



Cost Action 869 “Mitigation options for Nutrient Reduction in Surface Water and Groundwaters”

Workshop WG3

*Consiglio Nazionale delle Ricerche, Piazzale Aldo Moro 7,
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REPORT

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1 AGENDA

The meeting was organized by Antonio lo Porto (IT) and Oscar Schoumans (NL). It was attended by 25 persons from 17 countries, and had as general topic: Completing the database of mitigation options. At the WG3 meeting in Devon (2007) it was decided that factsheets should be written about the different mitigation options (n > 100) with information about results from different countries. Furthermore, we discussed the need / importance to set up a framework where mitigation



options could fit in. There are some major advantages in summarizing this information in factsheets and put it together in a European framework:

- Reduce duplication of work.
- Data mining and sharing information and methodologies.
- Transferable information within EU.
- Get evidence about effectiveness in relation to geographical conditions and scale issues.

Before the meeting a total of 64 drafts of factsheets were already prepared and made available via the actions website. The chair thanked all members that contributed to this process.

The following points were discussed:

- Division of list of mitigation options in different categories.
- Audience for which factsheets are written, length of factsheets.
- Topics discussed in factsheets (headings).
- Framework for mitigation options.
- General remarks made.

2 Division of list of mitigation options in different categories

During a small WG3 meeting in February in Amsterdam a list of categories of options was proposed. The list was accepted during this meeting, so the 8 categories and subcategories are:

Category	Subcategories
1. Nutrient application management	1.1 - General nutrient application management 1.2 - Manure application management 1.3 - Manure surplus management 1.4 - Inorganic fertilizer application management
2. Crop management	
3. Livestock management + production of minerals in manure	3.1 - Overall production 3.2 - Feeding 3.3 - Grazing management 3.4 - Point sources at farm scale
4. Soil management	4.1 - Ploughing / tillage 4.2 - Measures for preventing erosion / increase infiltration 4.3 - Miscellaneous
5. Water management	5.1 - Irrigation 5.2 - Drainage
6. Land use change	
7. Land infrastructure	7.1 - Manage relationships between farm and rivers or streams 7.2 - Manage relationships between livestock and rivers or streams 7.3 - Manage ditch, stream or river boundaries 7.4 - Create, maintain or manage field boundaries
8. Measures in surface water	



3 Audience for which factsheets are written, length of factsheets

It was decided that the factsheets will be written for a public with a higher education, like catchment managers, water managers, policy makers, advisers. Of course, the participants of the COST action also belong to the public, since factsheets are a way of internal knowledge exchange. Relevant factsheets can be used by a country on a national scale after translation, simplification, and filling in details like costs of implementation.

The length of the factsheets should not exceed 2-3 pages (A4). Longer documents can be made available as background document.

4 Factsheet headings

Based on the outcome of the small meeting in Amsterdam the factsheets written thus far were composed using a consistent set of headings. After discussion, it was decided to change these slightly, and to use the following headings in the future:

- Description, including if effect is aimed at nitrate (N) or phosphorus (P)
- Rationale, mechanism of action
- Relevance, applicability & potential for targeting
biophysical conditions (climate, slope, soil type); land use (crops etc.); practicability (skills, technicians); targeting refers to farm type considered
- Effectiveness, including uncertainty
Separate headings for N & P ; qualitative comments; only direction of change, no quantification; list of issues to consider
- Time frame
- Environmental side-effects / pollution swapping,
e.g. faecal indicator organisms, pesticides, emission of greenhouse gasses, sediments, biodiversity
- Administrative handling, control
- Costs
investment, labour (only background information of the costs, no amounts)
- References

Whenever possible links to specific references are appreciated. For this purpose, it is possible to place a copy of a publication or report on the website of the Action, if this is not illegal (!).

5 Framework for mitigation options

A discussion started about a framework the mitigation options fit in, based on a conceptual model made in the UK. In this model, each option is classified according to different aspects: 1. Transport: surface – pores & drains – through flow; 2. Source: soil – fertilizers – manure; 3. Mobilisation: incidents – in solution – detached. It was decided to discuss the framework further within a small group (members: Schoumans, Haygarth, Grizetti, Irvine, Litaor, Kronvang, Gascuel, Isermann) and to present the outcome during the meeting in Austria.



6 General remarks made

A general introduction to the list of factsheets has to be written, describing the background of the factsheets and the different categories. In this introduction the use of farm balances and the P-index method can be discussed, and methods to quantify the cost-effectiveness of options.

It was suggested to create a wiki-page for each mitigation option, to stimulate a broad discussion about the contents.

7 Follow-up

For each topic in the “List of options and factsheets” that was compiled previously and is available on the website it was decided who would review existing factsheets, or would write a factsheet. In a number of cases it was proposed to combine topics in order to reduce the total number of factsheets. A summary of the decisions will be made by Wim Chardon and distributed among the participants of the meeting.

During the meeting of WG4, to be held in May 2008 in Waidhofen/Ybbs in Austria, the results of the Rome meeting will be presented, and attendees will be asked to volunteer in reviewing factsheets.

8 Dbase DG-environment

WG3 received an invitation to make a link to the Dbase of DG-environment regarding mitigation options within agriculture. There will be a DG-meeting on 30 April 2008. It was concluded that we will try to join that meeting in Brussels and to present the outcome of WG3 as it is at this moment (action WG3-chair Oscar Schoumans).