



**GMO-FREE REGIONS MANUAL:
CASE STUDIES FROM AROUND THE WORLD**

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FOREWORD

Dear reader and user of this manual,

There is no doubt about the incompatibility of genetically modified organisms (GMOs) with organic agriculture.

In the Mar del Plata conference declaration (1998), the International Federation of Organic Agriculture Movements (IFOAM) articulated a public position regarding GMOs. Consequently, the prohibition of the use of GMOs has been expanded upon in many IFOAM documents, such as the IFOAM Basic Standards.

Recently, the foundational elements of organic agriculture were laid down in the Principles of Organic Agriculture, approved by the 2005 General Assembly in Adelaide, Australia. The principles show that on all levels - Health, Ecology, Fairness and Care - GMOs are incompatible with organic agriculture.

IFOAM is well aware of mostly local and regional but as well national and international activities underway in the anti-GMO movement to set up GMO-free regions. This manual builds on existing expertise by making such experiences publicly available. The manual also provides comprehensive reports from different legal settings, as well as samples of letters and links to useful websites.

It is our wish that this manual may inspire others to set up GMO-free regions as well so that, worldwide, our seeds and food will remain GMO-free. Since seeds¹ are a treasure we inherited from our ancestors to feed us and future generations, we must ensure we do all we can for their safeguarding. I trust that this manual will be of help for this task.



Gerald A. Herrmann, IFOAM President

1 See seed saving training manual available at <http://www.ifoam.org/training>

ACKNOWLEDGEMENTS

Most of the information you will find in the chapters of this manual is from GENET-news postings, the information service of the European NGO Network on Genetic Engineering (GENET) (archived at <http://www.gene.ch>) and other publicly accessible internet sources. The sources are mainly articles from news agencies and the media, press releases and reports from companies and NGOs. To ensure that this text remains easy to read, these numerous sources are not specified. Bibliographic data and internet addresses of important documents are only given in some cases.

We would like to thank several individuals and organizations for their support in providing information that is not available in the internet and translating legal texts.

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LIST OF ABBREVIATIONS

AbL	Working Group for Rural Agriculture (Arbeitsgemeinschaft bäuerliche Landwirtschaft, the German association for small and family farmers)
AGS	Advanced Genetics Sciences (a Californian biotech company)
ANPED	Northern Alliance for Sustainability (an international NGO based in the Netherlands)
ANZFA	Australia New Zealand Food Authority
BSA	German Federal Agency for Plant Varieties (Bundessortenamt)
Bt	Bacillus thuringiensis (characterizes GE plants that possess a transgene from this soil bacterium producing a toxin for certain insects)
BUND	Friends of the Earth Germany (Bund für Umwelt und Naturschutz Deutschland, BUND)
DNA	desoxyribonucleid acid (the macromolecul harbouring the genetic information)
EIA	Environmental Impact Assessment
ERMA	Environmental Risk Management Authority (of New Zealand)
ETH	Swiss Federal Institute of Technology Zurich (Eidgenössische Technische Hochschule Zürich)
FAO	Food and Agriculture Organisation (of the United Nations)
FOEN	Federal Office for the Environment (in Switzerland)
FSS	Fundacion Sociedades Sustentables (NGO in Chile)
GE	genetically engineered (analogous to genetically modified)
GMO	genetically modified organism
HSNO Act	Hazardous Substances and New Organisms Act (of New Zealand)
ICPPC	International Coalition to Protect the Polish Countryside (NGO in Poland)
LL	Liberty Link (a trademark of Bayer CropScience for its GE plants that withstand its herbicide Liberty containing glufosinate)
LMO	living modified organisms (legal term in the Cartagena Protocol on Biosafety, essentially the same meaning as GMO)
LTCCP	Long Term Council Community Plan (in New Zealand)

MP	Member of Parliament
NABU	Birdlife Germany (Naturschutzbund Deutschland)
NGO	nongovernmental organization (the two other distinct societal groups are the governmental and private sector organizations)
NIH	National Institutes for Health (of the United States)
NOOM Act	New Organisms and Other Matters Act (of New Zealand)
RCGM	Royal Commission on Genetic Modification (in New Zealand)
RR	Roundup Ready (a trademark of Monsanto for its GE plants that withstand its herbicide Roundup containing glyphosate)
SEARICE	South East Asia Regional Institute for Community Education (NGO in the Philippines)
SPS Agreement	Sanitary and Phytosanitary Agreement (of the WTO)
UNESCO	United Nations Educational, Scientific and Cultural Organization
USDA	United States Department for Agriculture
WTO	World Trade Organization

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INTRODUCTION

For over 30 years, the debate about the risks of genetically modified organisms (GMOs), calls for moratoria and bans on GMOs, the desire to establish GMO-free zones, and the creation of GMO regulation have not been new phenomena; they have been inseparably connected with the development and application of genetic technologies. Molecular biologists, concerned about the potential risks of their work, started the public debate on GMOs, which involves all sectors of modern society: government, industry, and civil society. The events and discussions during the decisive years from 1971 until 1977 shaped the regulatory approach to the new technology of the United States. Meanwhile, the international model of GMO regulation and the majority of corresponding national laws are built upon a different approach than developed in the United States. But since the United States is still the main developer and user of GMOs, it is also influencing the public discussion in all other countries that enter the field of genetic engineering and its legal regulation.

PRECAUTION VERSUS SELF REGULATION – THE ASILOMAR CONFERENCE²

In the early 1970s, the first experiments to combine deoxyribonucleic acid (DNA) molecules in the laboratory and to reintroduce them into bacteria to give them properties which they do not possess naturally were performed in California, United States. At the same time, experienced U.S. cancer researchers became concerned about the careless attitudes in many laboratories which were working with pathogenic microorganisms and cells cultures. At a conference in 1971, scientists learned about the biochemist Paul Berg's experiments conducted at Stanford University, California using viruses that can cause cancer in some mammals (e.g. hamsters) to genetically manipulate human bacteria. Later, they alerted Berg about possible dangers of his work for humans. Berg could not convince his colleagues of the experiments' harmlessness and, in the end, decided to stop them. In a different institute, Stanley Cohen worked on similar experiments but used plasmids to transfer newly combined DNA into bacteria. These plasmids were non-pathogenic circular pieces of DNA extracted from bacteria. In 1973, Stanley Cohen and Herbert Boyer's research groups succeeded in multiplying frog genes *ad libitum* in bacteria using the new plasmid technology. When this result became public, the researchers were bombarded with requests from scientists to send them the plasmids for their own research. Berg and his colleagues wondered whether the uncontrolled spread of these new research tools was a good idea considering possible ecological and health consequences.

2 The information for this subchapter has been summarized from a pioneering German publication on the controversial start of the development of genetic engineering in the USA: Jost Herbig. 1978. Die Geningenieure [The Gene Ingenieurs]. 263 p.

At the Gordon Conference on Nucleic Acids in 1973, Boyer reported on these new developments and concerns. Conference participants drafted a resolution which was accepted with a narrow margin of 48:42. The resolution warned about the dangers of hybrid DNA molecules for laboratory staff and the general population and called upon the National Academies of Sciences and the National Institutes for Health (NIH) to develop safety guidelines. Supported by Berg, Maxine Singer and Dieter Soll published this call in the respected scientific journal “Science” in September 1973.³ The resolution was effective; the NIH established a commission to draft guidelines on the work with new DNA hybrids. The commission was composed of the main pioneers of the new research field „molecular biology“ and other eminent biologists, amongst them James Watson. Soon after, they decided that an international conference was necessary to support their task. In an unprecedented approach, they invited their colleagues through a dramatic appeal published in three leading science journals, in which they suggested stopping certain types of experiments and expressed concerned about the use of the human bacterium *Escherichia coli*.⁴ This appeal and a parallel press conference initiated a broad discussion on the potential risks of genetic engineering, a discussion which still continues today. At the conference, the scientists had planned to talk about the conditions under which they could work safely, but the public started a debate whether this work should be undertaken at all. Later, Berg tried to downplay the significance of the appeal and Watson even declared that the warning was a big mistake because now molecular scientists were being compared with their colleagues working in nuclear sciences, although the risks of genetic engineering were only hypothetical.

In spring 1975, the announced conference was held in Asilomar, California. Conference reports described the picturesque scenery when millions of Monarch butterflies populated the place, not knowing of course that, 25 years later, this butterfly would become the symbol for the debate on the environmental risks of genetically engineered (GE) crops. The participants at Asilomar recognized that, in the future, more serious problems might arise from the industrial, medical and agricultural application of genetic engineering, but they restricted their actual debates on health risks. During the conference, it became clear that the scientists were divided on whether guidelines should be developed at all and, if yes, on which scientific criteria risk classifications of experiments should be based. The emerging idea to only use microorganisms bred in a way that they could not survive outside of the laboratory was seen as a solution. In the end, the opinion seemed to prevail that the scientific community could only benefit from a set of guidelines that anticipate potential hazards but allow work to continue. It was felt that reasonable self-made guidelines would not be as detrimental to scientific work and expected future business as governmental guidelines and public influence. Only two of the 140 participants voted against the suggested principles: Joshua Lederberg and James Watson, the latter a determined opponent to all regulations concerning genetic engineering.

3 M. Singer, D. Soll. 1973. Guidelines for DNA Hybrid Molecules. Science 181: 1114.

4 P. Berg et al.. 1974. Potential Biohazards of Recombinant DNA Molecules. PNAS 71: 2593-2594.

THE U.S. MODEL OF GMO REGULATION

In 1975, Cohen reported in an article that his research enabled scientists to cross the barriers which separate biological species, suggesting to readers that their experiments had created and invented new species. Even today, the novelty of GMOs and their properties is used by researchers to claim patents on them. Soon after the article's release in 1975, U.S. politicians started drafting regulations on GMOs. This alerted the molecular biologists who began trying to explain that GMOs are not different from natural organisms. In 1977, such a draft law was stalled when Cohen convinced politicians that his new approach also could have been done in the natural environment. This successful lobbying work was the basis for a whole generation of molecular biologists' attitude. Expecting a revolution in biology and an immense impact on business, GMOs were declared as natural as all other bred organisms, and as such, did not require specific regulation.

In 1976, the NIH adopted GMO guidelines which set up a system based on biological and physical containments to reduce possible health risks. The NIH guidelines formed the basis for similar guidelines in European countries, until the EU started in the late 1980s to create specific GMO laws. The United States never drafted GMO regulation but used existing frameworks to set up a voluntary consultation system in order to deregulate new transgenes and their proteins.

GMO-free zones in the U.S. system

The U.S. system of deregulation results in a lack of governmental overview of GMOs once they have passed the pre-market procedure. State and local legislation may introduce GMO moratoria and bans on all or certain GMOs in their territory. Though there have been many attempts to achieve this throughout the United States, most have been unsuccessful until now. A specific legal means against GMO-free zones are so-called pre-emption laws promoted by the U.S. biotech industry and mainstream farmer organizations. For example, these state laws forbid communal legislation dealing with GMO bans or labeling.

THE INTERNATIONAL MODEL OF GMO REGULATION

INTERNATIONAL LEGAL DEFINITION OF GENETICALLY MODIFIED ORGANISM

This definition is given by the UN Cartagena Protocol on Biosafety. The term “living modified organism” (LMO) was coined at the RioSummit in 1992 for political reasons. The current meaning of LMO is almost identical to the meaning of GMO in other regional and national laws.

“**Living organism**” means any biological entity capable of transferring or replicating genetic material, including sterile organisms, viruses and viroids.

“**Living modified organism**” means any living organism that possesses a novel combination of genetic material obtained through the use of modern biotechnology.

“**Modern biotechnology**” means the application of:

- a. In vitro nucleic acid techniques, including recombinant deoxyribonucleic acid (DNA) and direct injection of nucleic acid into cells or organelles, or
- b. Fusion of cells beyond the taxonomic family, that overcome natural physiological reproductive or recombination barriers and that are not techniques used in traditional breeding and selection.

Source: <http://www.biodiv.org/biosafety/protocol.shtml>

At the 1992 Earth Summit in Rio de Janeiro, many participants propagated the use of GMOs as a perfect means to overcome the negative environmental and health impacts of modern agriculture and intensification of production and called for massive international support for the development of such new organisms. Moreover, they argued that GMOs are especially suited to support poor countries in their development. Some negotiators, however, were aware of the broad critical debate on the application of GMOs that had been unfolding in the United States and in Europe. They introduced a paragraph into the text of the Convention on Biological Diversity that allowed the members of this convention to start negotiating on an international standards setting regime for GMO risk assessment and governmental decision making procedures. The creation of the Cartagena Protocol on Biosafety – as it was called upon its adoption – faced strong resistance by industrialized countries and its biotech industries. Both the United States and most EU countries argued that international frameworks were not necessary and that they would be detrimental for the development of GMOs, especially for poor countries. Many developing countries, led by the African Group, insisted that an international framework – legally binding and specifically dealing with GMOs – is necessary to protect them from GMO risks and undue influences on their national legislative procedures. Only in 1998 and 1999, when some EU countries moved away from a policy fully supportive toward GMOs to a more balanced position (see the chapters „EU Moratorium on GMO Approvals“ and „1997: GMO-free referendum in Austria“), they were able to agree with developing countries to accelerate biosafety negotiations. The treaty was adopted in January 2000.

The basic assumption of the Cartagena Protocol and the EU GMO legislation is that a GMO is an organism with new traits which have been introduced by methods that overcome natural breeding barriers. The novelty of this organism may cause new risks. Our current knowledge of existing organisms is not sufficient to determine such risks without performing a specific risk assessment. To assess new risks, a specific regulatory approach for GMOs including a comparison with their unaltered predecessors is necessary. As a basic rule, such a risk assessment is necessary for each new environment in which a GMO is introduced.

