



**Project code:** 675120

**Deliverable:** 6.2 – Network seasonal school 1 (CCES Winter School on developing science into practice, including stakeholder involvement)

**Work package:** WP6

**Lead Beneficiary:** EAWAG/USFD

Part of the 1<sup>st</sup> seasonal school of the Inspiration Network was delivered alongside the workshop event between 20-22 March 2017. The proposed date of this event within our Grant Agreement was by 31 January 2017. This date could not be kept, due to the start dates of our recruited Fellows. These dates range from 01/11/2016 to 01/04/2017, with most Fellows starting in January 2017, due to personal timings and visa applications pending. This meant that they missed the CCES registration deadline in October 2016. According to the original plan the CCES Winter School organised by ETH Zurich is offered to our Fellows as Network seasonal school 1. This Winter School takes place every year in January/February (<http://www.tdlab.usys.ethz.ch/education/winterschool/ws-about.html>). Therefore, the consortium made the strategic decision to offer the 2018 CCES Winter School to our Fellows, and also deliver part of the topic alongside Network workshop 1 in order to ensure the Fellows have maximum and timely exposure benefiting from the expertise of the network. We also wanted to ensure the maximum number of Fellows can attend, as developing science into practice is the foundation of the impact delivered by Innovative Training Networks. Only 3 Fellows were unable to attend: Olha Nikolenko (ULG) due to visa not granted on time, Bastian Saputra (USFD) due to personal reasons of family bereavement and Utpal Ghosh (TLB) due to visa delays.

According to the Fellows' feedback, while the workshop part of the event (sessions 1 and 2) encouraged them to think specifically about their personal ways of managing themselves and their individual projects as well as understanding the structure and expectations of the whole of the Inspiration network, the seasonal school part of the event (session 3) proved



immensely beneficial in allowing them to think forward working together on planning the impact and product delivery as the scientific outcome of the Work Package their individual projects are part of.

The schedule, list of attendees and presented information of and the event can be found on the following pages.



## **Workshop (WS) / Seasonal School (SS) 1**

Date: Monday, 20<sup>th</sup> – Wednesday, 22<sup>nd</sup> March 2017

Location: Mottram Hall, Cheshire, United Kingdom  
Wilmslow Rd, Macclesfield SK10 4QT

The specific purpose of this event is to provide the Fellows with the first training workshop (combined with seasonal school 1, deliverables 6.1 and 6.2) aimed at (i) building personal/professional resilience, and project management/communication skills, (ii) strategies for effective science dissemination and outreach, and (iii) strategies for developing science into practice. Each session incorporates a conceptual presentation, group discussion as well as individual and group activities. This is in accordance with Grant Agreement 675120 between the Inspiration Beneficiaries and the European Commission.

Please note the sessions will take place in The Horton Suite of Mottram Hall, with refreshments available throughout the day at the Conference HUB Lounge (AM) or the Carrington Grill (PM).

List of attendees: 17 (Collins Amoah-Antwi, Priyanka Banerjee, Izabela Bujak, Julia von Chamier, Polina Damala, Golnaz Ezzati, Owen Fenton, Alexandra Giber, Gabriella Kakonyi, Gisela Quaglia, Max Ramgraber, Mario Schirmer, Rosa Soria, Rob Sweeney, Steven Thornton, Robin Weatherl, Madaline Young)



## Day 1 : Monday, 20 March

- 15.00 Arrivals / Mottram Hall check-in
- 18.30 – 19.30 Icebreaker with Fellows (The Garden Room)
- 19.30 – 21.30 Evening meal (Carrington Grill)

