

COST Action 869

Mitigation Options for Nutrient Reduction in Surface Water and Groundwaters

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What is COST ?

COST European **CO**operation in the field of
Scientific and **T**echnical Research

The COST program is financed by the
EU Framework Programs (now FP7)

Support is given by COST for organizing meetings
and travelling, not for research projects

COST Action 869

Mitigation Options for Nutrient Reduction in Surface Water and Groundwaters

Proposal approved	March 2006
Kick-off meeting	November 2006
End date	November 2011
Web site	www.cost869.alterra.nl

Before COST 869

COST Action 832

“Quantifying the agricultural contribution to eutrophication” (1997-2003, 18 countries)

International Phosphorus Conferences

**1995 Wexford; 1998 Antrim; 2001 Plymouth;
2004 Wageningen; 2007 in Silkeborg**

Both created a strong European network on P

Main objective of COST 869

to undertake a **scientific evaluation**
of the **suitability and cost-effectiveness**

of **different options for reducing nutrient loss**
to surface and ground waters

at the river basin scale

International Conference on Land and Water Degradation

Topic of COST action:

How can we avoid water degradation
due to loss of nutrients from agricultural land

Background: Water Framework Directive

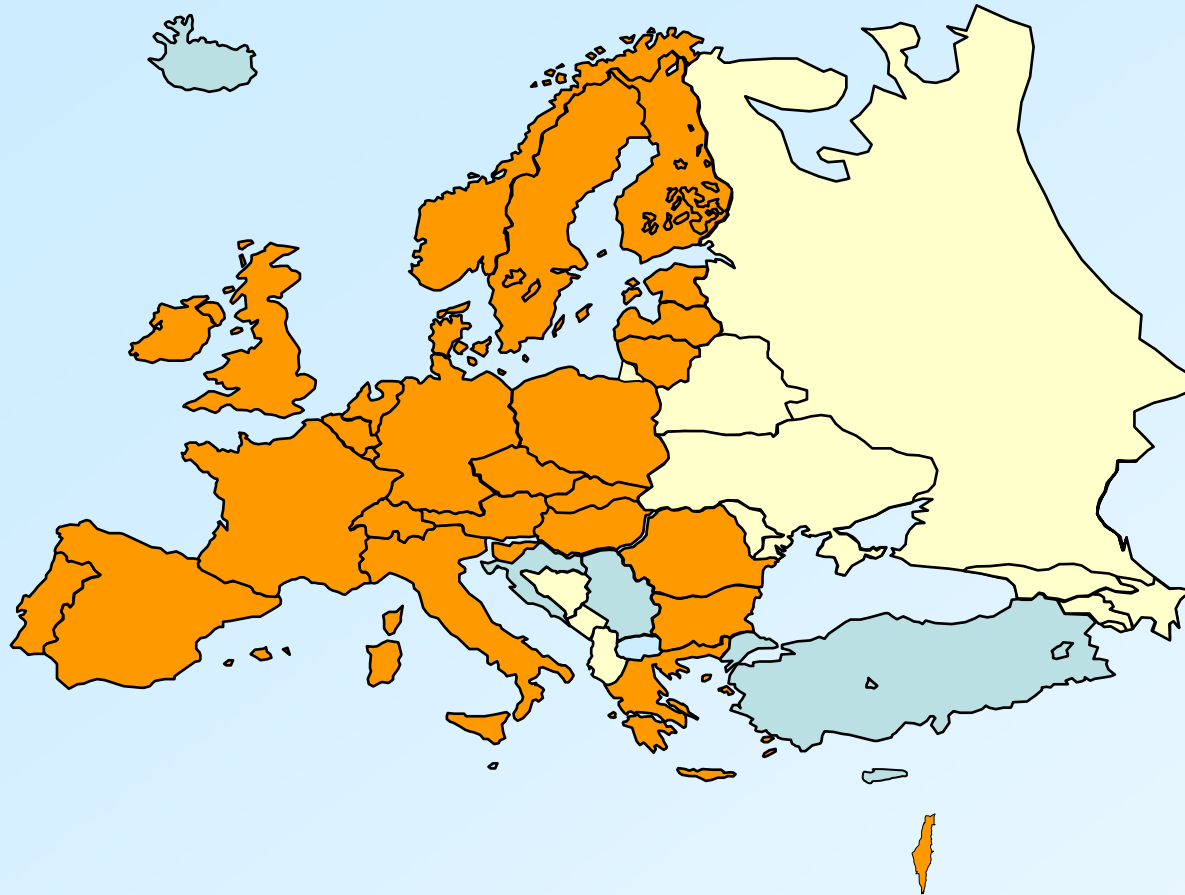
We want to prevent eutrophied streams:



Estimated contribution of agriculture to load of surface water in EU:

P: 50%, NO₃: 50-80%

(Collins, Wexford 2008)



