Bioforsk - *Norwegian Institute for Agricultural and Environmental Research*

National R&D institute under the Norwegian Ministry of Agriculture and Food with 500 employees

3 Units/Divisions:

1. Soil and Environment
2. Plants
3. Plant health and Agronomy

Bioforsk – Research Fields

- Multifunctional agriculture and rural development
- Plant science and agronomy
- Environmental protection and natural resource management

- 13 locations covering all major regions in Norway

- In July 2014 merged with 2 other institutes (Forest & Landscape and Agricultural economics) becoming among the 3 largest research institutes in Norway

Soil and Environment Division

Research on:

Soil

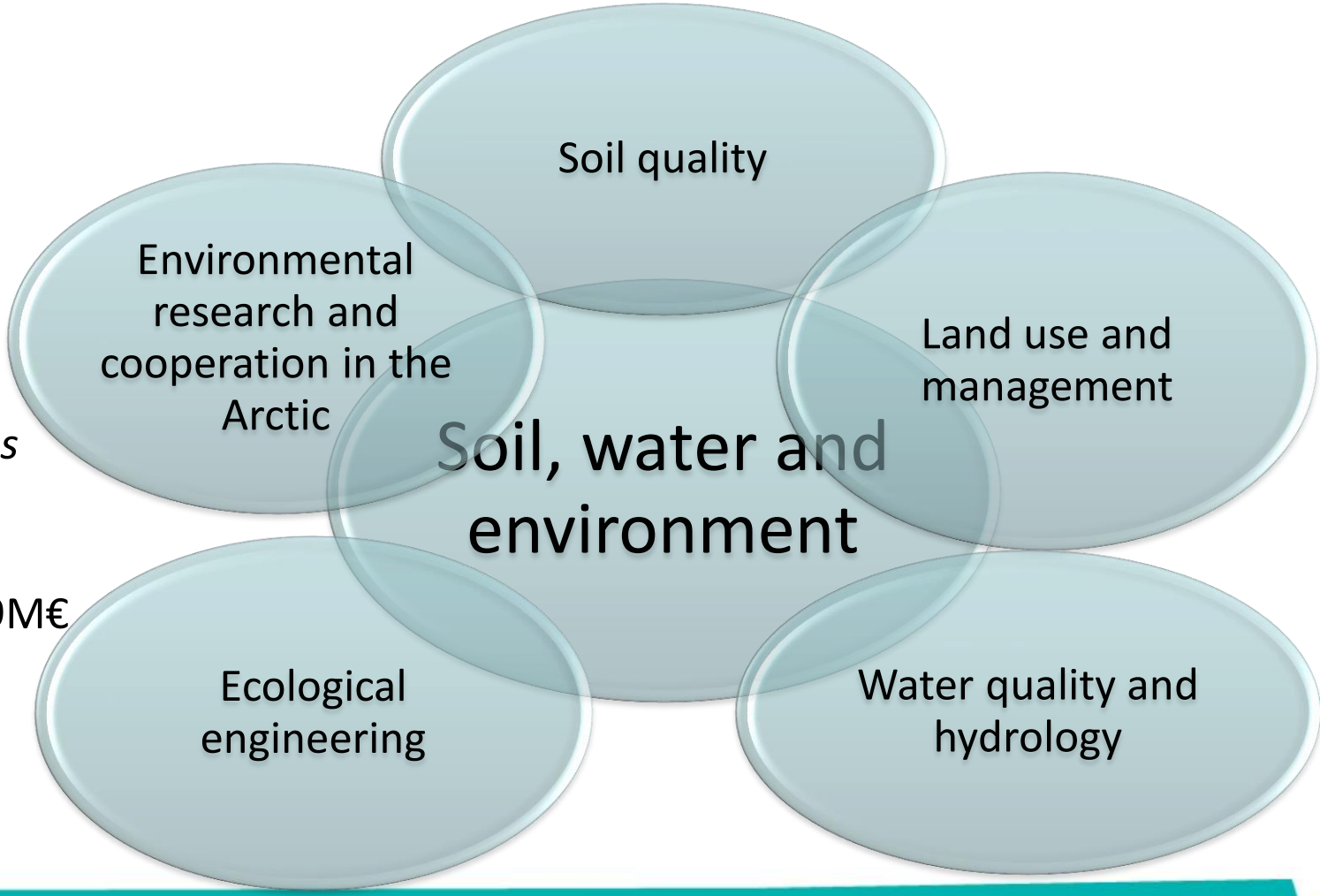
Water

Environment

Natural resources

Turnover 2013: 9M€

Personnel: 100



Examples of International Cooperation

Europe

Asia

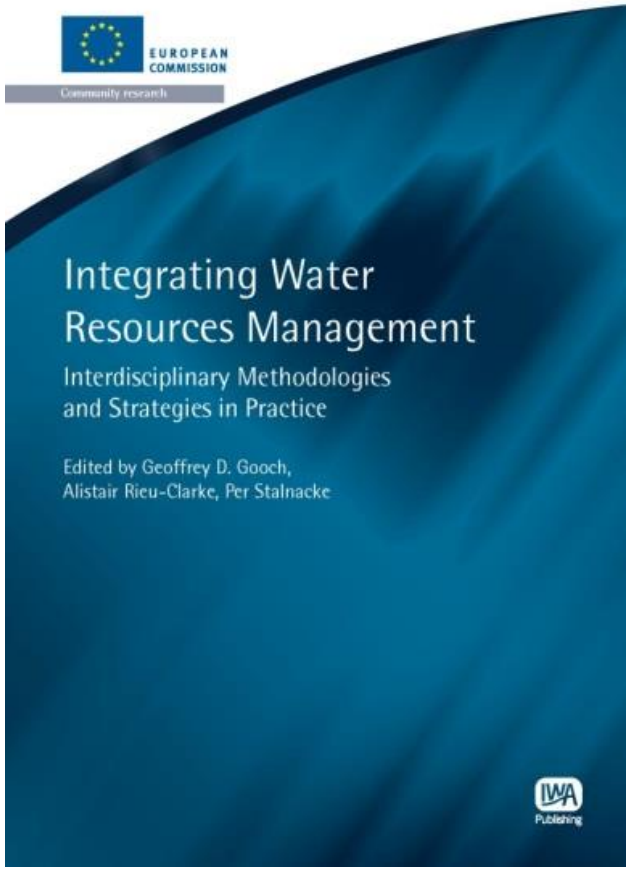
EEA Grants

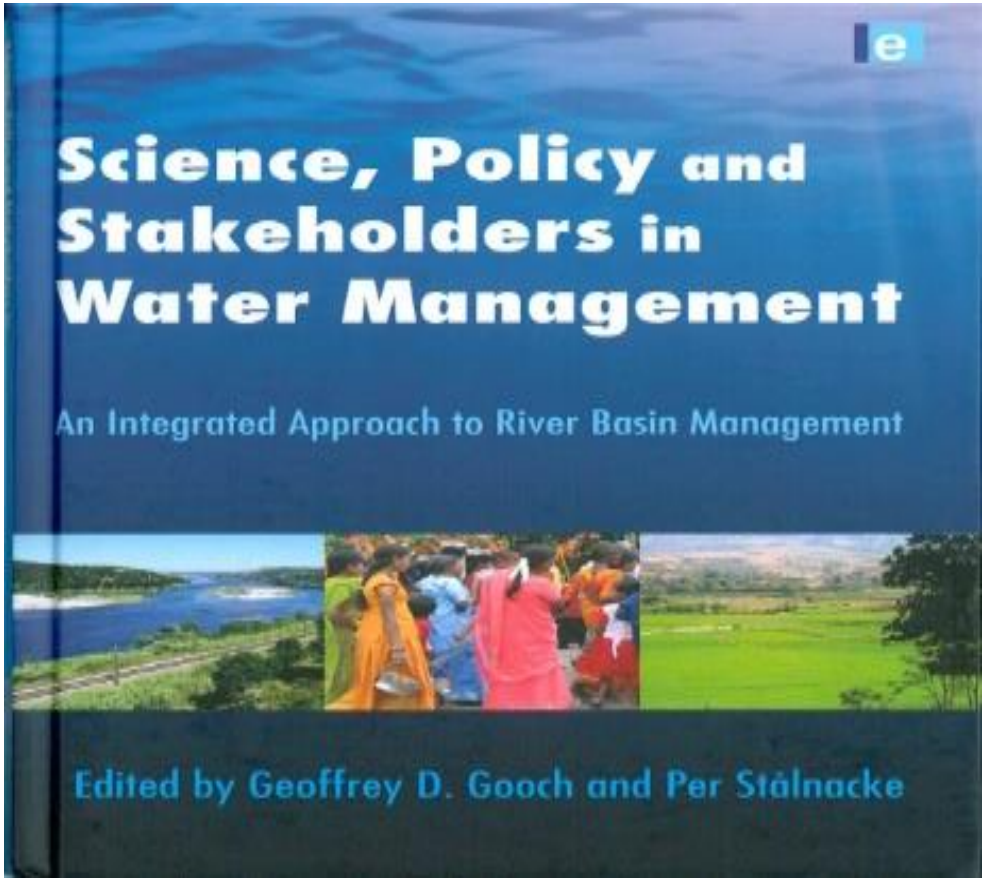
STRIVER

Strategy and methodology for improved IWRM – Striver Project

- Funded by EU FP6