## Day 2 : Tuesday, 21 March

- 8.00 - 9.30 Breakfast (Carrington Grill)
- 9.30 - 12.30 Session 1 facilitator Gabriella Kakonyi (University of Sheffield)
- Theme: Building personal and professional resilience
- Project management + planning exercise
- Communication skills
- 12.30 - 14.00 Lunch break (Carrington Grill)
- 14.00 - 17.00 Session 2 facilitator Rob Sweeney (CL:AIRE)
- Theme: Strategies for effective science dissemination and outreach
- Exercise 1 – individual activity (dissemination plan)
- Exercise 2 – group activity (network conference planning)
- 17.00 – 18.00 Session 3 facilitators Owen Fenton (Teagasc), Gabriella Kakonyi, Mario Schirmer (Eawag), Rob Sweeney, Steven Thornton and Wim de Vries (Wageningen University)
- Theme: Strategies for developing science into practice
- 18.00 – 19.30 Free time
- 19.30 - 21.30 Evening meal (Carrington Grill)

## Day 3 : Wednesday, 22 March

- 8.00 – 9.30 Breakfast (Carrington Grill)
- 9.30 - 12.30 Session 3 continued with Work Package activity
- 12.30 - 18.30 Lunch break and free time, then Continued with AB meeting icebreaker



## Session 3

# Strategies for developing science into practice

**Facilitators : Owen Fenton (Teagasc), Gabriella Kakonyi, Mario Schirmer (Eawag), Rob Sweeney, Steve Thornton (University of Sheffield) and Wim de Vries (Wageningen University)**

# INSPIRATION Innovative Training Network

WS1/SS1 – Mottram Hall, Cheshire

21-22 March 2017



CCES Winter School “Science meets practice” – Switzerland,  
January/February each year

<http://www.tdlab.usys.ethz.ch/education/winterschool/ws-next.html>

Also contact Mario for further information

Inspiration Workshop 4 : Agronomy management from ‘field to fork’ – Ireland,  
October 2018

Also contact Owen for further information

...working together with stakeholders from practice, field visit for technology  
demonstration



Don't lose sight of the big picture

Population growth, effective and sustainable usage of resources, increased food production, land and water quality degradation, sustainable agricultural intensification

Key functions

- Ensure relevance of science
- Enhance the quality of science
- Assess the impact of research
- Decrease gap between scientific and practical knowledge
- Help to mobilise global scientific expertise

Influence policy and practice both nationally and internationally.

Tackle real-world problems BUT, stop and think about what the real-world problems are.



## Know and communicate with your audience

- Policy makers and government (international, national and local)
- Non-governmental organisations (NGO)
- Business (primary, secondary and tertiary sectors)
- Academic collaborators
- Culture and education, including research
- General public





## Business case

Purpose: establish mechanisms to judge whether the project is (and remains) desirable, viable and achievable

What do you want to achieve? – bigger picture

Why do you want to achieve it? – reasoning, communication

Measure up:

Output – any of the project's specialists products (tangible or intangible)

Outcome – the result of the change derived from using the project's outputs

Benefits – measurable improvement resulting from the outcome as an advantage by one or more stakeholders

Contents:	executive summary	timescale
	reasons	costs
	business options	investment evaluation
	expected benefits	major risks
	expected dis-benefits	



## Example 1 : River management at the Thur (Mario Schirmer)

P1 “complementarity”: what is the human complementarity of the Thur river catchment (cantons, communities/towns, national, EU, global level?)

P2 “hierarchy”: which actors (individual, group, organization, institution, society) are involved in the river management?

P3 “interference”: how are different actors cooperating (horizontal: within hierarchy and vertical: across hierarchy)?

P4 “feedback”: what intended & non intended impacts/effects of Thur restoration can be observed?

P5 “decision”: what are the goals of different stakeholder groups, what options in river management do they prefer?

P6 “awareness”: how groundwater and river management is perceived by the public/stakeholders, what mental models do they have?

P7 “environment first”: what knowledge of the natural environment is necessary and available for an improved river management?



