

**SUSTAINABILITY INDICATOR PROJECT WORKSHEET**

Country / State:	Denmark
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Title of project / indicator theme / issue

Trace of different sources of heavy metal in the sludge in a wastewater treatment plan in Espergærde.

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

Heavy metals are very poisons even in small amounts and they will accumulate through the food chain. Throughout some years the level of heavy metal (nickel, chrome and cobolt) have been so high so it hasn't been possible to use the sludge as fertilizer on farmland. The sludge has been deposited in the local landfill.

Brief description of the causes to the problem / driving forces

In the catchments area of the wastewater treatment plant there are several enterprises (metal plating and others) which are using these heavy metals in there production and through outlet to the sewage system some amount of heavy metal will end up l the wastewater treatment plant.

Used Indicators

Measurement of the amount of heavy metal (nickel, chrome, cobolt) in the sludge in mg/kg dry matter.
Measurement in specific places in the sewage system.
Measurements in the sewage system close to the enterprises who are using heavy metals in the production.
Comparison between the amount of heavy metal in the outlet from the enterprises and the amount in the sludge.

Objectives in general

Elsinore Municipality will contribute to the overall strategy that sludge from the wastewater treatment plant can be used fertilizer on farm land

Objectives in specific

Elsinore Municipality will with this work try to be sure that 100 % of the sludge from the 3 wastewater treatment plant can be used as fertilizer on farm land.

By different kind of regular information to the enterprises we will try to cut down the outlet from the enterprises.

By comparison of the amount of heavy metal in the sludge and in the outlet from the enterprises we will try to find others unknown sources to the amount of heavy metal.

Efforts done or planned

Measurements of the concentration of heavy metals (one sample pr. 10 tons sludge and pooling the samples together over 3 months).

Measurement in the sewage system.

Information meetings with the known enterprises.

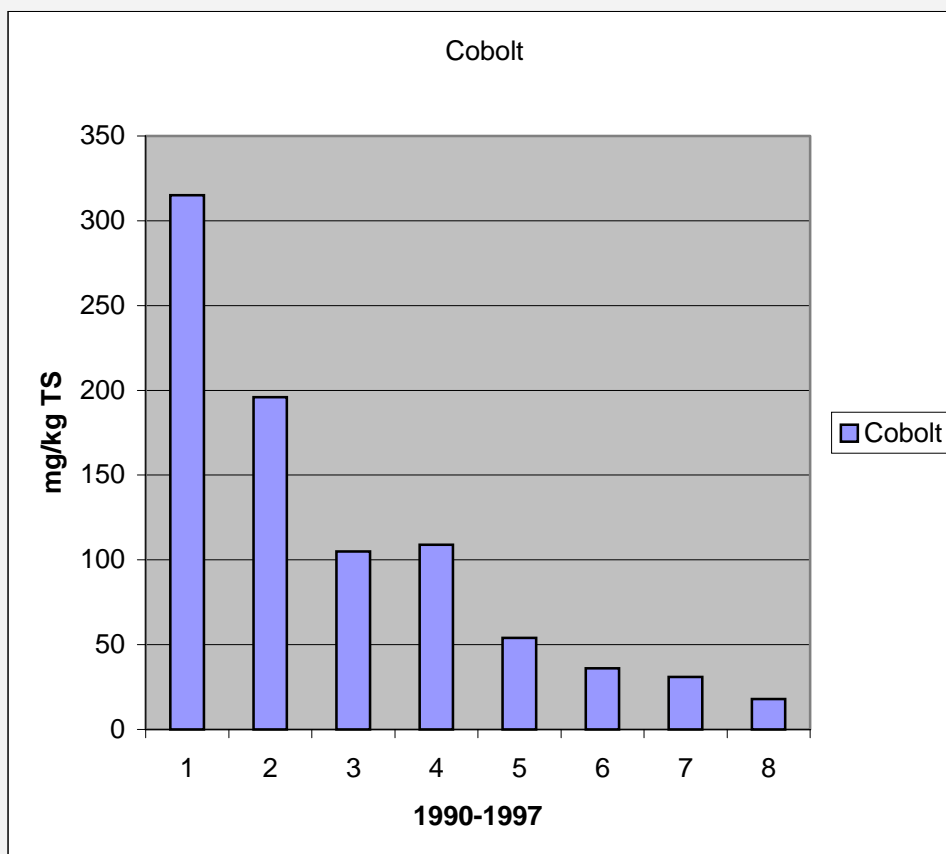
Inspection on the known enterprises.

