

**SUSTAINABILITY INDICATOR PROJECT WORKSHEET**

Country / State:	Denmark
Name and address of institution / organisation:	Frederikshavn Municipality, Environmental Division, Raadhus Allé 100, 9900 Frederikshavn Denmark E-mail: sloth@frederikshavn.dk

Title of project / indicator theme / issue

Sustainable municipal water supply.

Brief description of the main problems / challenges (to be approached by the initiative)

We want to maintain a plentiful supply of drinking water of good quality without detrimental effect on the environment.

In Denmark water supply is almost entirely based on the extraction of ground water. It demands normally only a limited amount of water treatment, most often a simple oxidation followed by filtration through a sand filter. It is a simple technology, with a low energy consumption and no particular waste products.

Brief description of the causes to the problem / driving forces

Intensive use of ground water can lower the level of the ground water, and cause changes in the character of the landscape. In addition streams and lakes can be short of water.
Intensive use of ground water can also make it difficult to extract enough water in the future.

Spreading of manure, fertilizer and pesticides on agriculture land can cause contamination of the ground water.

Used Indicators

Measurements of the mean level of the ground water, to determine if the extraction of ground water is sustainable. (m)

Annual extraction of ground water (m^3 /year).

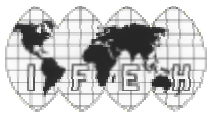
Annual loss in the water distribution system . (m^3 /year) and %

Annual breaks in the water distribution system .

Measurement of selected chemical parameters in the ground water, to ascertain if the quality of the water has deteriorated.

Consumption of electricity connected with the extraction, purification and distribution of water.

Quantity of waste products from the extraction , purification and distribution of water.



Objectives in general

To ensure that citizens and the business community have a clean and plentiful supply of good quality drinking water.

To ensure the sustainable use of ground water, to maintain the water resources in balance.

To ensure information and dialogue with citizens about the operation of the water supply.

To maintain the operation of the water supply at the optimum level.

Objectives in specific

Nothing yet.

Efforts done or planned

Continuous maintenance of the water distribution system.

Contracts with farmers where they agree not to use pesticides in the catchment area.

Advising citizens and the business community about possibilities of reducing water consumption.

Graphical presentation of time related progress on selected indicators

To follow.

How to get further information

Further information can be found on the website of Frederikshavn Municipality www.frederikshavn.dk - unfortunately the relevant parts are only in Danish.

Questions can be send to sloth@frederikshavn.dk