

Preliminary Outline for Article 13 Report "Maize and Biodiversity: The Effects of Transgenic Maize in Mexico"

Chapter 1. Context and background on wild and cultivated maize in Mexico

Agronomic and economic context of maize cultivation in Mexico and international trade in maize

How would unmanaged introduction of transgenic maize likely occur?

What are the alternatives (e.g., improved hybrids, open-pollinated varieties, land races, etc.) to which this should be compared? Both immediate and longer-term considerations should be taken into account (NRC 2002, pp 87–89). Present regulatory structures and international treaties should be considered as boundary constraints (they should be taken as given).

Chapter 2. Identification of potential benefits and risks (see NRC 1996)

(This should probably be an iterative process to engage as many of the interested and/or affected parties as possible. Iteration may be necessary because the first cut at identification will likely reveal additional interested and/or affected parties.)

Chapter 3. Assessment of effects on genetic diversity

Effect on land races

Effects on wild relatives

Effects on non-transgenic maize varieties

Germplasm conservation: *in situ*, in seed banks, and other

Chapter 4. Assessment of effects on natural ecosystems

Direct and indirect effects of transgenic maize cultivation

Direct and indirect effects stemming from gene flow

Chapter 5. Assessment of biological effects in agriculture

Effects on farming practices

Potential resistance evolution for *Bt* maize and other pest-protected transgenic maize varieties

Effects of gene flow

Chapter 6. Assessment of social and cultural effects associated with transgenic maize production

Background on social and cultural aspects of land race improvement and conservation of wild relatives

Effects on farmer choice and rights

Effects on productivity, yields and farm income

Effects on cultural practice, identity, and customs

Chapter 7. Assessment of human and animal health effects

Human food safety

Animal feed safety

Long-term monitoring and evaluation

Chapter 8. Framework by which potential benefits and risks can be judged

Economic valuation models of genetic diversity

Economic analysis of agricultural productivity

Ethical and political considerations of changes in agricultural practice

Chapter 9. Identification of management tools to mitigate or avoid the potential risks and to enhance or realize the potential benefits

Biological tools for cultivation, monitoring and response

Oversight/regulatory tools and intergovernmental agreements that could affect these

Chapter 10. Analysis of management options, including identification of possible tradeoffs