## Example 2 : Environmental Assessments for policy making (Wim de Vries)

Environmental Assessments are used to study the cause and effect of environmental impacts, suggesting possible solutions

- Objectives and Scope:** clear goals and definitions, approaches and progress toward regular, iterative assessment
- The Science/Policy Relationship:** regular dialogue, policy relevant questions, guidance for priority-setting, including government involvement in reviewing assessment products
- Stakeholder Participation:** clear and meaningful modalities for participation by stakeholders
- Nomination and Selection of Experts:** transparent criteria and procedures
- Data and Information:** agreed procedures for sourcing, quality assurance and the availability and accessibility of underlying data
- Treatment of Lack of Consensus among Experts:** clear and transparent guidelines for addressing lack of consensus
- Treatment of Uncertainty:** clear and transparent guidelines for addressing and reporting uncertainty
- Peer Review:** agreed, transparent criteria and procedures; use of reviewers not involved in the assessment



## Example 2 : Environmental Assessments for policy making (continued)

### **Criterion 1: Relevance**

The ability of an assessment to address the particular concerns of those using it. An assessment is relevant if the user is aware of it and it informs his/her decisions or behaviour.

### **Criterion 2: Credibility**

Validity of the knowledge assembled in the assessment. An assessment gains credibility and authority by virtue of its information, methods and procedures.

In cases where science has no clear answer or where competing explanations exist, the credibility of the assessment depends on agreed and transparent procedures for dealing with uncertainty and disagreement and how this is reported.



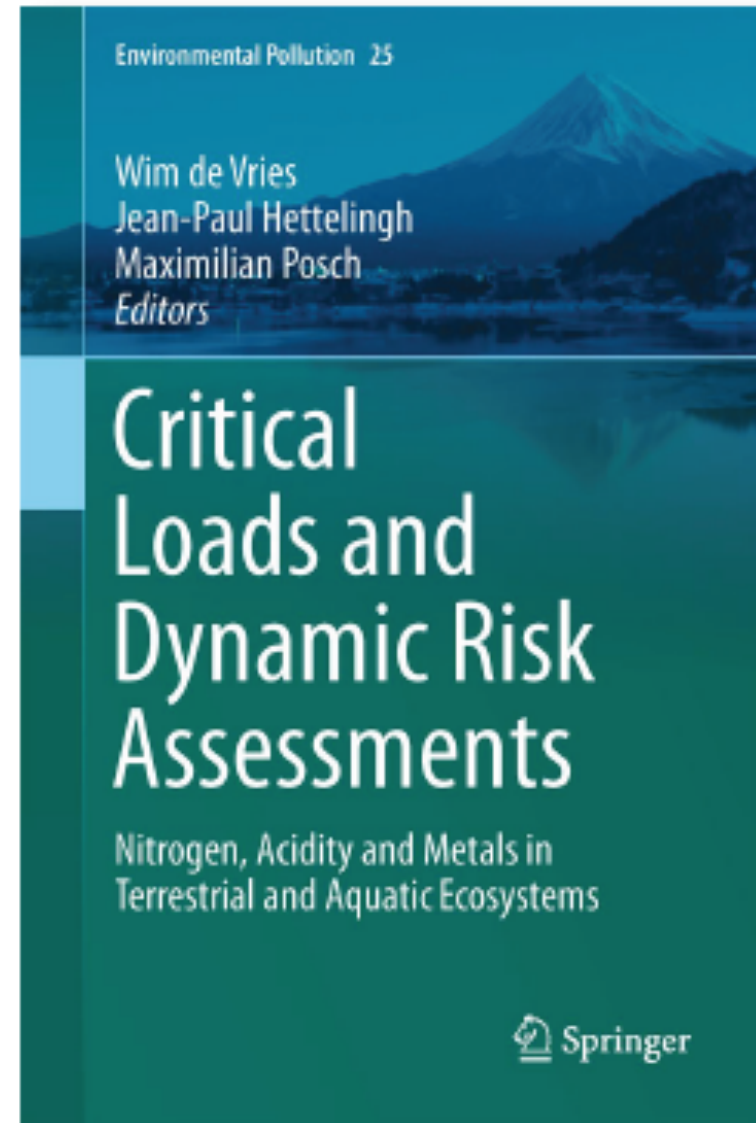
## Example 2.a : Air pollution and critical loads

