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# Politicizing the Precautionary Principle

Why disregarding facts should not pass for far-sightedness

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# 1. European GMO regulation in retrospective

1990s Cautious optimism / little experience

Discursive Shift toward 'Risk': Monsanto vs Greenpeace

food scandals / controversial risk studies on GMO

*Precaution  
has Priority*

- *De-Facto Moratorium in 1998 in the EU / withdrawal of labeled GMOs*
- *Shift toward influencing public debate in developing countries*

**Hijacking the Purpose of the Convention on Biological Diversity (CBD):** South prepared to protect its hot spots of biodiversity in return for technology transfer and capacity development, especially in the field of biotechnology (Art. 19), to enable a more sustainable use of the resources

- **Cartagena Protocol on Biosafety:** Transfer of preventive regulation to prevent technology transfer



# European GMO regulation in retrospective

EU Regulation: 2001/18/EC on the deliberate release of GMO into the environment

Decision in favor of ***process-oriented regulation of GMOs.***

**Problem with definition of a GMO:** something that does not occur naturally, mutagenesis is GMO but exempt from GMO regulation

**WTO case** in 2006 on “European Communities Measuring and Affecting the Approval and Marketing of Biotech Products”

- Dispute settlement panel faults the EU Union for causing undue delay (approval of the use of the Precautionary Principle as it is defined in the SPS Agreement)
- No retaliation measures by US/Canada/Argentina. General consensus that Europe should conduct more publicly funded risk research

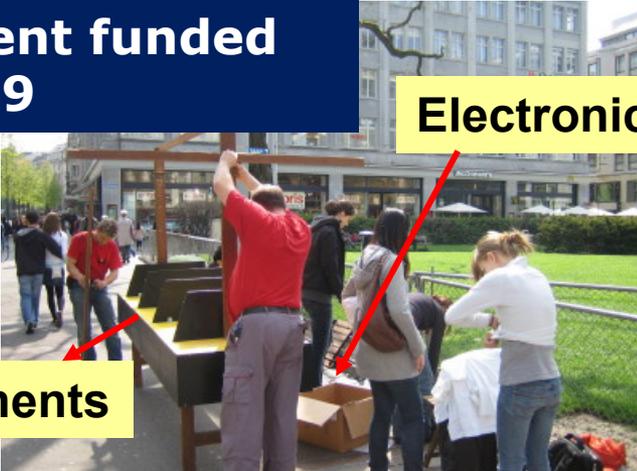
CH: National Research Program (**NRP59**): CHF 12 Millionen

A Decade of EU funded risk research on GMOs: EUR 200 Million

- *Yes, there are risks, but they are **known and therefore manageable***

# 2. What do consumers really want?

**A Natural Field Experiment funded by NFP 59**



**compartments**

**Electronic Cash Reg.**



**Label**



**decoration**

**Sales team in „uniform“**



**Logo: „corn bread: a delicacy“**

**Bread bags with questionnaire**

# Basic insights from the field intervention study

Market share of GM corn bread around 20%

Freedom of choice and transparency is welcome

Package size more important than bread type

Attitudes toward GMOs rather weak (hardly negative reactions)



## Response to the study:

**Retailers:** These consumers cannot possibly be our clients

**Politicians:** Extending the moratorium invoking the precautionary principle (including socioeconomic / consumer concerns)

# 3. Politicizing the Precautionary Principle (PP)

## PP is one of the most important guiding principles in environmental risk management

- the void in scientific understanding concerning risks of secondary effects/ complexity of cause-effect relations warrant further research

## EU Communication on the Precautionary Principle (2000):

PP has to be based on the basic principles of risk management (Proportionality, non-discrimination and consistency in the application of measures, risk-benefit comparison, minding new findings in science)

## Currently, all principles are infringed in the application of the precautionary principle in Europe

*Excuse:* Consumers would not buy GMOs in Europe

Third extension of the moratorium in Switzerland in 2017, Report on the PP published by the Federal Ethics commission (EKAH 2018)

- **gene editing = GMOs = PP = Ban**



## 4. The Gene-Editing Debate in the EU

***European Court of Justice (25.07.2018): Gene-editing is subject to process-oriented GMO regulation in line with Directive 2001/118/EC***

### **Resistance also in the mass media:**

- UN SDGs want sustainable intensification. This does not work without biotech
- Uncertainty: mutagenesis likely to have more 'off-targets'- effects than gene-editing?
- Traceability: How to track if intervention is not known (should we use artificial markers?)
- Industrial concentration > New chance to challenge industrial concentration in agribusiness (a product of costly GMO regulation in the first place)



 **frontiers**  
in Plant Science

P. Aerni (2019):  
Why disregarding  
facts should not  
pass for  
farsightedness

## 5. Is European anti-biotech policy undermining UN SDGs?

### The case of Vitamin A rice:

Globally, 250 million children are Vitamin A deficient. Every year 250'000-to 500'000 go blind because of Vitamin A deficiency

**Golden Rice** offers a great chance...and freedom of choice

- **Bangladesh** has approved «Golden Rice» for cultivation in spring 2019. Prior to that the country made very positive experience with Bt eggplant, a food crop

### Demand by the European Parliament

(Heubuch Report 2016): No support for the 'New Alliance for Food and Nutrition Security in Africa' if GMOs are involved

- Offends UN CBD, OECD Paris/Busan Declaration on Aid Effectiveness
- Contrary to the SDGs and Agenda 2030



- **What is the exact morality behind this?**

## 6. Final Remarks

How were the great **sustainability challenges** addressed in the history of mankind?

- Not through regulation but actually innovation (e.g. kerosine as a equivalent substitute for **walefish oil in the 19th century**)

Qualitatively equivalent synthetic (plant-based) **substitute for palm oil** proved possible thanks to advanced biotechnology (C16 Biosciences)

**Problem of framing:** We would prefer the 'natural' (thanks to retailers we confuse 'natural' with 'sustainable', and 'technology' in agriculture with 'unpredictable risk' to be banned with PP)

- **GMO-free label under attack** for being misleading in Germany

Climate change experts are raising the issue of biotechnology (**IPCC 2019**, Aerni et. al. 2016) > they have a different understanding of the PP

- **A transition from a process- to a product based approach in GMO regulation would at least allow for a case by case discussion and make regulation more consistent with PP**