GMO-free zones under the Cartagena Protocol and in the EU system

The effect of the Cartagena Protocol, as well as the implementing national law, is that, if a GMO has been approved upon a risk assessment, the use of that GMO is not only legalized in the respective country, but the approval also constitutes a right to use this specific GMO. Both regulations choose the precautionary principle as a basis for decision making, and any decision making process must use a scientific risk assessment as its starting point and has to be performed for each individual GMO (case-by-case approach). In the case that scientific uncertainty over the risks remains after a risk assessment, the necessary governmental actions to protect biodiversity – including a ban – can be taken. In GMO approval systems based on the Cartagena Protocol or the EU system, legislative bans of GMOs are generally regarded as illegal – or have to be based on other regulations that interfere with or supersede the GMO legislation in their specific application.

CARTAGENA PROTOCOL ON BIOSAFETY

Article 16 - Risk Management

5. Parties shall cooperate with a view to:

- (a) Identifying living modified organisms or specific traits of living modified organisms that may have adverse effects on the conservation and sustainable use of biological diversity, taking also into account risks to human health; and
- (b) Taking appropriate measures regarding the treatment of such living modified organisms or specific traits.

DIRECTIVE 2001/18/EC ON THE DELIBERATE RELEASE INTO THE ENVIRONMENT OF GENETICALLY MODIFIED ORGANISMS

Article 19 - Consent

3. The written consent referred to in Articles 15, 17 and 18 shall, in all cases, explicitly specify: [...] (c) the conditions for the placing on the market of the product, including any specific condition of use, handling and packaging of the GMO(s) as or in products, and conditions for the protection of particular ecosystems/environments and/or geographical areas; [...]

Sources: <http://www.biodiv.org/biosafety/protocol.shtml>

http://europa.eu.int/eur-lex/pri/en/oj/dat/2001/l_106/l_10620010417en00010038.pdf

ARGUMENTS BEYOND ENVIRONMENTAL AND HEALTH RISKS

Apart from the concerns regarding environmental and health risks of GMOs, two other areas are of relevance for the GMO-free zone movements: socio-economic and ethical considerations. Both are disregarded in the national risk assessment and decision-making procedures. Until now, most existing concepts of technology impact assessments which often include the two fields of concern have not been integrated in GMO regulation. In industrialized countries, only Norway has introduced a binding socio-economic assessment in its approval process. In the EU and some other countries, the prevalent debate on socio-economic effects concentrates on “co-existence”.⁵ GMO-critical participants of that debate see co-existence as the possibility of organic or other GMO-free agriculture keeping its GMO-free status, even when neighbors grow GE crops. As contamination from neighboring fields would directly threaten the economic interests of GMO-free farmers it contradicts the will of the majority of consumers to buy GMO-free food stuff. GMO-supportive groups, on the other hand, define co-existence as the possibility for all farmers to grow any crop they want as long as this does not pose environmental and health threats to their neighbors. The European Commission decided that there is no need for a harmonized EU approach towards rules that ensure co-existence – whatever is to be understood under this term. As a result, EU member states have started to set up their own rules, which are quite different in their basic approaches and specific provisions.

⁵ The web pages of the German organization “Save Our Seeds” provide a good overview about the state of the co-existence debate in Europe and elsewhere: <http://www.saveourseeds.org/en/index.php>

GENE TECHNOLOGY ACT OF NORWAY

§ 1 Purpose of the Act

The purpose of this Act is to ensure that the production and use of genetically modified organisms and the production of cloned animals take place in an ethically justifiable and socially acceptable manner, in accordance with the principle of sustainable development and without adverse effects on health and the environment.

§ 10 Requirements relating to approval

The deliberate release of genetically modified organisms may only be approved when there is no risk of adverse effects on health or the environment. In deciding whether or not to grant an application, considerable weight shall also be given to whether the deliberate release will be of benefit to society and is likely to promote sustainable development.

Source: <http://www.dep.no/md/english/doc/legislation/acts/022031-200052/dok-bn.html>

GMO-FREE ZONES WORLDWIDE

As mentioned in the beginning of this chapter, the call for GMO-free zones and their implementation is, despite legal difficulties, a world-wide phenomenon. Examples can be found on all continents, especially in those areas with a higher level of public awareness and information on GMOs and a longer experience with industrialized agriculture. The historical root of the GMO-free movement is the 1970s citizens' movement against nuclear power plants and weapons. One instrument was that municipalities – and later States – declared themselves as nuclear free. The most prominent example is New Zealand, which adopted the New Zealand Nuclear Free Zone, Disarmament, and Arms Control Act in 1987 as a result of a year-long citizens' movement. Meanwhile, six international treaties establishing nuclear weapon free zones in different parts of the world exist.⁶ With the declaration of GMO free zones and campaigns for GE free food, these concepts from the nuclear free movement were adapted to the field of genetic technologies – a development that James Watson feared in 1973 right after the first appeal on possible risks of GMOs was published.

While governments agree on the risks of nuclear weapons, most of them either see no specific risks associated with GMOs or are convinced that specific legal systems could expose and manage environmental and health risks. Thus, while many international, regional, and national examples of GMO risk assessments and regulations exist, the ideas of GMO-free zones are mainly propagated by civil society movements. At the same time, however, numerous governments from the local to the supra-national level have followed the arguments of these civil society movements and declared their support for GMO-free zones due to uncertainties in environmental and health risk assessments or due to economic concerns over the effects of GMOs on sustainable development.

6 Nuclear-Weapon-Free Zones Around The World, <http://www.opanal.org/NWFZ/NWFZ's.htm>

In the following chapters of this manual, ten brief overviews about exemplary GMO-free movements or regions are presented.

- A) GMO-free regions in**
California (USA), Chile, New Zealand, Philippines, Germany, Poland
- B) The specific case of the**
EU and the GMO Moratorium
- C) GMO-free referenda in**
Austria, Lower Saxony (Germany), Switzerland

There are many more examples of initiatives to create GMO-free regions. For example:

- in the last years, nearly all Australian States have adopted moratoria on (certain) GMOs;
- Thailand has banned GMO field trials and does not allow commercial GE crop planting;
- a broad civil society movement in South Africa urges the government to ban GMOs; and
- some Japanese local governments have banned or restricted GE crop planting.

The dominance of European examples, on the one side, highlights the importance of the topic in Europe. For instance, 174 regions and over 4500 municipalities and other local areas in Europe have declared themselves GMO-free. In six European countries, GMO-free zones almost cover the entire country: Poland, Greece, Austria, Switzerland, France, and Italy. On the other side, many detailed reports about GMO-free movements are available through the Internet and thus can serve as easy accessible information sources.

Since 2003, some additional noteworthy activities for GMO-free regions in Europe include:

- Three international conferences on GMO-free zones organized by the European NGO Network on Genetic Engineering (GENET), the Foundation of Future Farming, and the Assembly of European Regions;⁷
- Friends of the Earth Europe's Europe-wide GMO-free region campaign;⁸
- The creation, originally by ten European regions and initiated by the Austrian State of Upper Austria and the Italian Province Tuscany, of a network of GMO-free regions. This initiative now comprises a total of 39 regions.⁹

7 The documents are available at: <http://www.genet-info.org/conferences.html>; <http://www.gmo-free-regions.org/gmo-free-regions.html>

8 <http://www.gmofree-europe.org/>

9 http://www.gmofree-europe.org/NetworkofGMOfree_regions.htm

HOW TO USE THE GMO-FREE REGIONS MANUAL

The next chapters focus on explaining the political and legal background of the presented initiative. In some countries, there are examples of legislative actions to set up GMO-free zones (for example, in Switzerland and the United States). In other countries, the focus of GMO-free movements is on voluntary measures through declarations of land owners and civil right contracts (for example, Germany). To ensure easy readability and overview, each case study begins with a clear overview of the movement, describes challenges and successes. In addition to reporting on the campaigns, the Manual reproduces selected, corresponding reference documents and campaign material that provide examples of how GMO-free regions were set up in certain countries. These documents can provide important templates for future actions in other parts of the world. Campaigning materials which focus on the EU legal context and aim at groups working in EU member states have been published by Friends of the Earth Europe, campaigning material that focusses on the situation in the USA was compiled by the Genetic Engineering Action Network.¹⁰ For groups campaigning in other countries, these documents are useful examples; however, the actual work has to be based upon the respective country's specific political and legal context.

10 GMO-free regions campaign materials of Friends of the Earth Europe: <http://www.geaction.org/new.html>

CASE STUDIES ON GMO-FREE ZONES

GMO-FREE ZONES IN CALIFORNIA (USA) – AN OVERVIEW

Main Actors

FARMERS	NGOS	POLITICAL PARTIES	INDUSTRY
<ul style="list-style-type: none"> – Mendocino Organic Network – Conventional wine growers 	<ul style="list-style-type: none"> – Several GMO-free coalitions at the State and county level – Advocacy and lobby organizations 		<ul style="list-style-type: none"> – Organic food companies

Legal Status

LEGALLY BINDING	VOLUNTARY
<ul style="list-style-type: none"> – Senate Bill 245 of 2003 banning GE fish and other GMOs in aquaculture in the Pacific Ocean – Measure H in Mendocino County, and GMO moratoria in other counties 	<ul style="list-style-type: none"> – Farmers Pledge

Specific features that are used by GMO-free zones movements

Municipalities have strong legislative power
 Lack of State and Federal regulation on GMOs
 Deregulation process does not constitute right to use those GMOs
Tradition of social and environmental awareness and activism in California
 No GE seeds available for many important crops grown in California

CALIFORNIA – COALITIONS BETWEEN CIVIL SOCIETY AND CORPORATE INTERESTS

Ice-minus bacteria – The start of a GE-critical civil society movement

California is where the world's first GMO field trials were conducted – triggering the first activities of civil society organizations and local governments against such trials. The permit for the world's first field trials was sought in 1983 when Advanced Genetics Sciences (AGS) applied for spraying the so-called ice-minus *Pseudomonas* bacteria on fruits to prevent frost damages. Environmental and social activists – amongst them Jeremy Rifkin's Foundation on Economic Trends – as well as governmental officials were alerted and could prevent the trials for some years. The company finally received the permit in 1986 but lost it rather quickly because the authorities found out that the field trial had already been conducted before the application was submitted. The Monterey County Board of Supervisors banned the trials in 1986 and forced AGS to look for another location. In April 1987, the tests could be continued with strawberries in the county of Contra Costa after a court judgment rejected claims by local groups that the trials would pose unacceptable risks. The freshly planted strawberries were uprooted by activists but could be replanted. The company claimed that the tests were successful but due to public pressure and delays, the final product was never developed.¹¹ AGS was later bought by DNA Plant Technologies which, in the 1990s, developed its ripening-delayed GE tomato „Endless Summer“ but never brought it to the market as well. Already this first field release of a GMO revealed the huge potential for conflicts triggered by the application of genetic engineering, a tendency which has not decreased during the last 20 years.

The first GE crop that reached the market in 1994 was both developed and tested in California – the FlavrSavr tomato which remained firm at the vine, could be transported over longer distances, and, according to the company, also tasted better. The company Calgene and the U.S. Food and Drug Administration developed an administrative procedure similar to that dealing with food additives that eventually led to the status of the tomato – or to be more precise its new transgenic antibiotic resistance marker gene – as a deregulated plant. Building upon a concept previously developed by mainly biotech scientists from industry, administrations, and other organizations, the composition of the GE tomato was declared as a „substantial equivalent“ to its conventional counterparts. The only – predicted – difference was the new gene and protein which had been declared as harmless. The FlavrSavr flopped. Consumers complained about its inferior taste compared with other tomatoes – so much for „substantial equivalence“. In addition, conventionally bred long-shelf tomatoes from Israel could be grown much cheaper in Mexico and exported to the United States. Later, Calgene was bought up by Monsanto. The real success of GE crops started in 1996 when farmers in the Midwest started to grow Monsanto's Roundup Ready (RR) soybeans; Bt maize and Bt cotton followed soon. Because California's agriculture does not concentrate on three big GE crops, soy, maize, and canola, but merely grows GE cotton to a larger extent, the share of GE crops on its fields is still low.

11 Meanwhile, non-GE ice-minus bacteria have been registered under the brand name "Frostban" in the USA

Private sector activities – GE pharma rice

In 2003, the small Californian biotech company Ventria launched an application at the United States Department for Agriculture (USDA) and the Californian authorities to seek allowance to grow a variety of GE rice commercially that produces recombinant proteins for drug use. Ventria, under its former name Applied Phytologics, had already received an approval by the USDA in 1997 for field testing these rice varieties. The two rice varieties produce two recombinant human proteins: lysozyme and lactoferrin. Ventria plans to sell the products in oral rehydration products to treat severe diarrhea in developing countries. The company explained that 65 acres of rice could generate 1,400 pounds of lactoferrin, enough to treat at least 650,000 sick children. The same acreage of lysozyme rice would yield enough protein to treat 6.5 million patients.

Under the California Rice Certification Act of 2000, Ventria's application must be reviewed by a 12-member committee of scientists, growers and business representatives operating under the Californian Rice Commission. The committee, however, demanded that Ventria improve its suggested containment plans. The Californian rice farmers – part of a USD 500 million industry – and many civil society groups were especially upset by Ventria's refusal to disclose the location of the fields.¹² It was assumed that Ventria would grow the GE pharma rice right in the main rice growing area of California. On March 29, the California Rice Commission recommended that Ventria should be allowed to plant 120 hectares of its rice immediately because it was already getting late to sow the crop. But the USDA and the Californian Department of Food and Agriculture rejected the call for a fast-track approval. They were still convinced that the suggested isolation distance of 100 feet was too little. After the StarLink and other contamination scandals, the U.S. authorities have opted for a zero-tolerance policy with regard to contamination of commodity grains with pharma crops. The authorities announced a public consultation process to gather more information in order to go ahead with original application – meaning plantings could start in 2005 at the earliest.