Background : SO<sub>2</sub>, NO<sub>x</sub>, NH<sub>3</sub>, O<sub>3</sub> causing smog, eutrophication, acidification, damage to plant, animal life and materials

Approach : Assessing critical loads and changes of risks in time using field manipulation experiments, surveys along deposition gradients, re-surveys over time, and modelling approaches

Use in policy making :

- Long Range Transboundary Air Pollution Convention, signed in 1979. Most of Europe is party to the convention
- Due to research, policy is since 1994 based on critical loads and dynamic risk assessments rather than flat rate reductions





Why was air pollution impact research and modeling so effective in policy making?

-The concept of critical loads was invented, including a long term acceptable input of air pollutants, being easy to communicate in policy making (relevant)

-The critical loads that were derived were continually discussed and evaluated in international workshops (credible)

-Research was carried out in close co-operation with policy makers funding the research (stakeholder involvement)

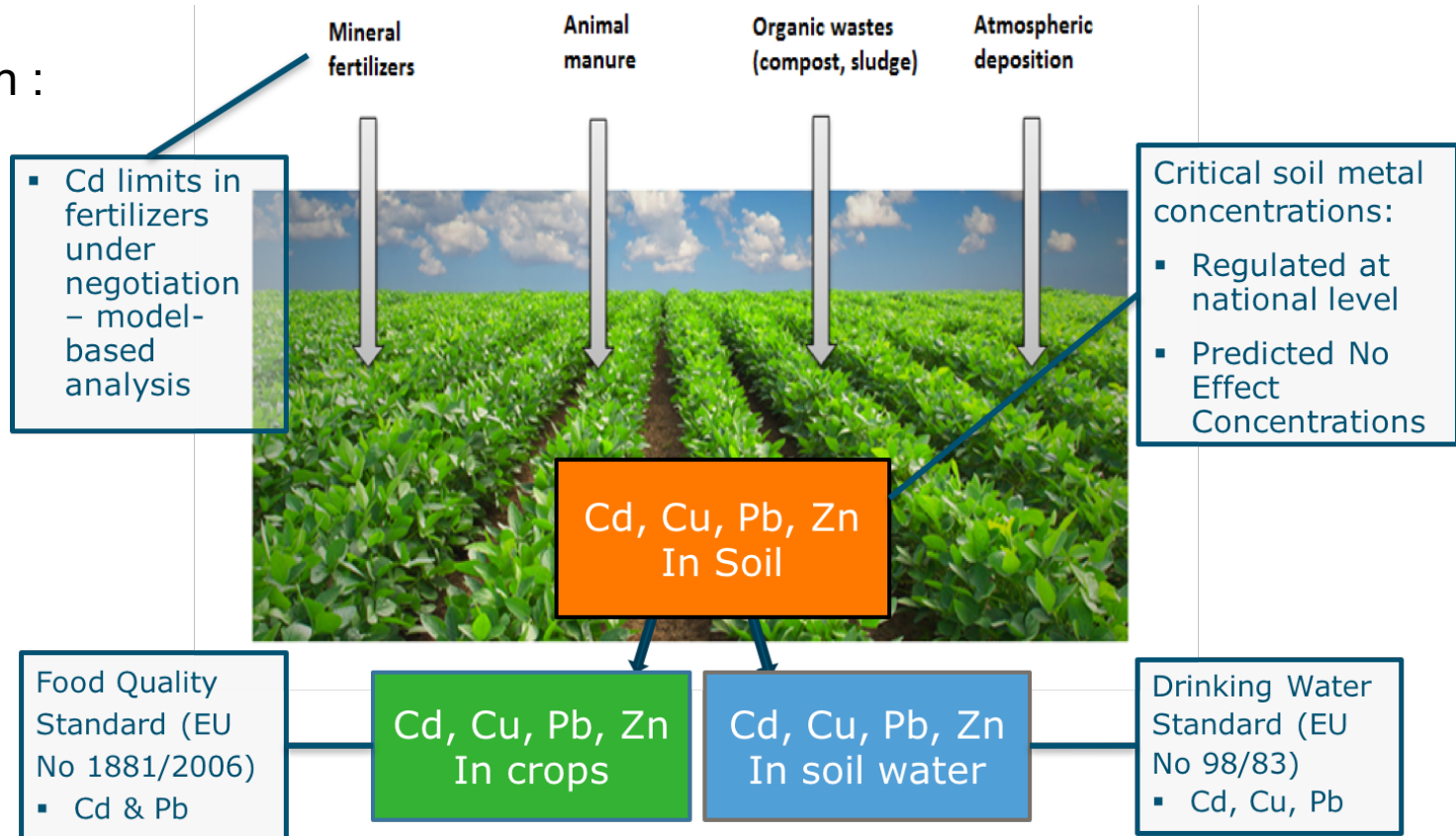
-All the mentioned processes under Example 2 were employed to make it successful, relevant and credible