- Period 2006-2009
- One out of 8 ''twinning'' river basin projects
- Contributed to EUWI, MDG and the Johannesburg sustainability Summit declaration
- Coordinated jointly by NIVA and Bioforsk (Norway)

Some STRIVER Outcomes





‘‘Easy-access products’’ for non-experts

STRIVER

STRIVER TECHNICAL BRIEF

Strategy and methodology for improved IWRM...
- An integrated interdisciplinary assessment in four twinning river basins

TB No. 12

A limnological study of the Sesan River in Cambodia in the dry season: focus on toxic cyanobacteria and coliform bacteria

Chemical water analyses during the dry period in year 2008 (NE Cambodia) show that the trophic level in Sesan was oligotrophic. Surprisingly, we found that a large portion of the phytoplankton volume in the river consisted of indicator species for a mesotrophic to eutrophic environment; indicating influence from upstream sources. More specifically, cyanobacteria and especially toxic species was detected in addition to high levels of thermo-tolerant coliform bacteria.

The STRIVER Brief series translate the results from the EC FP6-funded STRIVER project into practical and useful information for policy makers and water managers

consisted of indicator species for a mesotrophic to eutrophic environment; indicating influence from

Bioforsk

STRIVER

STRIVER POLICY BRIEF

Strategy and methodology for improved IWRM
- An integrated interdisciplinary assessment in four twinning river basins

Issue No. 16

Strategy and recommendations for Integrated Water Resources Management in Glomma, Norway

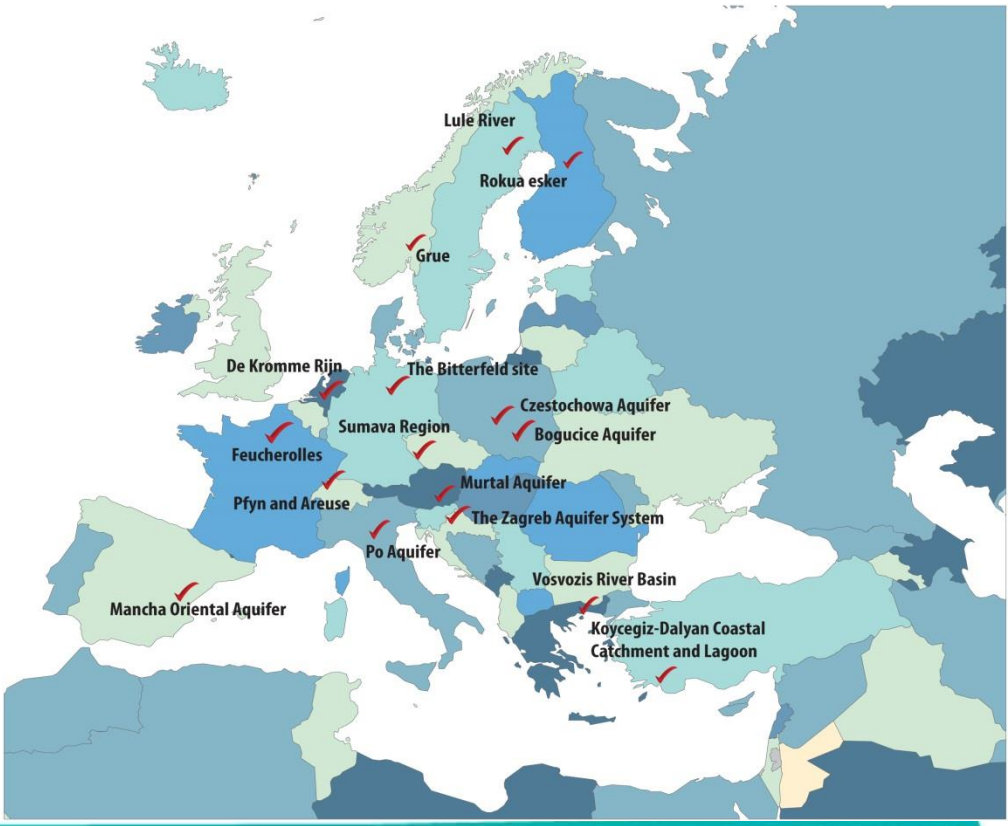
STRIVERs close interaction with water managers and local stakeholders in Glomma has strengthened science-policy linkages and has laid ground for more science-based implementation of the EU Water Framework Directive and national legislation, particularly related to hydropower development. The two scientific STRIVER tools applied; modeling of nutrients and multi-criteria environmental flow analysis has proven to be useful in practical IWRM in Glomma.