Inspection on others enterprises.

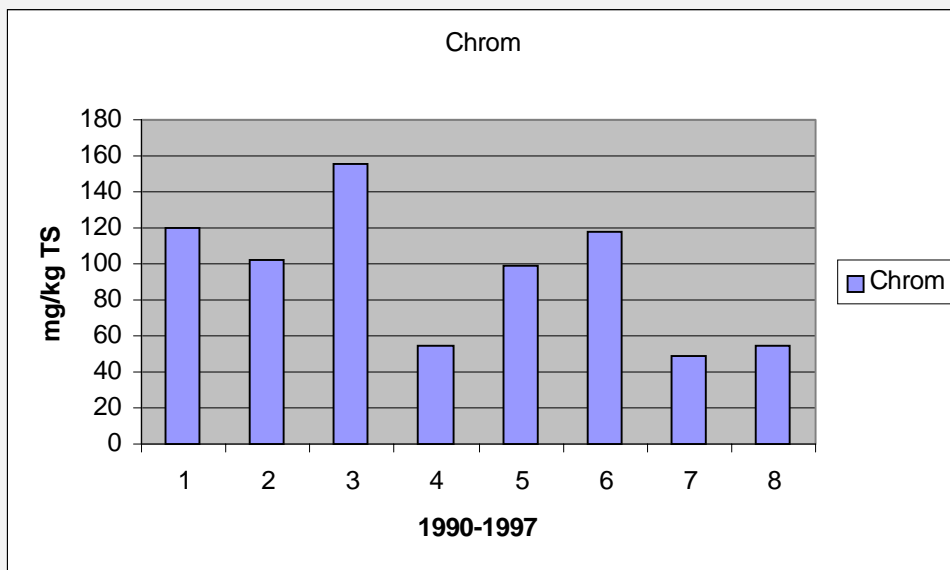
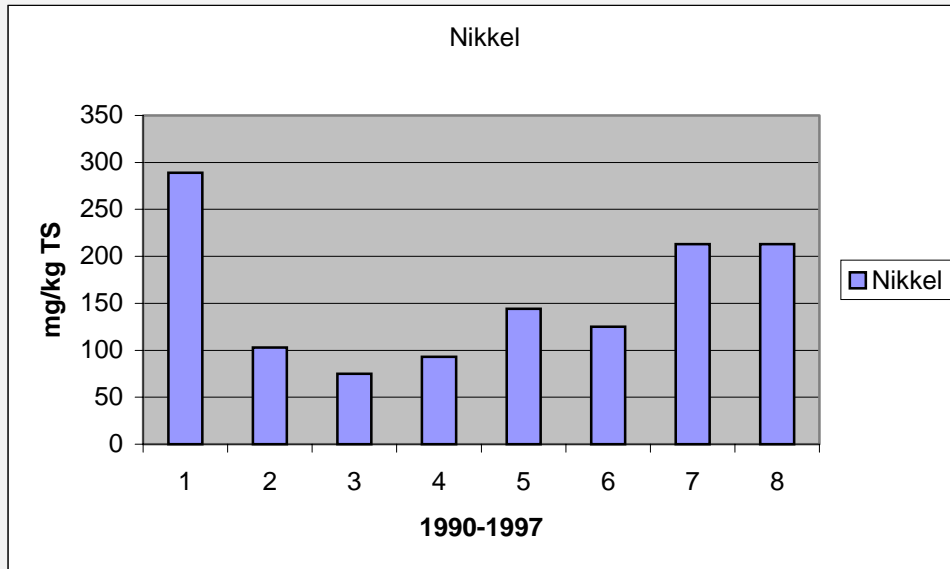
Approval of the different enterprises according to the environmental laws.

“Cleaning” of the sewage system.

Graphical presentation of time related progress on selected indicators



Graphical presentation of time related progress on selected indicators



How to get further information

You can get further information by getting in contact with the environmental department by e-mail: miljo@helsingor.dk