Example 2.b : Soil cadmium pollution: impacts on food quality/human health: extreme case is 1950s itai itai disease (Japan)

Background : What is an acceptable Cd limit in P fertilizers: EU regulation

Approach :





- Proposed Cd limit in fertiliser with  $> 5\%$   $P_2O_5$  is 20 mg Cd/kg  $P_2O_5$
- Rationale for limit includes a model-based analysis of impacts of Cd –contaminated P fertilizers in Europe
- This analysis showed that on average Cd accumulates at Cd concentrations  $> 20$  mg/kg  $P_2O_5$ .

Why soil pollution impact research is likely to be effective in future policy making?

-Research was carried out on the effect of Cd in fertilizers being the direct issue in which policy makers are interested (relevant)

-The model assessments are still under discussion among scientists and thus the results are not yet definitely used in assessing limits (negotiation phase) (results need to be credible)

-Research is done in close co-operation with both fertilizer companies and policy makers interested in the research (stakeholder involvement; stay independent)





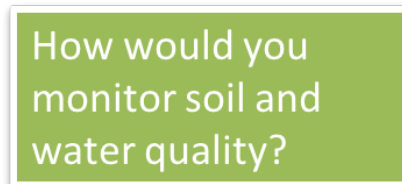
## Example 3 –

### Testing if sustainable intensification is possible at farm to catchment scales?

- There needs to be co-operation from all stakeholders (farmers and regulators) to present a long term study on real farms
- Results are real world but expectations need to be managed .....it can take a long time and money for water quality to change even after full implementation of programmes of measures
- Regulators always want more measures instead of waiting for full characterisation
- Often science is too complicated to translate into policy – e.g. soil type and geology differ across field scales
- At the Field to Fork workshop we will carry out exercises using our model catchment in Teagasc



Is that farmer spreading slurry too near to the river?

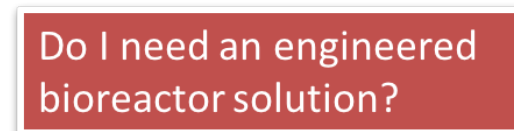


How would you monitor soil and water quality?



Is this farm Sustainable?

- Environment
- Economic
- Social



Do I need an engineered bioreactor solution?



## Dragons' Den exercise

- Wednesday, 22 March 9.30 - 12.30
- Fellows to team up with their Work Package members and develop a product/model software/policy based on the research aims/outcomes of their WP
- 9.30 - 11.00 preparation time with facilitators available to help, discuss and answer questions
- 11.15-12.30 present a business case to the Dragons' Den panel (Gabi, Mario, Owen, Rob, Steve). Approximately 15 minutes for each of the 5 work packages. After each pitch, the Dragons have the opportunity to ask questions about the venture, then decide whether they'd be willing to invest their own cash to kick-start the businesses.

The exercise is designed to encourage the following principles:

- work in teams, cooperate, communicate, plan and delegate
- develop creativity, thinking outside the box
- manage time
- think about the wider applications and impact of the research
- identify and present ideas to the relevant stakeholders