

# STUDIES FOR SUB-SURFACE WASTE DISPOSAL IN THE NETHERLANDS

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## Abstract

The policy in the Netherlands, with regard to wastes, has the following main objectives:

- preventing or limiting the creation of wastes,
- promotion of the use of wastes in suitable applications,
- stimulating developments friendly to the environment.

By a successful policy we may expect, that for the period 2000-2005, a minimum quantity of half a million tons a year will be available for disposal.

Permitting of underground activities lies within the jurisdiction of the mining-law, the environmental legislation and the town and country planning. To store or dispose wastes in the deep underground the construction of a cavity or in the case of rock salt the leaching of a cavern is a necessity. The construction of those structures for which mineral extraction is required, is subject to the regulations of the Mininglaw of 1810, (code Napoleon) regardless the possible economic use of those minerals. The introduction of these storage- and disposal-activities into the existing legislation system requires time-consuming political procedures. The actual situation with regard to the interaction of mining-storage- and disposal-activities in the Netherlands is elucidated.

With regard to the availability of suitable host-rocks in the underground mainly rock salt and clay-layers are considered. The storage and disposal of wastes in the Zechstein- and Röttsalt layers in the Northern- and Eastern part of the Netherlands are further investigated. In contrast to storage at surface, a final disposal in the underground gives the possibility of safeguarding by a multi-barrier system. In close cooperation between the Dutch salt-companies, researchinstitutes and governmental supervision agencies, conditions are defined with which disposal facilities have to comply, in such a manner that there is no danger, even in the long term, for contamination of the biosphere.

This paper describes in a general sense the state of the art of the research into waste disposal in the salt formations of the Netherlands.