In November 2004, Ventria announced that it had applied at the USDA to grow the GE rice on 200 acres in three counties in southeast Missouri, Scott, Cape Girardeau and Mississippi. It became public that Northwest Missouri State University had plans to build up a Center of Excellence in Plant-made Pharmaceuticals to support Ventria's efforts in commercializing its products. In return, the company announced it was building new headquarters in Missouri and made the university's President an unpaid member of its board of directors. In early 2005, it became clear that Ventria was cooperating closely with one farmer who intended to plant 150 acres on his own land. The distance to the next rice fields were said to be more than four miles. These plans immediately raised concerns amongst the local rice farmers, who had not been consulted by Ventria before. The Missouri Rice Research and Merchandising Council pointed out that the Californian authorities demanded a 300 mile buffer zone to protect the financial interests of the rice industry. Almost all local rice farmers opposed Ventria's plans, 175 of them signed a petition

12 Bill Freese, Michael Hansen, Doug Gurian-Sherman. July 2004. Pharmaceutical Rice in California – Potential Risks to Consumers, the Environment and the California Rice Industry. <http://www.centerforfoodsafety.org/pubs/CARiceReport7.2004.pdf>

to stop the planting. The farmers complained that the State offered Ventria generous financial support for its controversial operations without respecting its own farmers' interests.

In April 2005, Ventria's ambitions were seriously challenged when Anheuser-Busch, a huge brewing company from St. Louis and the biggest rice purchaser in the United States, announced it would stop buying rice from Missouri if GE pharma were planted. Anheuser-Busch, together with Riceland Foods Inc., a major rice trading company from Arkansas that also protested against Ventria's rice, presently buys up to 90% of Missouri's rice harvest. After some emergency meetings and a public outcry over U.S. biotechnology supports, the companies agreed on a 120 mile buffer zone between Ventria's and other farmers' rice fields – again without consulting the rice farmers. Due to this resistance by other private sector players, Ventria again missed the right time to sow its rice – and applied for additional trials in North Carolina where farmers do not grow rice.

The field trials in North Carolina were only one mile apart from the USDA Tidewater Research Station that is also used to breed new rice varieties, because, as researchers pointed out, it was 650 miles away from commercial rice growing areas. But Ventria remains convinced that it has found an ideal testing place. Somen Nandi, the director of molecular breeding, told the press:

„There is a .001 percent chance of cross-pollination within 10 or 15 feet. [...] Not a single plant of rice will grow there [outside of the test ground]. Not a single plant. It [the rice plot] is a completely unique ecological niche.“

In March 2006, Ventria received the allowance from the USDA to expand its rice trials to 335 acres. At the same time, but – according to the agency's spokesperson – not related to the enlargement of the growing area, the rice breeding activities at the Tidewater Station were relocated to the State of Maryland.

One year after the announcement of the collaboration with Ventria, the University of Missouri informed the public that the expected financial support from the State of Missouri could not be secured. As a result, the scientific Center of Excellence was scaled-down to a medium-scale facility to extract proteins from plants. At the end of December 2005, Ventria canceled its plans to move production and administration to Missouri because the facilities would not match its future needs. In September 2006, Ventria and the Government of Kansas informed the public about a public-private partnership to grow GE pharma rice and to construct the extraction facilities. Ventria and Junction City have pledged to spend around USD 12 million for the facilities. Finally, in March 2007, USDA granted a preliminary approval to grow the GE pharma rice on 3000 acres near Junction City. A contamination of the food chain is regarded as impossible because there are no other rice growers in Kansas and Ventria is going to use dedicated facilities for all its operations.

Parliamentarian activities

The conflicts over GE field trials in California were characterized by the fact that, to a much larger extent than in other parts of the world, civil society organizations focused their campaigns on legal means. Due to the lack of State oversight with regard to GE crops and due to the relatively large legal powers of the municipalities, GMO bans can be issued by the local governments or voted on by the people.

State legislation – GE fish

California was the first U.S. State that enacted a ban on certain GMOs (freshwater and marine fishes, invertebrates, crustaceans, or mollusks) when, in 2003, the legislation adopted an amendment to the Fish and Game Code (Senate Bill 245). The reason for this provision was the much debated application at the FDA to approve a GE salmon for food production – a request that still has not been decided after 10 years of consultations. The Code's existing provisions on banning aquaculture in the ocean was changed to read:

- (a) In the waters of the Pacific Ocean that are regulated by this state, it is unlawful to spawn, incubate, or cultivate any species of finfish belonging to the family Salmonidae, transgenic fish species, or any exotic species of finfish. [...]
- (b) Nothing in this section authorizes artificial propagation, rearing, or stocking of transgenic freshwater and marine fishes, invertebrates, crustaceans, or mollusks.¹³

An attempt to enact a ban on GE fish (Senate Bill 1525)¹⁴ in the Fish and Game Code covering all waters of California was unsuccessful because the Bill was not finalized at the end of the legislative session

County of Mendocino – GMOs in agriculture

In September 2003, a local movement in the County of Mendocino announced its plans to launch a GMO-free zone initiative at the March 2004 ballot. Across the United States, several local or state initiatives working on GMO issues (including the labeling of GE-food) were already active, but until then, none of them had gone as far as letting citizens vote in a GMO-free referendum. The initiative was backed by local organic growers (the Mendocino Organic Network), conventional wine growers and long-standing GE critics like Marc Lappé of the Center for Ethics and Toxics. In 2000, Lappé had co-authored the failed Californian GE food labeling bill. One of the concrete fears of the farmers was the announcement to introduce GE vines resistant to Pierce's disease into the Californian agriculture. No GE crops are planted in the county, which is home to 150 organic

13 http://info.sen.ca.gov/pub/03-04/bill/sen/sb_0201-0250/sb_245_bill_20031012_chaptered.html

14 http://info.sen.ca.gov/pub/01-02/bill/sen/sb_1501-1550/sb_1525_bill_20020520_amended_sen.html: "It is unlawful to import, transport, possess, or release alive into this state, except under a revocable, nontransferable permit as provided in this chapter and the regulations pertaining thereto, any terrestrial or aquatic organism or wild animal of the following species: [...] (k) Any live transgenic fish, or the roe thereof, including, but not limited to, transgenic salmon or the roe thereof."

farms working on 1/6 of the agricultural land. The local initiative only caught the attention of the U.S. biotechnology industry when the media coverage became more intensive at the end of 2003. The group quickly collected 4,147 signatures – 2,579 signatures were required – to register the ballot initiative which was named “Measure H”.

In reaction to the initial success of the Mendocino Organic Network, the California Farm Bureau Federation (as the mainstream agricultural organization), backed by the U.S. Biotechnology Organization and individual biotechnology scientists, launched a counter-campaign to convince citizens to vote against the referendum. The California Plant Health Association, representing pesticide and biotech companies, launched a law suit against Measure H, claiming that the text was factually wrong in three statements and misleading the voters. The Superior Court decided not to block the initiative; Judge Leonard LaCasse told the press that “it is instructive that the argument against this ballot proposal contains language that is at least equally provocative to the language in favor of the measure.”

In January 2004, CropLife America donated a first USD 150,000 to the corporate campaign to defeat Measure H. In the meanwhile, however, more than 300 Mendocino residents and businesses donated some USD 11,000. In the end, CropLife America provided USD 675,000 of the USD 696,566 raised by the “No to Measure H” campaign. The Measure H supporters raised USD 105,000; the largest single donation of USD 23,905 came from the Center for Food Safety, Washington. The continuous flow of radio ads, polls, phone call campaigns and public debates in the first weeks of 2004 culminated into a battle between organic and biotech agriculture, into a fierce argument if farmers have the right to contaminate their neighbors and if organic farmers might lose their certification and/or market bonus when GE contamination occurs.

On March 2, 2004, 56% of voters supported Measure H, which, for the first time in the United States, banned growing GE crops in a certain area. The supporters were enthusiastic about the success of their grassroots campaign and hoped that many other counties would follow the Mendocino example. The opponents stressed that the citizens in this remote part of California did not exactly know what they were voting on. Future GMO-free initiatives would certainly face a more effective counter-campaign, based on the experiences gained in Mendocino. And, soon thereafter, the California Farm Bureau Federation started a campaign that led to several declarations of local governments stating the full support of GE crops.

Observers were pointed out that counties only can regulate affairs that lack any State overview – as is the situation with GE crops. In a comparable case from the 1970s when a ballot initiative banned aerial pesticide spraying, industry reacted spontaneously. Within two weeks, the State of California initiated legislation on aerial spraying, which effectively eliminated the right of the lower bodies to regulate the issue.

Californian Pre-Emption Law

As it was expected, immediately after the Mendocino vote the biotechnology industry started a nation-wide campaign at the State Parliaments to introduce preemptive laws that would make local GMO bans unlawful. In California, Senate Bill 1056 was launched. The fierce debate that had started during the Mendocino campaign between supporters of sustainable and organic agriculture and local self-determination on the one hand and supporters of GMO agriculture and corporate dominance on the other continued and culminated in summer 2006. A main concern was the contamination of food crops and wild plants by transgenes. The June 2006 report of the Institute for Social Ecology¹⁵ on the inappropriate federal overview of field tests – the latest of several similar findings – and the August 2006 news about widespread GE contamination in U.S. rice varieties fueled opponents' concerns and arguments against the bill. Countries importing U.S. rice reacted immediately by stopping the entry of the illegal rice, and the rice futures market fell by more than USD 150 million until the end of August. In the end, the Senate decided not to bring the bill to a vote. It was seen as undemocratic to approve a pre-emptive law that only benefits one side of the implicated interest groups and was adopted before Parliament had even debated whether it should become active in creating laws to oversee GMO agriculture. When the legislative period ended on August 31, the bill was not finalized and thus failed, at least, until it can be re-introduced in the new session. The draft law says:

Except as otherwise specifically provided in this code, the provisions of this chapter are of statewide concern and occupy the entire field of regulation regarding the registration, labeling, sale, storage, transportation, distribution, notification of use, and use of field crops to the exclusion of all local regulations. Except as otherwise specifically provided in this code, no ordinance or regulation of any political subdivision may prohibit or in any way attempt to regulate any matter relating to the registration, labeling, sale, storage, transportation, distribution, notification of use, or use of field crops.

15 Institute for Social Ecology. June 2006. Deficiencies in Federal Regulatory Oversight of Genetically Engineered Crops. <http://www.environmentalcommons.org/RegulatoryDeficiencies.pdf>

U.S. Department of Agriculture Office of Inspector General. December 2005. Animal and Plant Health Inspection Service Controls Over Issuance of Genetically Engineered Organism Release Permits

<http://www.usda.gov/oig/webdocs/50601-08-TE.pdf>

TexPIRG Education Fund. April 2005. Raising Risk : Field Testing of Genetically Engineered Crops in the United States

http://www.texpirg.org/reports/Raising_Risk_2005_Final_TX.pdf

Center for Science in the Public Interest. January 2003. Holes in the Biotech Safety Net – FDA Policy Does Not Assure the Safety of Genetically Engineered Foods http://www.cspinet.org/new/pdf/fda_report_final.pdf

U.S. National Academy of Sciences. 2002. Environmental Effects of Transgenic Plants: The Scope and Adequacy of Regulation <http://www.nap.edu/books/0309082633/html>

ANNEX CALIFORNIA

Internet Links

A) GMO-free groups

Californians for GE-Free Agriculture

<http://www.calgefrees.org/>

GMO-Free Alameda County

<http://www.gmofreeac.org/>

San Luis Obispo GE-free

<http://slogefree.org/>

GMO-Free Humboldt

<http://www.growgmofree.org/>

GMO-Free Mendocino

<http://www.gmofreemendo.com/>

GE-free Sonoma

<http://www.gefreesonoma.org/>

Preserving the Integrity of Napa's Agriculture (PINA)

<http://www.preservenapasag.org/>

Santa Barbara GE-free

<http://sbgefrees.org/>

BioDemocracy Alliance

<http://www.organicconsumers.org/ge-free.cfm>

B) Overviews about deregulated GE crops and foodstuff in the USA

Biotech Crops Approved in Canada, Mexico and the United States

<http://www.whymbiotech.com/index.asp?id=2837>

List of Completed Consultations on Bioengineered Foods

<http://www.cfsan.fda.gov/%7Elrd/biocon.html>

Documents

In this document section you can find:

- A) The official text of Measure H for the County of Mendocino
- B) Four official statements – two supporting, two rejecting the measure
Source: Campaign for a GMO-Free Mendocino County,
<http://www.gmofreemendo.com/moreh.html>
- C) A pledge for GMO-free farming in California
Source: Californians for GE-free Agriculture, www.calgefree.org/pdfs/FarmerPledge.pdf
- D) An overview about GE crop field trials in the USA and in California
Source: TexPIRG Education Fund, <http://www.texpirg.org/TX.asp?id2=16715&id3=TX>
- E) A map on the status of U.S. State seed and plant preemption laws
Source: Environmental Commons,
<http://www.environmentalcommons.org/gmo-tracker.html>
- F) A map on the GMO-related ordinances of Californian counties
Source: University of California, Division of Agricultural and Natural Resources, Statewide Biotechnology Workgroup, <http://ucbiotech.org/resources/legislation/legislation.html>

GMO-FREE ZONES IN CHILE – OVERVIEW

Main Actors

FARMERS	NGOS	POLITICAL PARTIES	INDUSTRY
<ul style="list-style-type: none"> – Tierra Viva (Organic Growers Association) 	<ul style="list-style-type: none"> – The Network for a Chile Free of GMOs – Chile Sustentable – Fundacion Sociedades Sustentables – Centro Austral de Derecho Ambiental 		

Legal Status

LEGALLY BINDING	VOLUNTARY
<ul style="list-style-type: none"> – Ongoing efforts to amend environmental laws 	<ul style="list-style-type: none"> – Statements by different organizations – Declarations by farmers

Specific features that are used by GMO-free zones movements

Rural communities which value indigenous or traditional lifestyles
 Organizations working on the protection of agricultural biodiversity
 Non-transparent decision making with regard to risk assessment and approval of field trials
 Lack of information with regard to location of field trials
 Opinion that the country is being used as testing grounds for GE seeds by foreign companies

CHILE – A WINTER NURSERY FOR TRANSNATIONAL SEED COMPANIES IN A CENTER OF BIODIVERSITY

Chile plays a specific role in GE crop agriculture because the country has been chosen by the transnational seed companies as a “winter nursery”: Northern seed companies go to southern countries to conduct field trials during the northern winter. This enables companies to have two rounds of breeding trials per year. Many GE crop field trials that produce GE seeds for export have been planted in Chile since 1992, when a regulation was brought into effect that set up a permit system for such trials. This regulatory system, however, did not allow for public participation. Since then, Chile’s environmental law has been amended by provisions to perform environmental impact assessments which include the possibility of public input when GE crops are to be planted. Nevertheless, these provisions do not apply to trials for seed production – the dominant GE crop activities in Chile. Some biosafety measures, such as isolation distances, have been prescribed for field trials, but Chile’s regulation and enforcement capacities are too weak to ensure compliance with these rules. In addition, no field studies to test the efficiency of these measures have been conducted. A peak was reached in the planting season 2005-2006, when nearly 13,000 ha (98%) of the plantings were different GE maize varieties. Chile is also home for many smaller trials with GE pharma crops. The total planted area from 1996 to 2002 is estimated to be around 64 ha. In 2005, the U.S. company Ventria planted 2 ha of its GE rice producing lysozyme and lactoferrin – at the same time when trials of these plants were being hotly debated in the United States and rejected in California and Missouri (read more about it in the California chapter). Although Chilean agricultural authorities have been positive about GE breeding activities, it is still prohibited nationally to sell GE seeds and commercially plant GE crops.

