Designing the common study

- The study was planned from the start of the programme as an integrated activity
- The method was developed in collaboration between the natural- and social scientists
- External experts were invited to give advice on the method design
- A skilled external moderator was hired for leading the focus group discussions
- The results will be published in a stakeholder oriented book, in various scientific publications and in a special issue of AMBIO

A few recommendation

- The choice of method should be carefully planned to ascertain high quality of the study
- Comment: It is very hard to find publications reporting about method development in collaboration between social- and natural scientists
- Please publish your experiences both good and bad in this field to give support for future interdisciplinary research!!!

How starting up and running a project?

A common problem(s) to solve

Important issues to consider

- Language and communication
- Organisational structures and procedures
- Diverging worldviews



Be aware of

- IDR requires more resources i.e. time, effort, money...
- May hopefully result in synergy between disciplines and higher impact of knowledge in the society
- Increased possibility for creative new ideas emerging and possibilities of synthesis of knowledge
- Calculate with a higher risk of failure - plan for alternative routes

Starting up a IDR-programme

- Good diplomatic leadership is important
- The programme is preferentially based in an environment that encourages faculty/research collaboration
- Work on establishing a team philosophy
- There is a need for "glue money"
- Arrange frequent meetings, seminars and workshops to foster bridges between students, postdoctoral scholars, and researchers
- Establish dialogue with stakeholders /end users in the society/industry already during the capacity building process

Think about the end already at the beginning!

- Make up plans and agreements for:
 - Activities including collaboration between the researchers
 - Publications
 - Dissemination
 - Stakeholder dialogue
- Use the plans as dynamic and flexible tools in the management of the programme
- Sign agreements about IP



A functional IDR-team will need a mix of competences

- Researchers that have knowledge and experience from more than one discipline
- Specialists/disciplinary researchers that have time to spend on working out details
- Personalities that will enjoy IDR are creative, curious, flexible, willing to learn from others, good communicators and team workers
- Important to be open to involve new competence/researchers during the evolution of the programme
- A small group is easier to handle



Things to consider regarding facilities for IDR

- Physical co-location of researchers will enhance chance meetings between researchers (a time saver)
- Shared instrumentation (a money saver)
- If there is no chance of common facilities be certain to reserve extra resources for travel and meetings!

How support the projects?

- Support project initiation and team building (capacity building)
- Educate researchers and PhD-students in management, administration and communication
- Allow flexible funding within the programme
- Important that the funding organisations have an understanding of the special features of IDR and are willing to give advice to the programmes and also document lessons learned to be used by future programmes

How evaluate IDR-programmes?

- MISTRA: Evaluation of scientific quality as well as impact in society
- Important to include experts with interdisciplinary experience in the evaluation board
- An urgent need for development of new criteria for assessment
- Delay the assessment of a IDR programme. The first few years will mainly be focusing on building relationships and sorting out different world views

Some down-to-earth advice

- Meet often, have fun, build relationships
- Respect each others competence and knowledge
- Small teams with more time is better than large teams with little time
- My rule of the thumb: involve researchers for more than 30% of their working time
- Develop common agreed rules for cooperation
- Try to create a team philosophy
- Create common research arenas such as case studies

My list to Santa

- New management structures and promotion policies within Swedish Universities allowing inspiring and creative IDR settings
- Career possibilities for researchers in interdisciplinary settings
- Reward academic leaders who foster IDR
- More scientific journals with an interdisciplinary agenda
- Possibilities for researchers to move more freely between the academic world and other functions in the society

Suggested readings

- **The first ten years MISTRA**

<http://www.mistra.org>

- **Facilitating Interdisciplinary Research,**

National Academic Press, November 2004

- **Interdisciplinarity in research,** European

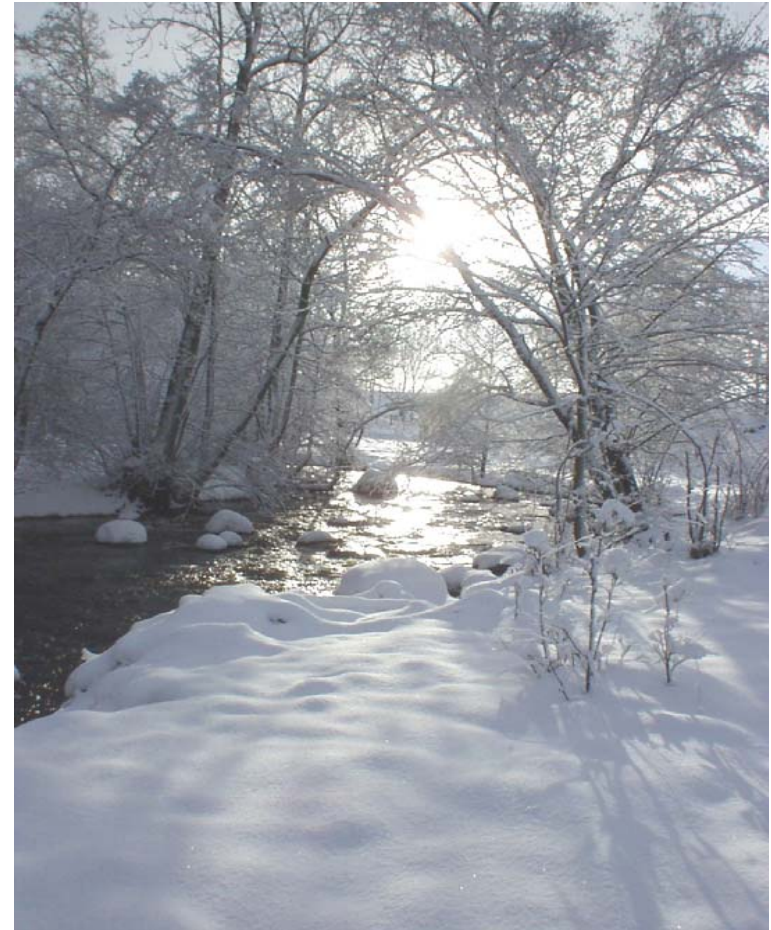
Union Research Advisory Board, April 2004

**Thank you for
listening and good
luck to all of you!**

www.vastra.org

www.ivl.se

www.mistra.org



**The Rönne å case
study catchment area**