

Do Genetically Modified Organisms hold a risk for protected areas?

Genetically modified plant material can enter protected areas in several ways, e.g. via wind (pollen deposition), water (GMO runoff) or due to outcrossing. Genetically modified plant material, which contains insecticidal proteins (e.g. Bt-maize), can directly affect sensitive species in protected areas. Herbicide resistant plants (e.g. glyphosate resistant oilseed rape) have a more indirect effect on the environment: when they are cultivated, the application of their complementary, broad-spectrum herbicides (e.g. roundup) can adversely affect weeds and may impact invertebrates and vertebrates. Changes in cultivation practice, such as less crop rotation, expansion and aggregation of agricultural areas, additionally reduce agrobiodiversity.

Many non-target species enter cropland areas for feeding, breeding, or during migration, hence exposure to genetically modified plants is likely to occur. However, ecotoxicological studies are missing for most species, especially for endangered ones. Hence, it is difficult if not possible to estimate the hazard for non-target species resulting from GMO-cultivation. In order to fill this gap of knowledge and to increase the scientific basis of the risk assessment, further studies are required.

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