Cleaner water
through
improved agricultural practice

The EU LIFE-Environment Projekt

AGWAPLAN

AGriculture and WAter PLAN

River basin management plans with local fingerprint

When river basin management plans are drawn up in Denmark in 2009 pursuant to the Water Framework Directive, the fingerprints of local farmers from eastern Jutland will be upon them.

That will be the result of the EU LIFE-Environment project AGWAPLAN, which was launched in November 2005. The participants in the project include farmers, agricultural associations, scientists, agricultural advisors and environmental authorities.

The aim of the project is to bring agricultural pressure on the drinking water supply and the aquatic environment into line with the requirements of the Water Framework Directive while at the same time enabling farmers to continue to earn a living.

The means is to develop advice, methods and tools that can promote good agricultural practice so that farmers can reduce nitrogen and phosphorus losses to the aquatic environment from their fields.

The partners in this untraditional cooperation have selected three pilot areas in eastern Jutland in which to demonstrate good agricultural practice:

- Norsminde Fjord and its catchment – the main problem appears to be nitrogen
- Lake Ravn and its catchment – the main problem appears to be phosphorus
- Hinnerup Waterworks catchment – the main problem is nitrogen.

In these areas the farmers will show how they can voluntarily attain the objectives for nutrient losses through good agricultural practice – objectives that will otherwise be imposed upon them later pursuant to the Water Framework Directive.

The Water Framework Directive

- Provides the overall framework for protection of watercourses and lakes, coastal waters and groundwater
- Establishes objectives for the environmental state of all water bodies within the EU
- Will be implemented in 2009 through river basin management plans that among other things will specify specific requirements as to agricultural losses of nitrogen and phosphorus within each individual catchment of watercourses, lakes, coastal waters and groundwater.

The AGWAPLAN project will demonstrate how the above-mentioned river basin management plans can be implemented in practice.

Integrated advice founded on three pillars

The LIFE project AGWAPLAN will ensure that the Water Framework Directive is not just imposed on the farmers against their will. To the contrary, the participating farmers will gain joint ownership of the directive by actively influencing how it is implemented through good agricultural practice.

From the beginning all the project partners will be involved in designing a new advisory tool to enable the agricultural advisors and environmental authorities to draw up integrated plans for the farms in collaboration with the farmers. The plans will integrate consideration for:

- Production
- The farming community
- The environment.

in an integrated advisory approach. Only by getting all three pillars to stand solidly will the farming community have a viable strategy that creates an understanding of the need to show consideration for the environment – and hence acceptance for voluntary measures.

Environmental information on the Internet

To facilitate preparation of holistic plans for the individual farms, an electronic map system for the three pilot areas has been developed under the AGWAPLAN project. The system contains all relevant data on production conditions and environmental conditions so that the agricultural advisors can base their advice on the best available knowledge.
When a farmer zooms in on the map the data are presented to him. Moreover, the data are accompanied by suggestions as to where the risk of nutrient loss is greatest and what he can do to reduce it.
The farmer is thereby able to focus his efforts on those places where the effect is greatest.