Due to its longitudinal expanse, Chile is characterized by many different ecological zones which are isolated from the rest of South America by the Andean Cordillera. Chile’s natural biodiversity is extremely rich; more than 50% of the flora is endemic. Furthermore, certain potatoes (*Solanum tuberosum*), tomatoes (*Lycopersicon chilense*) and strawberries (*Fragaria chiloensis*) all originate from Chile. More than 200 native varieties of potato are known, and many traditional maize and bean varieties were developed in the area. Preserving and further developing these local genetic resources is regarded by many rural and indigenous societies as a crucial element in their endeavor to protect their culture and life styles.

Civil society activities

Over the past years, the numerous trials with GE maize have received particular attention as a threat to local genetic resources. In 1999, when the Network for a Chile Free of GMOs was founded, one of its first activities was to call for a disclosure of the location of GE crop trials. The Network is a coalition of 20 organizations (eight environmental, three consumer & nine organic agriculture organizations). In response to demands from the biotech and seed industry, the authorities kept all information on the trials secret as confidential business information. The Fundacion Sociedades Sustentables (FSS), the Centro Austral de Derecho Ambiental and Tierra

Viva, the Organic Growers Association of Chile, filed a freedom-of-information lawsuit against the National Agriculture and Livestock Service which is responsible for overseeing the trials. In 2001, a court ruled in favor of the organizations, but the final decision in November 2002 by the Supreme Court ruled that the location of the trials could be kept secret.

The existing GMO-free zones are based on non-binding declarations of local and regional bodies or individual farmers. The first GMO-free zone in Southern Chile was declared in April 2001 by a group of stakeholders in the Region of Aysen. In July 2006, a second farm-based GMO-free zone was established in the region of the Aymara people in Northern Chile. The FSS – current coordinator of the Network for a Chile Free of GMOs – organized two stakeholder seminars in the town of Arica to create public awareness with regard to the local GE crop trials and their possible effects on local agriculture. Since 1996, at least six field trials of GE crops (RR canola, Bt maize, RR soy) were approved by the authorities and conducted in the region without any specific information to the communities and the farmers. According to the Agriculture and Livestock Service, 6.4 ha of GE maize were planted in the valleys around Arica in the growing season 2005-2006.

Northern Chile belongs to the centre of origin of and potatoes, and many small scale farmers continue to grow traditional maize varieties. Historically, the cultivation of maize in the Aymara region goes back many thousand years and is closely connected to the culture of the indigenous peoples living in the region. These traditional varieties contain important genetic resources, for instance, one local maize variety has already been characterized in scientific literature because it can grow under conditions of unusually high salinity. Current pressures threatening traditional cultures in their entirety are also leading to the disappearance of these local genetic resources and, thus, a loss of options to improve crops by local breeders and farmers. As a result, farmers fear an assault on the genetic integrity of their crops because GE maize field tests could lead to a contamination of the local maize varieties. Fifty farmers signed a GMO-free declaration, and the participants of the seminar in Arica urged the authorities to declare the region as GMO-free zone. In an effort to conserve their traditional varieties, 27 farmers (who had been nominated as Seed Guardians) started to exchange seeds of threatened varieties in the GMO-free zone.

In October 2006, FSS organized two meetings on Chiloé Island and in Puerto Montt, the capital of Region 10 „Los Lagos“ in southern Chile. Chiloé was selected as one of the five pilot sites in the FAO initiative, „Globally Important Ingenious Agricultural Heritage Systems,“ which is aimed at developing policies that help to recognize the importance of unique potato genetic resources and support the communities in their work to maintain agrobiodiversity. The petition to declare Chiloé free of transgenic organisms was signed by 163 people. Among them were 37 farmers that declared not to plant GM crops on their farms. The threat of transgenic contamination in Region 10 is obvious: between 1997 and 2003, the governmental Institute for Agriculture Research carried out field trials of five transgenic lines of the potato variety Desiree in the region.

Parliamentarian initiatives

To create a legal framework for GMO-free zones, the House of Representatives presented in 2003 an amendment to a main environmental law that would allow local agricultural organizations to establish areas of clean production which, in cooperation with local and regional authorities, might be declared as GMO-free zones. This law is still under discussion as of December 2006. The current activities of agricultural and environmental groups to call for GMO-free zones aim at supporting those Parliamentarians who are supportive of a legal framework for GMO-free zones. To increase the impact of the regional initiative, FSS sent a letter to the Ministry of Agriculture requesting to stop further approval of releases of GE crops in Aymara. FSS also urges for a modification of the environmental law to allow the installation of GMO-free regions, especially in those areas that are centers of origin of traditional varieties or rich in agricultural biodiversity.

ANNEX CHILE

Internet Links

Following internet pages inform about GMO related civil society activities in Chile and South America. Most of the information is in Spanish.

Chile Sustentable

<http://www.chilesustentable.net/>

Campaña Red por un Chile libre de transgénicos

<http://www.ecosistemas.cl/1776/propertyvalue-26817.html>

Fundacion Sociedades Sustentables on GMOs

<http://www.biodiversidadla.org/content/advancedsearch?SearchText=Fundaci%F3n+Sociedades+Sustentables&SearchContentClassID=2&SearchContentClassAttributeID=154&SearchSectionID=1>

Boletín de la Red por una América Latina Libre de Transgénicos (RALLT)

<http://www.biodiversidadla.org/content/view/full/3086>

RALLT. Julio 2006. Por una región andina libre de papa transgénica

<http://www.rallt.org/campana/Region Andina libre papa GM.pdf>

Documents

A major source of information on GMOs in Chile:

Manzur, Maria I. (2005). Biotecnología y Bioseguridad. La situación de los transgénicos en Chile. Fundación Sociedades Sustentables y Programa Chile Sustentable. LOM Ediciones. Santiago.

In this document section you can find:

- A) The 2001 GMO-free declaration from the region of Aysen

- B) The 2006 GMO-free declaration from the region of Arica

Source: Documents translated and sent by Maria I. Manzur, Programa Chile Sustentable

GMO-FREE ZONES IN NEW ZEALAND – OVERVIEW

Main Actors

FARMERS	NGOS	POLITICAL PARTIES	INDUSTRY
<ul style="list-style-type: none"> – Organic farmers 	<ul style="list-style-type: none"> – GE-Free New Zealand in food and environment – GE-free Northland – Sustainability Council of New Zealand – Greenpeace New Zealand – Several local GMO-free movements 	<ul style="list-style-type: none"> – Green Party 	<ul style="list-style-type: none"> – Food industry

Legal Status

LEGALLY BINDING	VOLUNTARY
<ul style="list-style-type: none"> – Temporary moratorium on applications for GMO field trials – Efforts to include GMO management in local land and resource management plans and strategies 	<ul style="list-style-type: none"> – Resolutions of municipalities – Pledges of property owners – Food industry policies

Specific features that are used by GMO-free zones movements

Main actor in the nuke-free movement
 Strong culture and legal provisions for public participation
 Maori communities which value indigenous or traditional lifestyles
 Local governments pursue policies to create legal power in GMO management
 Few but controversial GMO research & development and field trials (GE animals & trees), no GE agriculture
 Strong influence of the Green Party

NEW ZEALAND – THE POWER OF PUBLIC PARTICIPATION AND DEBATES

New Zealand is certainly the country which has experienced the most thorough debates and most consequent legislative and political activities on GMO-free zones. New Zealand has seen a voluntary moratorium as well as a legally binding moratorium on GE crop field trials, followed by a very strict GMO approval system. In addition, the country has experienced GMO-free property registers and other activities by civil society, withdrawals and destruction of GE crop field trials, intensive discussions with the indigenous Maori, and a largely GE-free food supply through respective policies by the corporate food sector, supported by strict GE food labeling laws.

Greenpeace's GE-free food campaign

Accordingly to the web page of the Australia New Zealand Food Authority (ANZFA), 29 GE crops (10x maize, 8x cotton, 3x soybean, potato and canola, 2x sugarbeet) are approved for food use in New Zealand and Australia; the highly controversial Monsanto application concerning Roundup Ready GE wheat was withdrawn in 2004. The deeply rooted aversion of the New Zealand public to buy and eat GE food and the continuing debate on inadequacies in risk assessment and decision making procedures formed the basis for Greenpeace New Zealand when it launched its Consumer Network against GE Foods in November 1999. The network started to lobby food retailers to implement GE-free food policies for their own brands and to urge their suppliers to secure GE-free sources or develop GE-free alternatives. Through an Internet-based “GE-free Food Guide”, published since December 2000, Greenpeace has kept the public informed about the current state of corporate GE food policies. The campaign gained additional momentum in 2001 when the field trial moratorium was extended.

MILESTONES OF THE GE-FREE FOOD CAMPAIGN

Jul 2000	Coles Myer Supermarkets' 'own branded' products are formulated to contain no genetically modified food
Feb 2001	Restaurant Banks New Zealand (operating Pizza Hut, Kentucky Fried Chicken and Starbucks Coffee) announces to have eliminated GM ingredients from its products, and from animal feeds used by its suppliers in December 2001
Feb 2001	Heinz-Wattie's Australasia confirms: "Heinz global policy is for its product range to be GM Free"
Jun 2001	NZ Dairy Foods announces "a policy of ensuring that its products do not contain genetically modified ingredients"
Aug 2001	Poultry company Tegel declares to receive its chicken feed from GE-free sources (50,000 t soy per annum)
Apr 2002	Unilever Australasia states to have "worked to eliminate genetically modified crop derived ingredients, through substitution, sourcing from areas where non-genetically modified crops are grown and identity preservation systems. In addition Unilever Australasia sources its dairy ingredients locally and our dairy ingredient suppliers have established contracts with their milk suppliers stipulating that the animals are to be fed with non-genetically modified feed"
Mar 2002	NRM, New Zealand's largest stock feed company, reached an agreement with Ag Processing, the biggest co-op supplier of soybeans in the world, to supply soya from non-GE crops (120,000 t soy per annum)
Nov 2003	Goodman Fielder, the single biggest user and distributor of canola oil in Australasia, announces a new policy of excluding all GE crop derived ingredients, including animal feed in food production
Nov 2003	Foodstuffs, the largest and the only fully New Zealand-owned grocery retailer took "action to ensure that all of its private label products, which includes the icon Pam's brand, do not contain GE ingredients."
May 2004	McDonald's New Zealand informs that it is "aware of concerns over the use of GM in animal feed and has therefore requested its suppliers to identify sources of non-GM soya in animal feed. This has been achieved by its chicken suppliers." Source: compilation by the Hartmut Meyer

GE food labeling regulation

Food safety issues in New Zealand, including food labeling, are dealt with by a bi-country agency, the Australia New Zealand Food Authority (ANZFA). In July 1999, the ANZFA announced strict GE food labeling rules with a 1% threshold for accidental contaminations. The new rules replaced the old concept that triggered labeling only when GE food was found not to be "substantial equivalent" to conventional food. Under the new regime, labeling is triggered by the measurable content of the transgene or new protein in the food. The process leading to the new rules

involved organizations from civil society, the farm sector, the biotechnology industry, and the food industry. Because the safety of GE food should be ensured through a risk assessment and approval system, the ANFZA GE food labeling system is based on the “right to know” concept; consumers are given their right to know about the production processes and ingredients of their food. The Australian Food and Grocery Council welcomed the new rules. Civil society groups supported the legislation in principle but complained about the exemptions from labeling. The GE food labeling regime finally entered into force in December 2001. The food industry has obviously been able to comply well with the rules – an official survey in 2003 revealed that the labels from 167 out of 168 tested products were in line with the rules. In this survey, products without GE labels but containing soy or maize ingredients were chosen, and the GE contents were either below the labeling threshold or, in the majority of cases, not measurable. The food industry appears to be able to follow its GE-free policies.

