

Workshop A 4

GMOs and Biodiversity – Background Paper

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Possible threats to the environment

Currently, there are great uncertainties as concerns ecological risks of GMOs. These uncertainties are the result not only of the fact that there is a lack of reliable data but also the fact that natural systems are extremely complex. Lag phases in such systems, trigger effects (the occurrence of an impact only under particular conditions, such as under extreme weather conditions), and the ability of organisms to self-reproduce are examples of relevant factors. Decisions should thus always be based on the precautionary principle.

Both for admission as well as for the later monitoring it is of decisive importance to determine under what premises a predicted or observed effect of the GMO on the environment can be classified as "ecological damage" and therefore as not tolerable. Thus it can be regarded as highly problematic that neither the regulation on admission (i.e. 2001/18/EC) nor the regulation on genetically modified food and feed (i.e. 1829/2003/EC) provide specific measures and criteria for this decisive but yet extremely vague concept of a "risk to the environment". Without concrete risk assessment criteria, there can be no uniformly enforceable protection, or precautionary, approval standards. There are also no references that would allow enforcement of general monitoring and individual case monitoring. As regards this, there are, however, far-reaching methodological deficits.

Using an asset-related approach in defining ecological damage is recommended. Using this approach, valuable environmental assets should be understood to be biological diversity as specified by the CBD and the assets specified by national Nature Conservation Acts. In the EU Sixth Environmental Action Programme member States committed themselves to "Protecting, conserving, restoring and developing the functioning of natural systems, natural habitats, wild flora and fauna with the aim of **halting** desertification and the **loss of biodiversity [by 2010]**, including diversity of genetic resources, both in the European Union and on a global scale" (from overall aims in Art. 2).

Decision VII/30 of the Convention on Biological Diversity (CBD) *defines* biodiversity loss "as the long-term or permanent qualitative or quantitative reduction in components of biodiversity and their potential to provide goods and services, to be measured at global, regional and national levels".

The CBD-information paper *UNEP/CBD/SBSTTA/9/INF/26* recognises that the notion of biodiversity loss is complex and concludes as a basis for developing indicators that biodiversity loss can consist of:

- a) A decline in extent, condition or sustainable productivity of ecosystems
- b) A decline in abundance, distribution or sustainable use of species populations, and extinctions
- c) Genetic erosion

Thresholds would have to be established below which ecological damage = loss of biodiversity would have to be accepted. Also timeframes and geographical frames need to be defined. The basic prerequisite for assessing ecological damage is having baselines and GMO-free reference areas. Therefore it is necessary to keep sufficiently large areas free of GMOs.

Further, given the centralized nature of the approval system, special attention should be given to seeing to it that national interests are adequately included in the European decision-making process by having the competent national authorities participate in a suitable manner.