Participating Countries : 29 (Nov. 2008)

+ New Zealand

Organization of COST 869

4 working groups:

1. Localization of critical source areas in catchments
2. Influence of nutrients on ecological processes in surface waters
3. Mitigation options
4. Evaluation of projects in example areas

Management Committee - country representatives

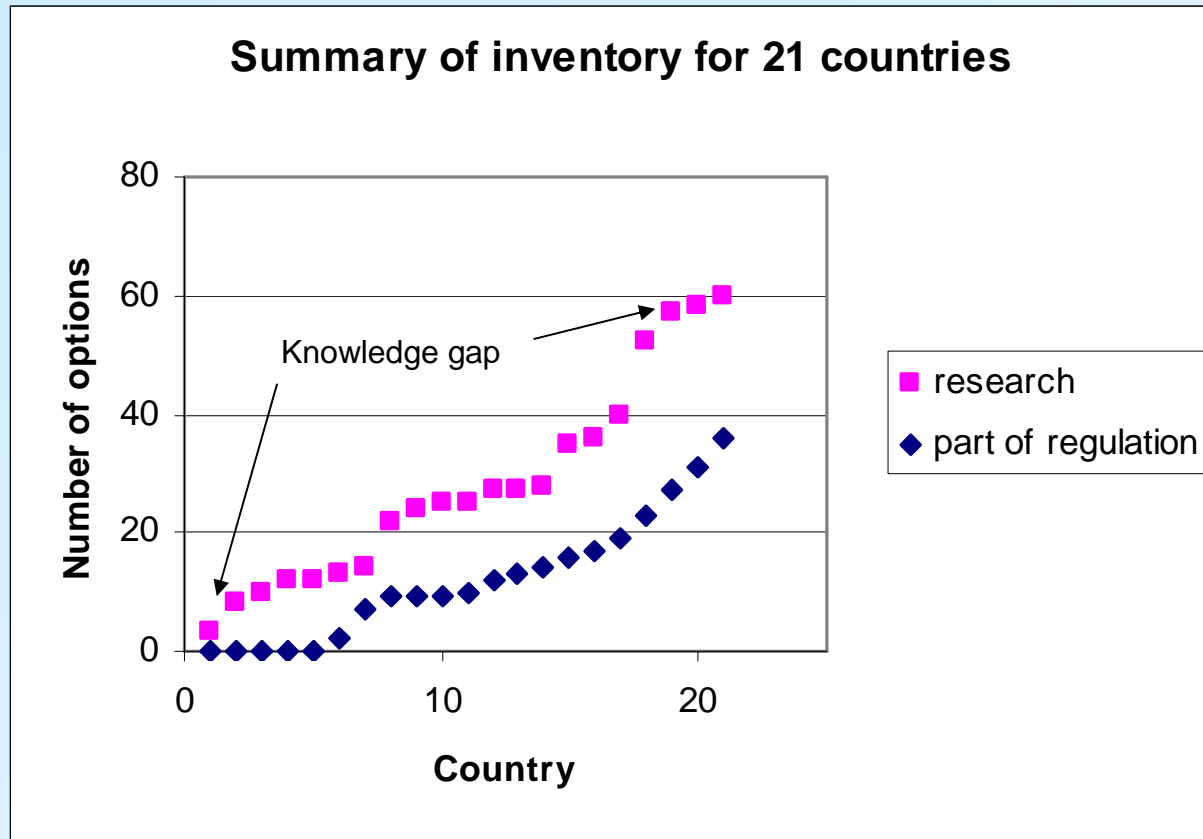
Inventory of 88 mitigation options

A list of 88 options, taken from literature, was sent to country representatives in COST 869

They were asked if research has been done on these options in their country, and if the options are (already) part of any regulation or of a recommendation



Inventory of 88 mitigation options



Conclusions of inventory

1. Knowledge gap between COST-countries
2. Knowledge transfer can be useful, e.g. via:
 - Organizing meetings
 - Action website that contains reports, presentations of meetings, links
 - Develop database with options (factsheets)

Categories of mitigation options

- Nutrient application management
- Crop management
- Livestock management
- Soil management
- Water management
- Land use change
- Land infrastructure
- Measures in surface water
- Abating consequences of eutrophication

Current status of database

- September 2009: about 75 factsheets, 40 more are expected
- Written by 21 persons from 14 countries
- Written for public with a higher education: catchment managers, water managers, policy makers, advisers, participants COST Action

www.cost869.alterra.nl - List of options and factsheets

Future activities

Workshops on:

- Improvement of database
- Buffer zones
- Novel technologies
- Connectivity; upscaling; stochastic modeling
- Drastic reduction of nutrient input to agriculture
- Monitoring - develop protocol

(topics to be discussed / decided Thursday)

Final conference 2011