Moratoria on GE crop field trials

The first moratorium April 2000 – October 2001

As in many other countries of the world, environmental organizations, local citizen groups, and the Green Party campaigned for a moratorium on GE crop field trials in New Zealand. One strategy was to call for a country-wide consultation process that would show the critical position of many societal groups representing the vast majority of New Zealand’s population. The hope was that the government would follow the majority opinion and implement a GE crop moratorium. In October 1999 the Green Party filed a petition with 92,000 signatures calling for such a consultation together with a moratorium on the testing and marketing of GMOs. The new coalition government at the time – Labour Party and Alliance, supported by the Green Party – agreed to this demand. A so-called Royal Commission on Genetic Modification (RCGM) was to be set up to conduct the consultation.

During these early debates, the operations of GE research institutions were reviewed by the Environmental Risk Management Authority (ERMA). ERMA found out that 152 of 1065 experiments in 27 research facilities had not been approved by their biosafety committees. As a consequence, ERMA suspended the right of those bodies to license GE research in contained use in April 2000. With this decision, any new GMO research was blocked.

*Royal Commission on Genetic Modification*¹⁶

In the same month, the Royal Commission on Genetic Modification (RCGM) started its work. The government announced that no applications for GMO field trials could be launched during the consultation period. In the following 14 months, the Commission listened to 107 interested

16 The Royal Commission on Genetic Modification at the Royal Society web page: <http://www.rsnz.org/topics/biol/gene/> and at the Ministry for Environment web page: <http://www.mfe.govt.nz/issues/organisms/law-changes/commission/index.html>

parties and initiated an extensive dialogue with the Maori, the indigenous people of New Zealand. As a reaction on the almost unanimous rejection of GMOs in New Zealand's civil society organizations, representatives of biotechnology industry and science urged the Commission not to follow "public opinion" (which included GE critical scientists) but to choose "scientific criteria," (as presented by the proponents of GMOs) as basis for the way forward. The final report was published in July 2001.

Beside several other recommendations, the Commission did not propose to continue the moratorium but opted to set up strategies and systems to foster the release of GE crops, trees and animals. The seven recommendations on GMO field trials and marketing called for:

- a Bt resistance management scheme
- a GE seed labeling regime
- a strategy to ensure the production of GMO-free honey
- a comprehensive ecological assessment accompanying any GE forest tree application
- a preference for animals "less likely to find their way into the food chain" when used as bioreactors
- a preference for non-human genes in GE animals
- an industry code of practice on segregation

When the report was delivered, the Life Sciences Network, a lobby group for the biotechnology industry and science, announced an extension of the voluntary moratorium on GE crop field trials until October 2001. The biotechnology industry preferred to wait for the governmental decision on the RCGM report before making announcements on their own moratorium policy. The remaining time before the government announced its decision at the end of October 2001 on how to proceed with GMOs and biosafety in New Zealand was used by civil society groups to urge for a continuation of the field trial moratorium. In many cities, GE-free marches were organized. The Life Sciences Network lobbied Parliamentarians to take the opportunity and to allow field trials, or face potentially severe economic consequences for New Zealand. According to the proponents of GE, possible benefits of up to NZD 5,000 per household and 100,000 jobs would be jeopardized if the moratorium were to be continued.

The second moratorium October 2001 – October 2003

Due to the pressure of the Green Party and the Maori MPs of the Labour Party, the Prime Minister Helen Clark on October 30, 2001 announced that the Government would extend the moratorium on releases of GMOs for two years while further research was undertaken.¹⁷ Ms Clark stressed that the government opted for a stricter stance on field releases than the RCGM had recommended when it suggested government should invite industry and science to send in applications for field trials: „The government does not believe that course was acceptable. It left the state like a possum in the headlights, not knowing when to expect an application and

¹⁷ An overview about the government's decision and background documents can be read at: <http://www.mfe.govt.nz/issues/organisms/law-changes/commission/index.html>

not in the near term having completed the further work the Commission itself recommended before approving any release.“ The government also acted more cautiously on research in contained use than the RCGM had suggested: „While the moratorium on applications for contained research will be lifted, the government will at the same time introduce immediate amendments to the HSNO [Hazardous Substances and New Organisms] Act to increase the level of certainty about the controls to be applied to any research and to the inspection and monitoring regimes.“

One day after the Prime Minister announced the two-year moratorium to initiate biosafety research and establish a new GMO legislation, which would prepare the path for field trial applications, activists launched the campaign „Green Gloves“. Non-violent actions, such as destroying GE field trials, were announced. This sparked a debate whether field trials that received a permit under the old legislative system could continue, although a new moratorium period had started and the GMO law was under review. Political solutions were needed because the applicants had the right to test their GMOs in the open. Especially the trials with GE trees were criticized by civil society groups; the „Green Gloves,“ for example, identified the pine trials as a prime target for their actions.

It is interesting to note how differently the two applicants – one from the corporate and one from the scientific sector – reacted to the extended moratorium. In November 2001, Carter Holt Harvey, Australasia’s leading forest products company, declared that they were going to stop trials which were said to have no direct commercial application. The company’s environmental manager, Murray Parrish, told the media: „We support the technology in principle and can see a range of opportunities, environmentally and commercially, but if consumers don’t want it for whatever reason we would be pretty silly to produce it.“ The other applicant – the public Forest Research Institute – insisted on its right to plant the GE pine and spruce trials. The research organization appeared to be largely unimpressed by the broad societal consensus to wait with GE trials until the new regulatory system came in place. Forest Research launched its applications for 20-year trials in June 1999 and received a permit in December 2000 that, amongst others, demanded to check the trees on a weekly basis and destroy all flowers. In the end, Forest Research started a consultation process with the Maori community in which territory the filed trials should be performed. After the consultations, the Maori blessed the trials and planting began in summer 2003. Only pine and spruce trees with marker genes that are supposed to have no impacts on the plants were planted, but not the ones which possess herbicide resistance or other genes that might influence growth and reproduction in an unforeseeable manner.

During the next election campaign in 2002, the Greens made the fight for a GMO moratorium a central topic of their policy; this policy helped lead to an increase of their votes from 5% to 7%. Because of the deep division between Labour and the Greens with respect the GMO moratorium, the new coalition Government – Labour and Progressive Coalition – preferred to choose the United Future party as supporting partner, but not the Greens. In February 2003, the Labour government presented a draft of the „New Organisms and Other Matters“ (NOOM) bill as a new framework under which applications for GE field trials and marketing should be assessed in future. Public consultations were held, and, much as in 2001, many civil society groups, supported

by critical scientists who called for an extension of the moratorium, worked against lifting the moratorium.¹⁸ At protest marches, police counted 20,000 protesters.

In October 2003, the NOOM bill finally passed in Parliament by 92 to 24 votes. The bill prescribes a detailed case-by-case risk assessment, strengthens the leadership of the Ministry of Environment, and allows for broad public participation procedures. The biotechnology industry warned the Government that only very few applications would pass the assessment procedure. Until today, the ERMA web page lists approvals for 39 different GE plants for field testing. Of those 39, only one application for Roundup resistant onions (Jun 2003, approved December 2003) and four applications for Bt cabbage, broccoli, cauliflower and forage kale (October 2006, no decision yet) were launched after the debate on GMO moratoria in took off in 2000. Contrary to claims by the Life Sciences Network, GE crop trials are apparently not that essential for the well-being of New Zealand's economy, nor has New Zealand experienced a loss of 100,000 jobs.



Waitakere District: map of
170 registered GMO-free properties
(137 ha) with their 8 km radius
Source: <http://www.gefreeregister.co.nz/Maps/waitak3.gif>

GMO-free zones

Civil society activities

Anticipating the imminent end of the GMO moratorium, local activists in Whangarei set up a „GE-Free Register“ in October 2001. Land owners could register their property and pledge that they would not use GMOs on it. Following the recommendations of the National Beekeepers' Organization, an 8 km radius around the property was marked on maps available from the web page (this 8 km radius reflects the potential foraging area of bees kept on the property). Within this „zone of interest“ neighbors should respect the will of the GMO-free property owner and refrain from planting GE crops. As of March 2007, there are 5572 properties listed in the GE-free Register covering a total of 354,775 acres (143,575 ha). The register turned out to be a successful idea; however, because too much time had to be dedicated to sustain the web page, the operation was handed over to Greenpeace in 2004.

18 Peter R Wills. September 2003. Genetic Engineering: Policy and Science since the Royal Commission: Insoluble Problems http://www.psr.org.nz/GE_report_Times.pdf

Parliamentarian activities

Apart from the country-wide GE field trial moratorium, several New Zealand municipalities have declared themselves as GMO-free. The current number is not available; however, at the end of 2001, some 70 municipalities were reported to have adopted GMO-free resolutions. While those declarations in general have a mere political character and lack enforcement and monitoring mechanisms, some local governments have been engaged in looking for possibilities of legally binding rules banning GMOs from their territories. In this chapter, the activities of the Waikatore City Council in the north of New Zealand will be presented as an example.

In November 2001, at a Special Meeting, the Waikatore City Council declared: “That Waitakere City Council declares Waitakere City GE-Free in field and food.” To define its intentions more precisely, the Council stated as well: “That there be further investigation to identify the most effective ways of advancing Council’s aspirations for Waitakere City to be ‘GE-free’, without compromising medical research or currently permitted activities but discouraging in every way possible any form of field trials.” Due to still unresolved questions about how to operationalize local GE crop bans in land use instruments, the GMO-free policy of Waitakere was never implemented by local management plans.

This decision (and similar decisions by other municipalities) raised concerns with some supermarket companies that local bans would affect their sales. As a result, they started lobbying the central Government to take action against the local bans. In summer 2003, while the country waited for a governmental decision on the RCGM report, the organization of the municipalities – Local Government New Zealand – debated whether its member could follow the example of several Australian States and not just proclaim GE-free zones but actually ban field trials. The Resource Management Act that enables councils to control land use was seen as the appropriate instrument to implement local GMO management rules. In March 2004, the Far North, Kaipara, Rodney, and Whangarei District Councils, together with the Waitakere City Council, commissioned the Sustainability Council of New Zealand to identify options for managing the risks arising from GMOs. The aim was to explore what extra safeguards could be enacted by local governments in addition to the measures set by the national authority. The report on communal GMO management was published in November 2005.¹⁹

The Councils announced three important findings in a press release:

- The report identifies a series of economic, environmental and cultural risks associated with the outdoor use of GMOs. It highlights the risk that cultivation of GM crops could cause, namely economic damage through GM contamination appearing in non-GM crops. This is considered a major source of risk because even

19 Community Management of GMOs II – Risks and Response Options

<http://www.wdc.govt.nz/resources/8714/Community-Management-of-GMOs-II--Nov-05-.pdf>

Review of GE issues and options report for Whangarei District Council

<http://www.waitakere.govt.nz/AbtCnl/ct/pdf/council2005/peerreview.pdf>

Opinion on land use controls and GMOs

<http://www.waitakere.govt.nz/AbtCnl/ct/pdf/council2005/opiniongmo.pdf>

trace levels of contamination are sufficient to trigger food product rejection as a matter of course for Japanese and northern European wholesale buyers.

- The report documents serious gaps in liability law applying to the use of GMOs. There is no liability under the statute governing GMOs for losses resulting from a GMO release carried out in accordance with an approval from ERMA. Costs will instead tend to fall on those suffering the loss or damage (such as non-GM farmers and local authorities).
- A further important deficiency noted by the report is that the exercise of precaution is a matter for ERMA's discretion. Precaution is an option, not a requirement under the law governing ERMA. However, a number of Northland councils have developed policies requiring precaution with respect to the management of GMO risks.

The councils could call for more stringent liability rules because under the relevant law, the HSNO and NOOM Acts compensation for damages caused by GMOs could only be demanded if the (legal) releasers and users of GMOs bend the rules.²⁰

The Minister for the Environment, Marian Hobbs, warned that the Councils cannot simply put their rules over the national laws and their principles. Local governments may ban GMOs in their territories under the Resource Management Act – but they must provide scientific evidence that they pose unique risks in these territories. Otherwise, the decision would probably not withstand a challenge at the Environment Court. Councils would have to finance and carry out scientific research to challenge the findings of the ERMA – and that has to happen on a case-by-case basis and not in connection to a blanket ban.²¹

The position of the Councils was that they do not plan to conduct extra scientific research but that they are obliged under the Local Government Act to protect the economic, social, environmental and cultural wellbeing of their communities, which also could include banning GMOs. New Zealand's local governments were obliged to formulate a Long Term Council Community Plan (LTCCP) which was due to start in 2006. The earlier GMO-free decisions of many communities were debated again when they developed the LTCCPs. Several communities included provisions on a ban of GMOs or a precautionary approach towards GMOs in the plans. For example, in November 2005, the Waitakere City Council voted:

1. That the Genetically Modified Organisms – the Northland Approach report be received.
2. That the Council's GE-free status be stated in the draft Long Term Council Community Plan 2006-2016 under the Strong Innovative Economy strategic platform.
3. That the Council holds a watching brief on the Northern Councils' joint action.

20 An informative overview about the GMO consultation process in Northern New Zealand can be found at the web page of the Whangarei District Council: http://www.wdc.govt.nz/agendas_online/CL_1022006/A676449.html

21 The viewpoint of the NZ government on local GMO oversight can be read at: <http://www.mfe.govt.nz/issues/organisms/regulation/local-government.html>

4. That the Council continues to take every opportunity to lobby the Government to address the issue of regulatory gaps in the Hazardous Substances and New Organisms Act 1996 and Local Government involvement in Genetically Modified Organisms applications.

In June 2006, the Waitakere City Council adopted the Long Term Council Community Plan 2006-2016 which states: „The city is promoted as GE-free in field and food.“²² The same month, the Northland Regional Council approved the Northland Community Plan 2006-2016 that declares a GMO moratorium for the region:

The Regional Council is a member of a Northland inter-council working group to discuss a common approach to the management of genetically modified organisms in Northland. Until this group has completed its work, the council has decided to adopt a precautionary approach. This means that there should be no further development and field testing of transgenic organisms envisaged for agriculture, horticulture and forestry in Northland, nor any commercial release, until the risk potential has been adequately identified and evaluated and a strict liability regime put in place.²³

This area comprises the three most Northern districts of New Zealand Far North, Whangarei, and Kaipara. The Council also took a proactive stance on GMO management when it decided to: „Provide a contingency fund for expert assessment of applications for outdoor trials or use of genetically modified organisms in Northland as notified by ERMA.“ In addition, it also “Set aside a fund of \$10,000 annually for expert assessment of notified applications made under HSNO legislation.“

22 Waitakere City Council. 2006. Long Term Council Community Plan, Vol.1, p.20 more information at: <http://www.waitakere.govt.nz/AbtCnl/pp/ltccp.asp>

23 Northland Regional Council. 2006. Northland Community Plan 2006 – 2016 More information at: <http://www.nrc.govt.nz/reports.and.news/annual.plan/index.shtml>

ANNEX NEW ZEALAND

Internet Links

A) NGOs

GE-Free New Zealand in food and environment

<http://www.gefree.org.nz/>

GE-Free register

<http://www.gefreeregister.co.nz/>

Greenpeace New Zealand

<http://www.greenpeace.org.nz/campaigns/ge/intro.asp>

True Food Guide

<http://www.gefreefood.org.nz>

Sustainability Council of New Zealand

<http://www.sustainabilitynz.org/>

Green Party of Aotearoa/New Zealand

<http://www.greens.org.nz/ge/default.asp>

B) Critical Scientific Groups

NZ Institute of Gene Ecology

<http://www.inbi.canterbury.ac.nz/>

Physicians and Scientists for Responsible Genetics (PSRG)

<http://www.psrg.org.nz/>

C) Indigenous Groups

Maori Environmental Business Network

<http://wms-soros.mngt.waikato.ac.nz/NR/exeres/5F2D0208-4029-4DCC-B7F5-2CE1D0FCC83D.htm>

D) Biotechnology Science and Industry

Life Science Network

<http://www.lifesciencesnetwork.com/about.asp>

E) Government

Environmental Risk Management Authority

<http://www.ermanz.govt.nz>

New Zealand Food Safety Authority

<http://www.nzfsa.govt.nz/>

Toi te Taiao: New Zealand's Bioethics Council

<http://www.bioethics.org.nz/>

Documents

In this document section you can find:

- A) An overview about GE plant field trials in New Zealand, compiled by the author

Source: ERMA, <http://www.ermanz.govt.nz/search/registers.html> (search for “new organism”)

- B) The speech of the Prime Minister Helen Clark on the results of the Royal Commission and the governmental decision to prolong the moratorium on GE plant field releases (31 October 2001)

Source: Archive of the Executive Government of New Zealand, <http://www.executive.govt.nz/minister/hobbs/gm/summary/pm-statement.htm>

- C) A letter notifying neighbors about the GMO-free status of the own property

Source: GE-free Register, <http://www.gefreeregister.org.nz/letter.pdf>

- D) A data sheet for the Maori GE-Free Register

Source: Maori Environmental Business Network, <http://wms-soros.mngt.waikato.ac.nz/NR/rdonlyres/ebrd4q24vzqf3tlylhfgi27x2h7dwrkvk32mqwdzu2lhboy7pnfgkqouesrs5dpwqcb5aisbblrqaih5oy33kxcdsnc/Maori+GE.doc>

GMO-FREE ZONES IN THE PHILIPPINES – OVERVIEW

Main Actors

FARMERS	NGOS	POLITICAL PARTIES	INDUSTRY
<ul style="list-style-type: none"> – Bohol Initiators for Sustainable Agriculture and Development – Bohol Network for Farmers Rights 	<ul style="list-style-type: none"> – South East Asia Regional Institute for Community Education (SEARICE) – Bohol Nature Conservation Society – Ecological Society of the Philippines 	<ul style="list-style-type: none"> – Green Party of the Philippines – Bayan Muna (Nation First) 	<ul style="list-style-type: none"> – Bohol Chamber of Commerce

Legal Status

LEGALLY BINDING	VOLUNTARY
<ul style="list-style-type: none"> – Ongoing efforts to introduce legislation on GMO-free zones in the Philippine Parliament (HB 1767 & 2124; SB 1775) – Resolution No. 2003-235 and Ordinance 2003-010 of the Province of Bohol – Regulation in other Provinces, but without enforcement provisions 	<ul style="list-style-type: none"> – Decisions of communal councils

Specific features that are used by GMO-free zones movements

Strong and radical movement against globalization and corporate dominance
 History of activities to empower rural communities
 Organizations creating awareness with regard to the use of genetic resources, farmers' rights, organic farming
 Legislative initiatives by Parliamentarians

PHILIPPINES – FIGHTING AGAINST THE MARGINALIZATION OF THE POOR AND FOR SELF-DETERMINATION IN RURAL DEVELOPMENT

For many years, civil society movements opposing governmental privatization and corporate development strategies have been engaged in projects and initiatives opting for greater self-determination for marginalized groups in society. Philippine organizations currently engaged in promoting GMO-free zones have their roots in the struggle for sustainable agriculture and social justice. This struggle has confronted many conflicts, and exposed members of civil society organizations and leftist political parties have even risked attacks on health and life by paramilitary groups. For instance, Victor Olaivar, who joined the Bohol Initiators for Sustainable Agriculture and Development when it promoted the GMO-free zone policy, was shot dead on September 7, 2006. He was also fighting through the Bohol Network for Farmers Rights for the rights of farmers to save, share, and plant seeds and opposed the new Plant Variety Protection Act. The human rights organization KARAPATAN lists more than 700 extrajudicial killings of members of progressive groups since 2001.²⁴

The current GMO policy and regulatory system was developed in close relation to advisers supporting models from the United States and the biotechnology industry. The main responsibility for GMO approvals was given to governmental institutions dealing with agriculture and trade. In 2001, President Arroyo issued the National Biotechnology Policy and in April 2002, the Department of Agriculture released the Administrative Order No. 8, which provided rules and regulations for the import and release of GE plants and their products. Already in December 2002, the Ministry's Bureau of Plant Industry approved the commercial propagation of Monsanto's Bt maize MON810. In the Philippines, 10,000 farmers were allowed to plant this maize on over 20,000 ha in 2003. That made the country the first to grow GE maize in Asia. Since then, more and more farmers have started to plant GE maize. According to the 2005 report of the International Service for the Acquisition of Agri-biotech Applications, 70,000 ha of Bt maize were grown on the islands.

According to overviews provided by the USDA, 42 different GE events have been approved for food and feed use to date: 31 GE events (in maize, cotton, potatoes, alfalfa, sugarbeet, soya and canola) and 11 stacked events²⁵ (in maize and cotton). The Philippines have approved several GE crops for food and feed that are not – to be more precise, not yet or not any longer – grown by any farmer in the world. Amongst those 42 approved events, four are approved for commercial propagation.

After the Cartagena Protocol on Biosafety was signed by the Philippine government, a National Biosafety Framework was developed under the responsibility of the Ministry of Environment. The Ministry used the opportunities of the project for public consultation and participation and involved a broader range of civil society groups than other Ministries which had been

24 KARAPATAN, Stop the killings in the Philippines, <http://stopthekillings.org/>

25 Stacked means two or more independent transgenes, such as Bt plus herbicide tolerance

developing biosafety regulations so far. The framework was implemented in March 2006 by the Executive Order No. 514, and foresees to include social, cultural, and ethical considerations into GMO decision making. Philippine biotechnology organizations fear that future GMO laws implementing the National Biosafety Framework may hinder the quick expansion of GE crop agriculture in the country.

Civil society activities

In August 2001, farmers destroyed a Bt maize field trial of Monsanto. The activists resorted to direct action after Monsanto and Pioneer Hi-Bred were sued for illegal field tests of Bt maize in 1999 and 2001. In both cases, the companies failed to appear before the judge until the field trials were over and the case was moot.

In the first year of commercial Bt maize planting, the protest against the introduction of GE crops reached a climax. On April 22, 2003, a group of nine activists started a hunger strike in front of the Department of Agriculture demanding a moratorium on open-air planting of Bt maize because of the high likelihood that GE pollen would contaminate neighboring fields. The group complained that the governmental risk assessment did not appropriately tackle the risks of Bt maize on the health of farmers, consumers, and the environment in the Philippines. Prominent representatives of the Catholic Church sided with the activists. The Department of Agriculture, supported by national organizations representing the interests of large commercial farmers, the biotechnology science, and industry, stuck to its decision to allow the planting of Bt maize. On May 21, the hunger strike was ended. Farmers had started to plant Bt maize, and the government told the protesters that it was only willing to consider a moratorium when they could present new scientific evidence on possible risks.

Parliamentarian initiatives

Central Parliament

To counter governmental efforts to make the Philippines No.1 in GE crop planting in Asia, oppositional parliamentarians filed the House Bills 1376 and 3381 in 2001. These bills would ban the entry, sale, and field testing of GMOs and their products; they were accompanied by House Resolutions calling for investigations of the GMO regime and risk assessments. Furthermore, two initiatives for mandatory GE food labeling were started. In a parliamentarian session, the Representatives complained that, due to the influence of the United States and the biotechnology industry, none of these initiatives could proceed in the system. The GMO-free zone initiatives were re-submitted in the new Parliamentarian session that started in 2004 (House Bills 1767 & 2124). In the Senate, a comparable bill was introduced in September 2004 (Senate Bill 1775). As in the previous session, these bills could not pass the committees.

Province of Bohol

Parallel to the legislation in the Philippine Parliament, the Province of Bohol – an island in the central part of the country – started its own initiative. This approach proved to be more successful. In June 2003, the first GMO-free zone of the Philippines was declared. The Sangguniang Panlalawigan (Provincial Council) of Bohol passed Resolution No. 2003-235 banning the use of GMOs. The resolution was introduced by the Vice Governor Julius Caesar Herrera after a long process of lobbying efforts by farmers and environmental groups. The Island of Bohol is known for its efforts to foster sustainable agriculture. For instance, it was chosen as one site of “Community Biodiversity Development and Conservation Program,” an international project that works to strengthen the ongoing work of farming communities in conserving and developing agricultural biodiversity vital to their livelihood and food security. In contrast to many other regional GMO-free resolutions, the Bohol document introduces monitoring and enforcement schemes which make the regulation rather stringent compared with other regulations from the Philippines and other regions of the world that merely express the political will to stay GE-free. Driving forces in the establishment of the GMO-free zone are the Bohol Network for Farmers’ Rights and the Bohol Nature Conservation Society, supported by others such as SEARICE and the Catholic Church. Marcela Feeds, the sole regional company producing animal feed, assured that it is not going to import GE maize seeds.

In 2004, the Government of Bohol, represented by its Governor Erico Aumentado, chose July 21 – Bohol Day celebrating the foundation of the province – to announce the Provincial Ordinance 2003-010, “Safeguard against Genetically Modified Organisms,” that sets rules to implement the 2003 resolution. A multi-sectoral GMO Monitoring Committee was established to oversee implementation of the GMO-free policy. The committee consists of representatives from government, business and civil society sectors. Furthermore, a province-wide information and education campaign on GMOs was launched. The ordinance focuses only on GMOs seeds and crops and does not regulate processed food products containing GMO ingredients.

The legislation requires that any planned introduction of GMOs must first meet four conditions:

- That the resolution declaring Bohol as GMO-free has been lifted on the basis of moral and scientific certainty and satisfaction of all sectors in the province as to its safety and environmental soundness;
- That a widespread multi-sectoral public hearing and education campaign in all municipalities throughout the province has been conducted;
- That a favorable recommendation has been unanimously given by the multi-sectoral GMO Monitoring Committee; and
- That any person who intends to introduce GMOs into the province must first show proof that he has subjected said GMO product to Environmental Impact Assessment (EIA) and has successfully complied with such EIA procedures consistent with the existing national and local laws and regulations.

Other Provinces

Other provinces of the Philippines that have been engaged in GMO-free resolutions are Mindoro Oriental and Marinduque (as part of the Organic Haven Islands of Mindoro, Marinduque, Romblon and Palawan). Both provinces released a Provincial Environmental Code and an Administrative Order banning the entry of GMOs in their areas. The provinces of Negros Occidental and Negros Oriental signed a memorandum to underline their vision to become the 'Organic Island of the Philippines'; a corresponding ban on GMOs in the island is expected to follow. In November 2006, the Government of Negros Oriental called upon the Council to start its work on a GMO-free ordinance. The Council of South Cotabato adopted a resolution calling for a moratorium on Bt maize planting. This moratorium was neither approved by the governor nor followed by the agricultural authorities.

ANNEX PHILIPPINES

Internet Links:

SEARICE

<http://www.searice.org.ph/>

Documents

In this document section you can find:

A) Resolution No. 2003-235 – Declaring the Province of Bohol to be GMO-free or free from genetically modified organisms
Source: document sent by SEARICE

B) Provincial Ordinance No. 2003-010 “The Safeguard Against GMOs”

Source: document sent by SEARICE

C) An overview about parliamentary initiatives on GMO-free zones and related issues, compiled by the author

Source: Senate of the Philippines, <http://www.senate.gov.ph/search.aspx?q=genetically>

D) The House Bill No. 2124 “GMO-Free Food and Agriculture Act of 2004”

Source: Bayan Muna Party, http://www.bayanmuna.net/legislation/HB/HB_2124.htm

E) An overview about GE crops approved in the Philippines since Dec 2002, compiled by the author

Source: diverse USDA Foreign Agriculture Service Attaché Reports, <http://www.fas.usda.gov/scriptsw/AttacheRep/default.asp>

EU MORATORIUM ON GMO APPROVALS

The EU approved its first GMO laws on contained use, field releases and market approval in April 1990 within the responsibility of the Directorate for Environment. In parallel, Denmark and Germany adopted their own national laws. In several member states, these legislative processes were accompanied by major public debates. For a long time, the debate pro and against GMOs was regarded as “hypothetical” because there were no GMOs in the fields and the food. This perception changed dramatically when, in 1996, the first shipment containing GE soy reached Europe. At that time, the Novel Food Directive to set up a specific legal framework for GE food stuff was still under debate, and no labeling provisions for GE food existed in the EU. While biotechnology companies and parts of the food sector, especially the grain mills, claimed that consuming GMOs would be inevitable from now on, civil society groups increased their activities against GMOs. The most visible group was Greenpeace that decided to launch a market campaign to convince the food sector not to use GMOs. This campaign was highly successful. Almost all European food retailers have signed GMO-free policies, and the food supply in the EU was kept almost GE-free until recently; notwithstanding the fact that, in 1998, 18 GMOs were authorized for release into the environment, and fifteen GM food products received market approval.

By GMO proponents, the EU GMO laws were regarded as too strict to support Europe’s competitiveness in the biotechnology industry and agriculture. As a result, a revision of these laws began with the intent to soften their legal framework. Many EU governments, Ministries and Directorates of the European Commission were in favor of deregulating the GMO laws, and supporters of strong legal provisions were in the minority. Despite the wide range of powerful GMO-supporters in the areas of politics, science, and industry and their public campaigns, the negative public opinion towards GMOs and GE food in many member states remained stable and at a high level.

GMO BANS IN EU MEMBER STATES

DATE OF BAN	COUNTRY	GMO	COMPANY
Feb 1997	Austria	Bt176 Bt maize	Ciba Geigy (now Syngenta)
Feb 1997	Luxembourg	Bt176 Bt maize	Ciba Geigy
Sep 1998	Greece	Topas 19/2 LL canola	AgrEvo (now Bayer CropScience)
Nov 1998	France	Topas 19/2 LL canola	AgrEvo
Nov 1998	France	MS1/RF1 sterile/ restorer canola	AgrEvo
Jun 1999	Austria	MON810 Bt maize	Monsanto
Mar 2000	Germany	Bt176 Bt maize	Ciba Geigy
Apr 2000	Austria	T25 LL maize	AgrEvo
Jan 2005	Hungary ^a	MON810 Bt maize	Monsanto
Mar 2005	Poland ^{a, b}	MON810 Bt maize	Monsanto
Apr 2005	Greece ^{a, b}	MON810 Bt maize	Monsanto
Apr 2006	Austria ^a	GT 73 RR canola	Monsanto
Jul 2006	Poland ^{a, b}	all GE crop seeds	-/-

a: these ban were not included in the WTO case which was launched in 2003

b: these bans were issued under the national seed registration laws. Source: compilation by Hartmut Meyer

The first major governmental step that led to the moratorium decision in 1999 was taken by Austria when it banned GMOs from being imported into its territory in 1997. Luxembourg, France and Greece followed with their own import bans. In 1998, when the citizens of France and Germany elected new governments and the Ministries for the Environment fell under the responsibility of the Green Parties, the balance between GMO-supportive and GMO-skeptical governments began to change. Another critical event in that time was the failure of the negotiations for a United Nations treaty on biosafety in February 1999 in Cartagena/Colombia, known as the later Cartagena Protocol on Biosafety. The collapse was caused by the so-called Miami Group (United States, Canada, Australia, Argentina, Chile, and Uruguay) and the lobby work of the international biotechnology industry. It certainly strengthened the conviction of many EU Ministers for the Environment that they should defend their legislative framework.

Advocates for a more precautionary approach gained further support through two scientific events that received world-wide media attention:

- The public announcement in January 1998 of negative results in rat feeding tests with GE potatoes by Dr. Pusztai in the UK and his subsequent dismissal²⁶
- The publication in May 1999 of a laboratory study showing negative effects of pollen from the widely planted Bt176 maize on the Monarch butterfly larvae by Dr. Losey and others from the United States.²⁷

Apart from disputes regarding the correctness and significance of the specific research, both cases triggered an intense debate whether current approaches and interpretations of GMO risk assessments and governmental overview were sufficient and appropriate.

The decision of the EU Environment Ministers in June 1999 to stall the approval process for GMOs until new regulations were in place caught the public by surprise. The political discussions in the weeks prior to the decision had still been focused on possible compromises defining conditions under which the approval process could be continued. Those Ministers who demanded a moratorium seemed to be in the minority. At the June meeting, the five EU member states Denmark, Greece, France, Italy and Luxembourg stated not surprisingly „that, pending the adoption of such rules (ensuring labeling and traceability of GMOs and GMO-derived products), in accordance with preventive and precautionary principles, they will take steps to have any new authorizations for growing and placing on the market suspended“. But, another seven EU member states (Austria, Belgium, Finland, Germany, the Netherlands, Spain and Sweden) also declared their intent “to take a thoroughly precautionary approach in dealing with notifications and authorizations for the placing on the market of GMOs, (and) not to authorize the placing on the market of any GMOs until it is demonstrated that there is no adverse effect on the environment and human health.” All twelve Ministers stressed that the public was concerned about the safety of GMOs and that the new laws on labeling and traceability had to be finalized urgently. They based their decision on the new EU Treaty of Amsterdam Community that had come into force only weeks before on May 1, 1999. Article 174 2 of the EU Treaty obliges governments to base their policy on the environment on the precautionary principle and on the principles that preventive action should be taken. Only the United Kingdom, Ireland and Portugal did not support this call for a GMO approval moratorium.

26 The Guardian (UK) reported extensively on the Pusztai case on February 12, 1999 when international scientists published a report supporting Dr. Pusztai one day before the UK Government was set to make a (positive) decision about a national GMO approval moratorium:

Flaws in the food chain – We need a moratorium, <http://www.guardian.co.uk/comment/story/0,,310539,00.html>

Food scandal exposed, <http://environment.guardian.co.uk/food/story/0,,1848734,00.html>

Food scandal: chronology, <http://environment.guardian.co.uk/food/story/0,,1849106,00.html>

Ousted scientist and the damning research into food safety, <http://environment.guardian.co.uk/food/story/0,,1849104,00.html>

Top researchers back suspended lab whistleblower, <http://environment.guardian.co.uk/food/story/0,,1848779,00.html>

27 Cornell University. 19 May 1999. Toxic pollen from widely planted, genetically modified corn can kill monarch butterflies, Cornell study shows. <http://www.news.cornell.edu/releases/May99/Butterflies.bpf.html>

J.E. Losey et al.. 20 May 1999. Transgenic pollen harms Monarch larvae. Nature 399: 214.

<http://www.biotech-info.net/transpollen.html>

This decision marked the turning point of a year-long debate on the deregulation of the EU GMO laws from 1990. In the following years, the European Commission did not challenge the moratorium decision nor the national bans on imports of EU-wide approved GE crops.

Challenge at the World Trade Organization

Immediately after the moratorium decision, the United States warned about challenging this decision at the World Trade Organization (WTO). Finally, on May 15, 2003, the United States, together with Canada and Argentina (the two other main GE crop growing countries and members of the former Miami Group), launched a complaint at the WTO.²⁸ In summer 2003, the EU member states agreed on a new GMO legislation that, as a whole, created a stricter framework for GMOs and GE food and feed than before. The new legislation went into force in January 2004, and marked the end of the EU GMO approval moratorium. The pending applications could be continued, and new applications could be sent in.

It took the WTO three years to come to a decision. In February 2006, Friends of the Earth Europe published leaked copies of the Interim Report of the WTO panel; the final report was published by the WTO in October 2006. In contrast to many reports and opinions, the WTO panel neither ruled over principles and provisions of the EU GMO legislation nor questioned the right of governments to ban GMOs. Following the original complaint, the WTO panel decided that the European Commission had not applied its executive power and thus unduly delayed the GMO approval process. Furthermore, the national GMO moratoria were found to be illegal in the context of the WTO because they do not fulfill the criteria spelled out for environmental risk assessments that would be necessary to justify such a measure under the WTO Sanitary and Phytosanitary (SPS) agreement. Such risk assessments not only have to show the possibility of damage, they also have to elaborate on the likelihood that this damage will occur. The WTO ruled that the member states' argumentation – which was based on the fact that existing risk assessments had been undertaken inappropriately and were not based on sound science – was not sufficient to justify GE crop import bans. Consequently, governments were required to present results of their own/new research that could substantiate claims of environmental risks for the country. The existing risk assessments, which were the basis for the EU's approval of the GMOs under question, concluded that the probability of causing environmental harm was negligible. The WTO could not be convinced that these risk assessments did not fulfill scientific standards.

EU member states continue to block GMO approvals

The eight national bans challenged by the WTO received broad support in September 2006 when the Council of EU Environment Ministers defended them with a qualified majority. However,

28 More information on the WTO GMO case can be found at the WTO web page and the FoEE web page
http://www.wto.org/english/tratop_e/dispu_e/cases_e/ds291_e.htm
<http://www.foeeurope.org/biteback/index.htm>

in light of the WTO verdict, the European Commission appears determined to overcome the national GE crop bans. For instance, in October 2006 the Commission decided to resubmit the request to lift the GMO bans to the EU Council of Ministers. But again, the EU Environment Council supported the measures of the five member states at their session in December 2006. Of the 25 EU nations, only the UK, the Netherlands, Sweden and the Czech Republic backed the position of the European Commission and the WTO.

And yet, EU-wide rules on GMO liability and coexistence are still missing. Until now, no new GE crops for cultivation have been approved in the EU, and EU member states have also not been able to agree on approving any of the new or continued applications for GE food and feed. In five cases, the European Commission made use of the so-called comitology rules for decision making and issued approvals for GMOs for food and feed against the will of the member states.²⁹

In addition to the first eight GE crop bans, four additional bans have been issued since 2005; Poland even banned the registration of all GE seeds in its national seed catalogue. It remains open if and when these decisions are going to be challenged by the European Commission and/or the WTO.

29 More information on the status of EU GMO approvals can be found at the European Commission web page and the FoEE web page in the section "Pending EU approvals" at http://ec.europa.eu/biotechnology/index_en.htm and <http://www.foeeurope.org/GMOs/Index.htm>

ANNEX EU

Documents

In this document section you can find:

- A) Definition of GMO according to the Directive 2001/18/EC of the European Parliament and of the Council
Source: European Union, http://europa.eu.int/eur-lex/pri/en/oj/dat/2001/l_106/l_10620010417en00010038.pdf

- B) Article 174 of the Treaty of Amsterdam amending the Treaty on European Union, the Treaties establishing the European Communities and related Acts. *Official Journal C 340, 10 November 1997*
Source: European Union,
<http://eur-lex.europa.eu/en/treaties/dat/11997D/htm/11997D.html – 0145010077>

- C) The Draft Minutes of the 2194th Council meeting (Environment) held in Luxembourg on June 24-25, 1999 and the Corrigendum to Draft Minutes
Source: European Council, <http://register.consilium.europa.eu/pdf/en/99/st09/09433-r1en9.pdf>, <http://register.consilium.eu.int/pdf/en/99/st09/09433-zzen9.pdf>, combined by Hartmut Meyer

- D) A map providing an overview about GMO-free regions in Europe

Source: Friends of the Earth Europe,
http://www.gmofree-europe.org/maps/GMOfree_regions_EU_October06_large.jpg

GMO-FREE ZONES IN GERMANY – OVERVIEW

Main Actors

FARMERS	NGOS	PARTIES	INDUSTRY
<ul style="list-style-type: none"> – Family Farmers Association – Organic Farmers Association 	<ul style="list-style-type: none"> – Friends of the Earth – Greenpeace – Numerous regional and local citizen initiatives 	<ul style="list-style-type: none"> – Green Party – Parts of the Conservative Party in Bavaria 	<ul style="list-style-type: none"> – Association for Ecological Agriculture

Legal Status

LEGALLY BINDING	VOLUNTARY
<ul style="list-style-type: none"> – Delay of the registration of GE maize varieties for unrestricted commercial planting 	<ul style="list-style-type: none"> – Declarations of communities and churches to exclude the use of GE plants in contracts on land leasing – Agreements between farmers not to use GMOs on their land – Respective contracts under civil law

Specific features that are used by GMO-free zones movements

Strong environmental movement
 Environmental organizations with offices and groups from federal to local level
 Long history of civil society debate on genetic engineering
 Influence and support of the Green Party as partner in coalition governments
 Broad coalitions between environmental, consumer, church, organic farming, and (organic) food business groups

GERMANY – WHAT CAN A RULING GREEN PARTY DO?

Since the middle of the 1980s, many German civil society groups and the Green Party had been initiating a critical debate on all applications of genetic engineering. In 1998, a new government formed by the Social Democratic Party and the Green Party ended a 16-year period of conservative government rule fully supportive of genetic engineering. In contrast to the other presented cases in this manual, no legal initiatives to support GMO-free regions were started in Germany. The German GMO law, as all other GMO laws, does not contain provisions that would allow GMOs to simply be banned from certain regions. In contrast to other countries with federal systems, such as Austria or Australia, the German federal states do not possess any legal means to set up extra environmental or agricultural frameworks or conditions for the use of GMOs. The rationale of the approval process is that if the authorities see risks in a specific GMO, an approval is either denied or comes with conditions that minimize the risks for the affected regions in the country. The ruling, though minority, Green Party and its Ministers responsible for GMO legislation (Health and later Agriculture) did not try to change the legal system to give more freedom to the lower political levels but opted for blocking or delaying the approval process of GE crops.

Administrative activities

In February 2000, the German Federal Ministry for Health, which, at that time, was responsible for implementing the GMO law, banned the import of Bt176 maize and thus blocked the expected approval of the first Bt maize variety by the Federal Agency for Plant Varieties (BSA). While its expert advisory body saw no specific risks connected with Bt176, the Ministry pointed out that the presence of the antibiotic resistant marker gene might pose additional risks and thus was not acceptable. This decision caused a dispute in the German government, since the Chancellor of the time had repeatedly announced his support for agricultural biotechnology. Finally, a EUR 50 million program was started to grow Bt176 maize on 500 ha per year to conduct additional environmental biosafety research, which would produce more relevant data for future GE crop approvals. In addition, the Government started a public dialogue with all relevant stakeholders to debate – once again – the pros and cons of GE crops and possible ways towards their approval.

One year later in 2001 the planned registration of agricultural Bt maize varieties with the T25 construct was blocked. This time, the impetus came from the Federal Ministry for Consumer Protection, Food, and Agriculture, which was meanwhile responsible for the GMO law.

In January 2004, the BSA, under a specific provision of the German seed approval law, granted seven different MON810 maize lines the status as experimental varieties that could be grown in limited quantities (5 t seeds per variety) by selected farmers. The Ministry again opposed full registration of the maize as varieties. The purpose of these farm trials was to collect experience and data to set up rules for the coexistence of GMO and non-GMO agriculture under specific German conditions. The experimental growing of these varieties started in 2004 on 300 ha; this equals 0.02% of the German maize-growing area. The locations of the trials were kept secret.

In 2005, a new GMO law which included a GMO register made it obligatory to publish the location of GE crop fields. According to the register, German farmers grew 340 ha of Bt maize in 2005. Before the planting season in 2006, the BSA finally registered five MON810 varieties for unrestricted commercial growing in Germany; the Bt maize area increased to 950 ha.

Church activities – “No genetech on church land”

In 1996, the Environmental Office of the German Protestant Churches (which own and rent a considerable amount of agricultural land) started to advocate for GMO-free zones in their 23 regional Churches. The Church Province of Saxonia was the first church to adopt a GMO-free policy. At the end of 2006, 14 out of the 23 churches had adopted different kinds of resolutions, calling for bans, moratoria or cautious approaches. In its November 2003 call for sustainable agriculture, the Central Committee of the German Catholics recommended that the use of GMOs should be forbidden in contracts for land lease.

Civil society activities

German initiatives promoting GMO-free zones focused on three different areas: communal land, church land, and farmer-based coalitions. Since existing instruments for environmental and agricultural land management could not be used to deal with GMO issues, these efforts all focused on setting up private contracts.

Initiative “No genetech on communal land”

In 1998, Friends of the Earth Germany (BUND) started a campaign to lobby communal parliaments and administrations to declare communal land as GMO-free. BUND built its campaign on its 2,200 local sections and on the support of many independent local initiatives that had been working against GE crop field trials since 1996. The initiative could announce an early landmark decision when, in February 1999, the Bavarian Landtag (state parliament) adopted a GMO-free resolution. Several other communities in Germany adopted similar decisions; however, the initiative never succeeded in establishing a significant number of GMO-free resolutions. The community lobbying efforts received a substantial push when, in 2003, the Ministry of Environment and its Federal Agency for Nature Conservation (BfN) decided to analyze the status of GMO-free zones in Germany that were founded through private contracts between groups of farmers or between big landowners (e.g. municipalities, churches) and farmers leasing their land. In 2004, the Institute for Ecologic Economic Research published the first status report on GMO-free regions in Germany.³⁰ From 2004 to 2006, the Agency financed a project to support the foundation of GMO-free regions based on voluntary agreements between farmers as a means to ensure coexistence between GMO and non-GMO agriculture and to protect biodiversity near

30 The study “Sondierungsstudie gentechnikfreie Regionen in Deutschland” (Pilot study genetech free regions in Germany) and other relevant publications can be downloaded at:

<http://www.gentechnikfreie-regionen.de/hintergruende/studien/gentechnikfreie-regionen.html>

and in ecologically sensitive regions. The project was run by the Institute for Labor and Economy of the University of Bremen, BUND, and the German Family Farmers Association. The GMO-free region Uckermark-Barnim will be described in a separate chapter as an example of farmer-based initiatives.

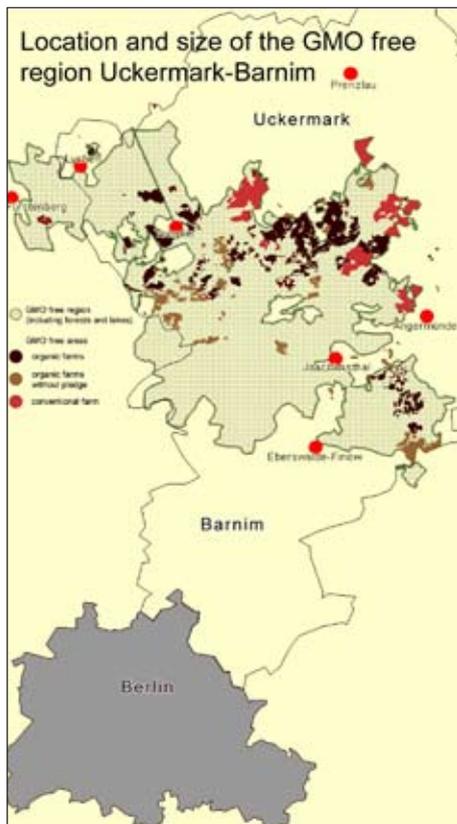
The revival of the German GMO-free movement was caused by three factors:

- Planned registration of the first Bt maize for commercial planting;
- the end of the EU moratorium on GMO releases in 2004, and
- the lack of effective rules and regulations to ensure the coexistence of GMO and non-GMO agriculture

The new communal campaign produced some important results. In December 2004, when the state of Berlin decided to sell some land properties the parliament of the state adopted a resolution of the Green Party that urged the government of Berlin to oblige property buyers not to use GMOs. This implies that 15,000 ha will be farmed GMO-free in the future.

In May 2004, the sections of BUND in Dortmund and the state of North Rhine-Westphalia sent a "citizen petition" to the mayor of Dortmund demanding a ban on GMOs on communal land. In April 2005, the Town Council of Dortmund adopted the first German communal resolution that named possible economic risks of GMO contamination as a reason to ban GMOs on its land.

As of the end of 2006, 67 municipalities and districts in Germany have adopted GMO-free resolutions. Considering that there are 12,500 municipalities and districts in Germany, this is still a very small number.



Source: http://www.schorfheide-chorin.de/KLU/BILDER/karte_gene.gif

English version by the author

Location and size of the GMO free region Uckermark-Barnim in Germany

Farmer-based GMO-free regions – Uckermark-Barnim in Brandenburg

GMO-critical groups have been present in state of Brandenburg since 1996 when the Barnim Coalition against Genetechnology (Barnimer Bündnis gegen Gentechnologie) was founded to protest AgrEvo, Schering and Monsanto's nearby GE crop trials. In 2003, concerns about GMO contamination of organic as well as conventional products, combined with the lack of regulations that ensure coexistence of GMO and non-GMO agriculture, resulted in the foundation of an initiative to create a GMO-free zone in the region of Uckermark north of Berlin. Due to its emerging problems with maize borer infestations, most of Germany's 340 ha with Bt maize (2005) are located in this state. In January 2004, 21 farmers succeeded in establishing a GMO-free zone. In June 2004, more than 30 organizations launched the Coalition for Genetech-free Agriculture in Berlin-Brandenburg (Aktionsbündnis gentechnikfreie Landwirtschaft Berlin-Brandenburg). At the end of 2005, 46 farmers in the Uckermark region had signed the GMO-free declaration. The zone covers an area of 120,000 ha, and 16,100 ha of this area are farm land. Of this total farm land, some 5,400 ha are cultivated by conventional farmers, and the rest belongs to organic farms. The GMO-free region is the largest of its kind in Germany and most of the area is located in the Schorfheide-Chorin UNESCO biosphere reserve. The GMO-free zone initiative is one

part of several regional initiatives which aim at promoting sustainable land use and development in a rural area of Germany. The initiative gained major recognition in August 2004 when, during a visit in the region, the Federal Minister for Environment recommended the concept for wider application in Germany.

After the Federal elections in September 2005, a grand coalition between the Conservative and the Social Democratic parties was formed, and the Greens once again became an oppositional party in the Parliament. The political support for the GMO-free movement ceased and backing to eventually allow GMO agriculture supported by favorable liability and coexistence regulations increased. And yet, though these two issues are still under debate, the area of land farmed in GMO-free regions had increased to almost 1 million ha by the end of 2006. To get a true overview of the area of land managed without GMOs, the land farmed by organic farms or leased under GMO-free contracts from the protestant churches outside of GMO-free regions must be added the number given below. In 2004, 767,891 ha (4.5% of the total 17 million ha farmland) were farmed by 16,603 organic farms. A differentiation between those organic farmers who operate inside and those outside of GMO-free regions has not been published yet. A specific overview about church land managed under GMO-free contracts does not exist.

FARMER-BASED GMO-FREE ZONES IN GERMANY

	NUMBER OF REGIONS	AGRICULTURAL AREA IN HA	INVOLVED FARMS
GMO-free regions	81	720,053	20,822
Initiatives to found GMO-free regions	33	189,360	5,293
GMO-free declarations by individual farmers		79,623	1,158
Total area		989,036	27,273

Source: <http://www.gentechnikfreie-regionen.de/index.php?id=45>, as of March 2007

ANNEX GERMANY

Internet Links

GMO-free regions in Germany

<http://www.gentechnikfreie-regionen.de/>

GMO-free region Uckermark-Barnim

http://www.schorfheide-chorin.de/klu_index.htm

Documents

In this document section you can find:

- A) GMO-free resolutions of the cities of Munich and Dortmund

Source: GMO-free Regions in Germany, translated by the author,
internet links currently not available

- B) Working definitions for GMO-free regions as developed by the project GMO-free Regions in Germany

Source: GMO-free Regions in Germany, translated by the author,
<http://www.gentechnikfreie-regionen.de/regionen-gemeinden/definitionen.html>

- C) A map providing an overview about the GE crop related decisions of German Protestant Churches

Source: German Protestant Churches (EKD), translated by the author,
<http://www.gentechnikfreie-regionen.de/regionen-gemeinden/beschluesse-der-landeskirchen-und-synoden.html>

- D) A map providing an Overview about the GMO-free regions in Germany

Source: GMO-free regions in Germany, translated by the author,
<http://www.gentechnikfreie-regionen.de/regionen-gemeinden/gentechnikfreie-regionen-und-initiativen/karte-zum-herunterladen.html>

GMO-FREE ZONES IN POLAND – OVERVIEW

Main Actors

FARMERS	NGOS	POLITICAL PARTIES	INDUSTRY
<ul style="list-style-type: none"> – Malopolska Union for Organic Farming – National Independent Farmers' Union 	<ul style="list-style-type: none"> – International Coalition to Protect the Polish Countryside – Animal Welfare Institute – Social Ecological Institute – Greenpeace Poland 	<ul style="list-style-type: none"> – Polish Peasant Party 	

Legal Status

LEGALLY BINDING	VOLUNTARY
<ul style="list-style-type: none"> – Ban of maize varieties not suited to the Polish climate, including 17 Mon810 varieties (approved by European Commission) – Ban to register GMO varieties (challenged by European Commission) – Ban of GMOs in animal feed (European Commission not yet reacted, challenge is likely) 	<ul style="list-style-type: none"> – GMO-free declarations of municipalities and all 16 Polish Provinces

Specific features that are used by GMO-free zones movements

Strong lobby for farmers' interests in the Parliament
 Resentments against EU accession and transformation of agriculture
 Organizations working for the conservation of traditional agriculture and landscapes
 Low profile of research & development in GMOs, no national industry working on GE crops

POLAND – CONFLICTS TRIGGERED BY EU ACCESSION AND AGRICULTURAL TRANSFORMATION

The first Polish GMO rules on deliberate releases and market introduction were introduced in 1997 as an amendment to the Environmental Protection Act. The implementing regulations went into force in November 1999; GE food labeling regulations went into force in April 2000. With its report, “Genetically Engineered Food and Crops in Poland,” from May 2000, the Northern Alliance for Sustainability (ANPED – based in the Netherlands) and the Malopolska Union for Organic Farming (Poland) revealed the inadequacy of Poland’s GMO approval and monitoring system. The report showed that the regulative system lacked any form of enforcement and, furthermore, was boycotted by the biotechnology and food industry. When the report was published, only one application for GE foodstuff was filed although Polish food – illegally – contained many other GE crop ingredients. The Polish Federation of Food Producers lobbied the Environment Ministry to introduce a 24-month transition period for the GMO regulation, instead of advising its members to abstain from sourcing GE material and to produce GE-free food. According to official sources, around ten field trials with GE crops per year were performed before 2000.

Poland, which accessed the EU in 2004, is characterized by a dominant agricultural sector which, through the Polish Peasant Party and other parties, is very influential at the parliamentary and governmental levels. Most of Poland’s 2.5 million farms are small family or subsistence farms. The majority of arable soils is of medium to low quality, and the agriculture production is rather extensive with an average farm size of less than 10 ha. On average, only small amounts of agrochemicals are used, and the biodiversity in and around the fields is rich. While this form of traditional low-input farming faces an insecure future, modern organic farming – managing relatively large areas and aiming at exporting products – is growing (approximately 83,000 ha in 2006). But Poland is also home of large agricultural enterprises, especially producers of pork and poultry that import large quantities of feed, which, for many years now, have contained GMOs. To safeguard the interests of traditional farming culture prevalent, for example, in the mountainous regions in southern Poland, the International Coalition to Protect the Polish Countryside (ICPPC) was founded in 2000.

Civil society activities

From 1996 onwards, civil society started to work on GMO issues in Poland. Greenpeace International’s report, “Playing God – