

Environmental risk assessment of genetically modified organisms

NERI



For more than ten years the Danish National Environmental Research Institute (NERI) has carried out research and advisory tasks concerning environmental risk assessment of genetically modified organisms (GMO), including plants (GMP) and micro-organisms (GMM) for deliberate release and for contained industrial use. The research includes population dynamics, gene transfer, food chain effects and possible consequences for non-target organisms in agricultural as well as non-agricultural ecosystems. Ecological modelling is an integrated part of the research.

Assessment and training

The required environmental risk assessment of genetically modified plants and microorganisms in the EU is described in Directive 2001/18/EC including Annex II and supplementing guidance notes and for contained use in 98/81/EU.

- NERI has experience in assessing possible environmental risks associated with the field releases and marketing of GMP and use of GMM according to the EU Directives. The expertise includes evaluation of the potential consequences of possible adverse effects, evaluation of the likelihood of the occurrence of these identified potential effects, and setting up management strategies such as monitoring plans for the GMP's or GMM's. The expertise includes also development and evaluation of methods for detection of effects, traits and the specific organisms in the environment.
- NERI has trained experts from the Baltic countries and Thailand on assessment of GMO's.
- NERI has several experts in environmental risk assessment under the Cartagena protocol and a member of the scientific panel on GMO's under the European Food Safety Authority.

The six steps

The six steps in the analysis of environmental risk assessment of genetically modified organisms as outlined by the guidance notes. The notes supplementing Annex II to Directive 2001/18/EC on the deliberate release into the environment of genetically modified organisms.

Identification of characteristics which may cause adverse effects

Evaluation of the potential consequences of each adverse effect, if it occurs

Evaluation of the likelihood of the occurrence of each identified potential adverse effect

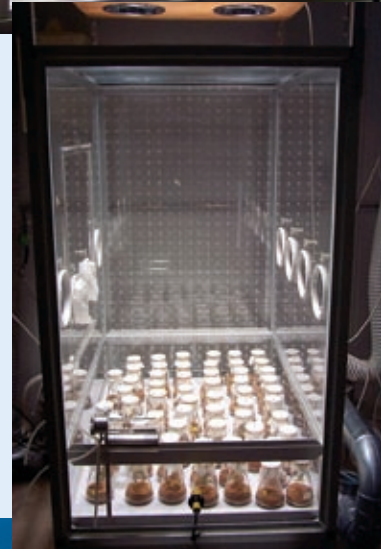
Estimation of the risk posed by each identified characteristics of the GMO's

Application of management strategies for risks from the deliberate release or marketing of GMO's

Determination of the overall risk of the GMO's

Environmental expertise

- Assessment of environmental risks effected by deliberate release of GMO's
- Assessment of risks related to the contained industrial use of GMO's
- Establishment and evaluation of monitoring plans for GMO's
- Courses in risk assessment of GMO's
- Providing assistance in relation to other uses of microorganisms e.g. as microbial pest control agents and for bioremediation.



Further information

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