www.bioforsk.no

GENESIS
groundwater and dependent ecosystems

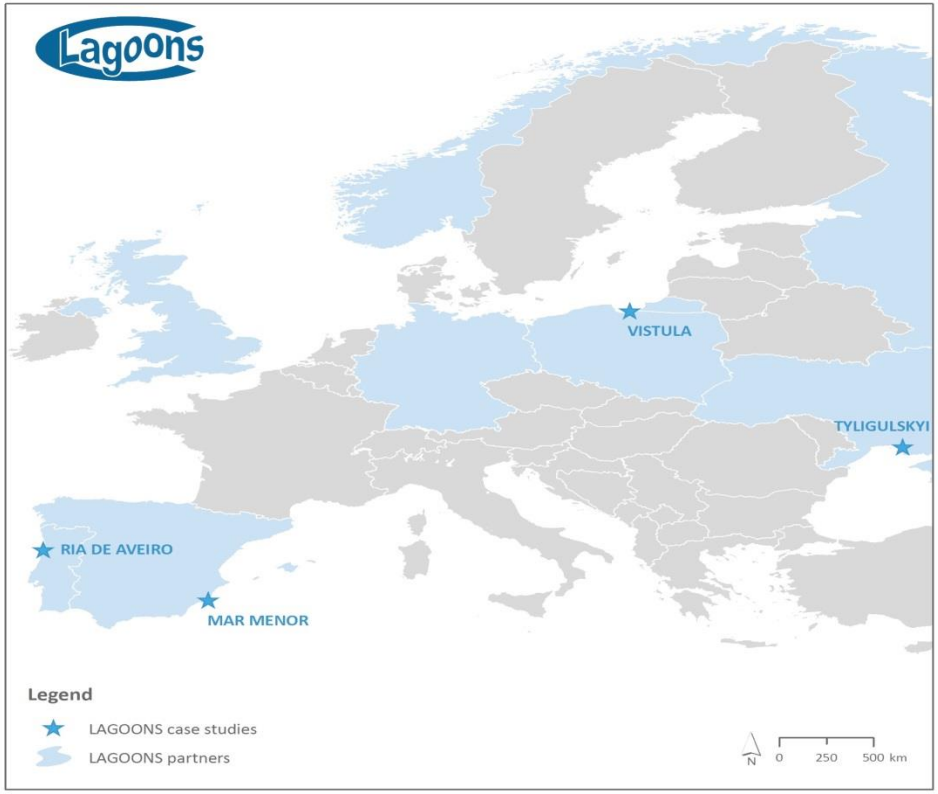
Assessing Climate Change and Land-use Impacts on Groundwater Systems in Europe

- Financed by FP7 EU (10 M€)
- Period : 2009-2014
- Quantify pollutants in groundwater
- Biogeochemical processes and distribution of pollutants
- Recommendations for Groundwater Directive
- Coordinated by Bioforsk



Integrated water resources and coastal zone management in European lagoons in the context of climate change

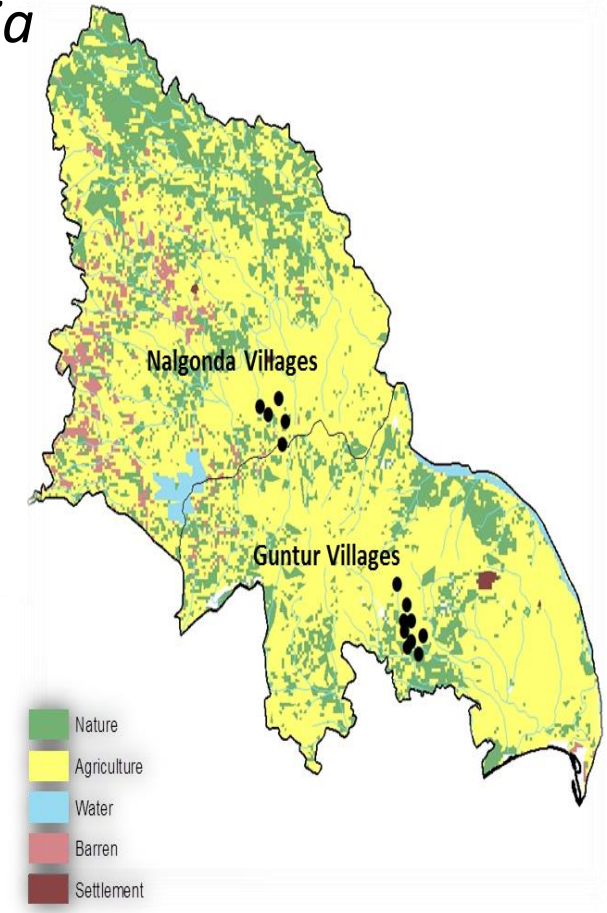
- Financed by FP7 EU (3,5 M€)
- Period : 2011-2014
- Develop integrated management of lagoons
- Focus on land- sea linkages
- Attention to science-policy-stakeholder interface
- Coordinated by Aveiro University and Bioforsk



ClimaAdapt

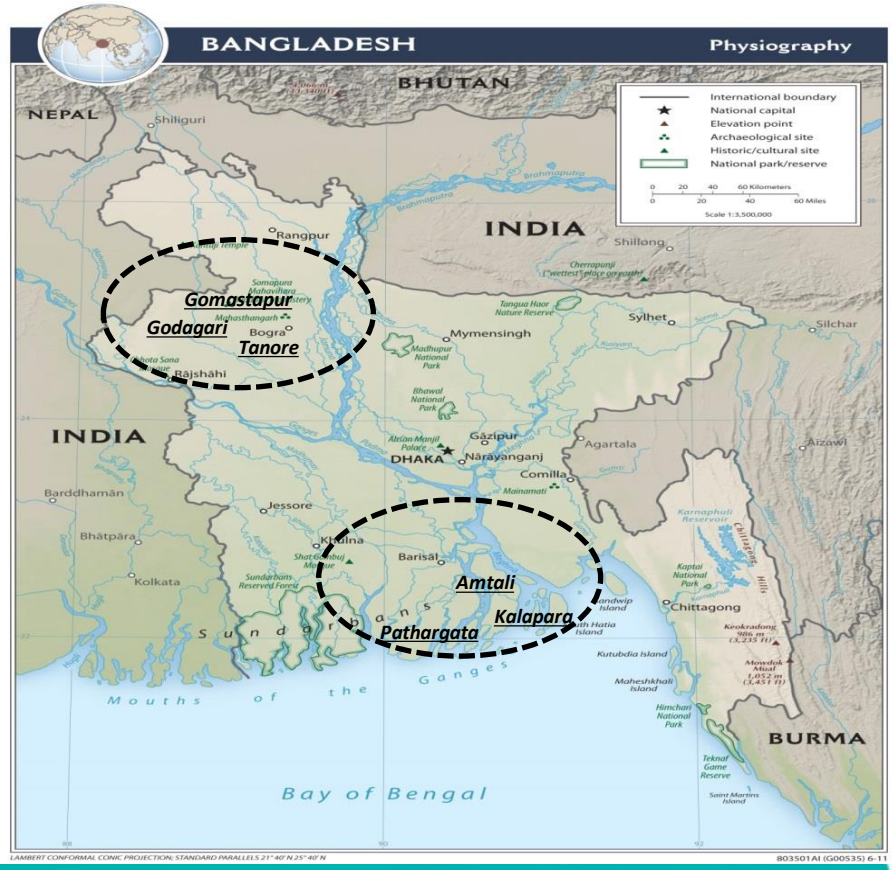
Climate change adaptation and agriculture in India