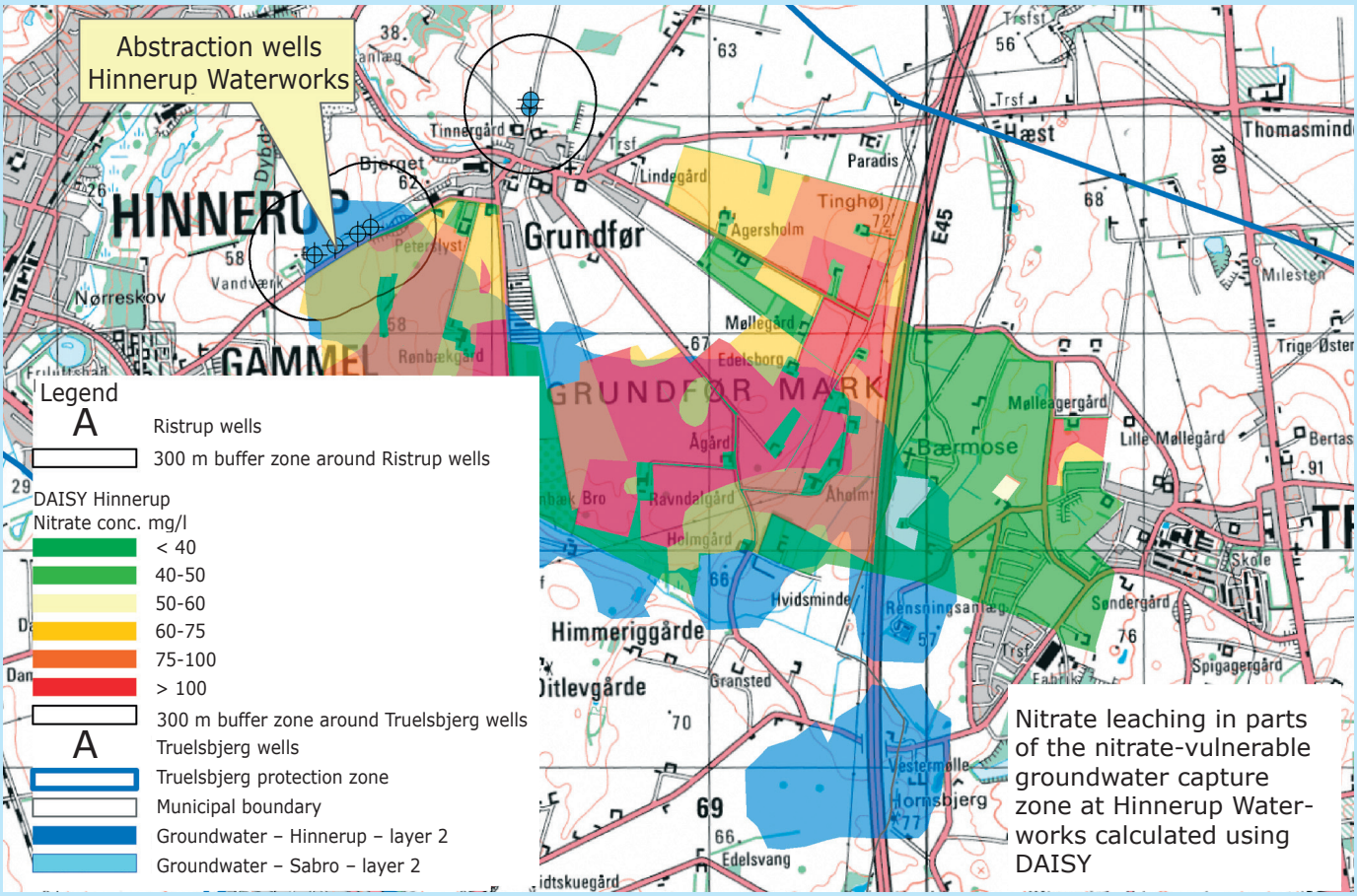
Example

A farmer zooms in on one of his fields located in sloping terrain. In the lowest part of the field an area is highlighted to indicate that there is a high risk of phosphorus loss. This is accompanied by a number of proposals for reducing phosphorus loss from that specific field, for example:

- Plough in the other direction
- Establish a border zone (with a subsidy).

The map system provides the farmer and his advisor with very specific possibilities to see how best to protect the aquatic environment – while concomitantly leaving room to cultivate the land and make a profit. It is a strong foundation for the integrated advisory system.

At the same time the map system is so clear that it helps promote understanding of the Water Framework Directive and its objectives. This understanding gives the farmer a sense of joint responsibility for it.



Nitrate leaching in parts of the nitrate-vulnerable groundwater capture zone at Hinnerup Waterworks calculated using DAISY

Integrated agriculture and water planning

AGWAPLAN is an EU LIFE-Environment project*. It is a cooperation between 20 farmers, three local agricultural associations, the Danish Institute of Agricultural Sciences, the Danish Agricultural Advisory Service, Aarhus County (until January 1st 2007) and the Danish Ministry of the Environment.

The project budget is DKK 15 million, of which half is provided by the EU and half is provided by the project partners and the Danish Environmental Protection Agency.

The project runs from November 1st 2005 to November 1st 2008. The ambition is that the results will be utilized in the implementation of the Water Framework Directive from January 1st 2009.

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**LIFE-Environment aims to implement Community policy and legislation on the environment in the European Union and candidate countries. This approach enables demonstration and development of new methods for the protection and the enhancement of the environment.*