

# MINUTES

## COST Action 869

### 'Mitigation options for nutrient reduction in surface waters and groundwaters'

Small meeting of WG2

'Influence of nutrients on ecological processes in surface waters'

21 May 2007

CIENS Oslo, Norway

Present

Seppo Rekolainen	Finland (Finnish Environment Institute)	Chair
Petri Ekholm	Finland (Finnish Environment Institute)	
Wim Chardon	The Netherlands (ALTErrA)	
Kenneth Irvine	Ireland (Trinity College Dublin)	
Nikolaos Skoulikidis	Greece (Institute of Inland Waters)	
Konstantinos Gritzalis	Greece (Institute of Inland Waters)	
Katarzyna Wasiak	UK (University of Leicester)	
Jannicke Moe	Norway (NIVA)	

Background

The COST Action 869 officially started on 7<sup>th</sup> of November 2006, when the action had its first Management Committee (MC) meeting. The action will end on 6<sup>th</sup> of November 2011. So far, 26 countries have signed the memorandum of understanding (See [www.cost869.alterra.nl](http://www.cost869.alterra.nl)). In the first MC meeting it was agreed on to hold a small meeting on 21 May 2007 to plan future activity of WG2. The Executive Committee of the Action had a small organizing meeting on 14 Dec. 2006 in which future activity was discussed in more detail. The special topics of the meeting included the interaction of nitrogen and phosphorus with regard to measures taken and response in the receiving waters. Other topics for WG2 to consider, examined in the meeting, included e.g. the relationship between critical source areas and ecological effects. The next MC meeting will be held in connection with the WG3 meeting in Nov./Dec. 2007 in Devon, UK. In addition, there is a plan to organize a joint meeting for all working groups and the MC in autumn 2008 in Italy.

#### 1 START

The delegates introduced themselves, Chardon briefly presented the action and Rekolainen examined the aims of WG2 as described in the Memorandum of Understanding (MoU). The overall aim is to collect, analyse and synthesise research results and information on ecological impacts of nutrient loading arising from past and ongoing international and national research and development projects. In this context, important concepts are target loads, critical loads and thresholds in all surface waters (from fresh-water rivers and lakes to coastal waters). New participants are obviously needed to cover all surface water types. Milestones and deliverables listed in the MoU are very ambitious.

Rekolainen told that he cannot act as the chair of the WG2 after the present meeting and suggested Petri Ekholm as his successor.

The financial frames were discussed. For the entire action, it is (in general terms) possible to organize either two meetings per year with two people from each country participating or one meeting per year with four national participants. The preparation of future work was based on the assumption that WG2 would have two medium size workshops under special themes, possibly in connection with the meetings of other WGs. In addition, there might be a joint-WG larger conference.

To stimulate discussion Skoulikidis presented data from Greek rivers, which have very varying ratios of nitrogen to phosphorus and Ekholm showed the relationship between phosphorus, nitrogen and chlorophyll *a* in Finnish lakes and the hypothesized interaction between sediment microbial processes and phosphorus concentrations in Finnish coastal waters.

Irvine suggested that WG2 should first focus on phosphorus and nitrogen limitation and on how colour of the lake water affects it (possible light limitation). Often the measures taken in agriculture reduce either nitrogen or phosphorus, whereas it is not always clear which one is needed for eutrophication control. This issue might be expanded by the question of the forms of nutrients, not all of them giving – at least an immediate – response in the receiving waters.

## **2 ELABORATION**

It was tentatively decided to hold two to three meetings within the COST time frame, the first one (to be organized either in connection with the 2008 meeting or separately in 2009) focusing on nitrogen and phosphorus limitation in various types of European waters. However, the meeting cannot be fixed before the next MC meeting in Devon. It was decided that:

- Irvine will make a tentative list of potential speakers, consisting of experts on lake, river and marine systems and who have recently published e.g. on nutrient stoichiometry or sediment processes affecting N/P limitation. The tentative list should be sent to the participants of this meeting by the 1<sup>st</sup> of June, who then should comment on it within 2 weeks. Several names were proposed in the meeting. The potential speakers should be contacted till the end of this year.
- Chardon will contact the local organizer of the meeting in Italy. He will also contact WG1 and WG3 for co-operation. For example, WG1 had desired co-operation with WG2 with regard to critical source areas, which might be related to the sensitivity of receiving waters.
- The speakers to be invited to the meeting should write an article on the subject, potentially to be submitted to a special issue of a scientific journal.
- Ekholm will send the draft call of the meeting.
- Finally, Rekolainen will inform the participants on the REBECCA output.

Data on nutrient limitation in different water types could be processed by the aid of short-term scientific mission (Irvine being responsible). For example, the large data set produced in the REBECCA project could be examined in NIVA with the help of a local expert. The participants should clarify the option to also make a similar analysis for existing river water and marine data. Chardon will contact RIZA for Dutch data.

The topic of the second WG2 meeting was left open for the time being.