- Funded by Norwegian Embassy in New Delhi
- Period : 2012-2016
- Agricultural interventions for climate change
- Links between research, innovation and capacity building
- Stakeholders engagement



Sustaining rice production under climate change in Bangladesh

- Funded by Norwegian Embassy in Dhaka
- Period : 2011-2014
- Drought and Flood-Saline prone areas in Bangladesh
- Improve adaptation of marginal-small farmers
- Rigorous policy recommendations



Some other ongoing EU-projects

- ***Soil-Cam:*** Pollution in the upper soil/groundwater compartment
- ***Refresh:*** Modelling water quality and socio-economic impacts due to climate change
- ***Rirscs:*** Environmental impacts, necessary to underpin frameworks for the safe management of CO2 storage sites
- ***Aware:*** Science-policy-citizen linkages for water management
- ***Recoca:*** Nutrient mitigation measures for the Baltic Sea
- **Coroado:** Water recycling and reuse technologies for Latin America in rural and agricultural areas

PROJECT PL0271 - **Innovative solutions for wastewater management in rural areas**

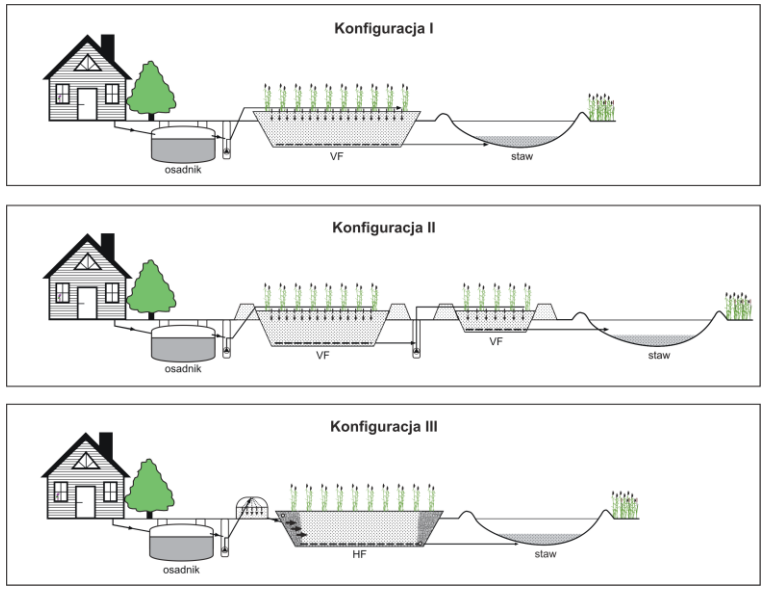
norway grants

eea grants
iceland liechtenstein norway

The project funded under the EEA Financial Mechanism and the Norwegian Financial Mechanism

Bioforsk

Reduce eutrophication of surface waters in the north-central Poland through analysis in wastewater and sludge management in rural areas



MUNICIPAL ENTERPRISE FOR WATER & WASTEWATER OF HERAKLION

AGRICULTURAL UTILIZATION OF TERTIARY TREATED WASTEWATER AS AN ALTERNATIVE WATER RESOURCE

Coordinator: MEWW Heraklion, Greece

Partners: Technical University of Crete, Technological Educational Institute of Crete, Region of Crete (Directorate of Water Management) and Bioforsk, Soil and Environment Division, (Norway)

Olive trees, vineyard and vegetable plantations irrigated with tertiary treated wastewater from MEWW Heraklion

Recording current situation of soil, crops and groundwater

Thank you very much!

Stefanos Xenarios

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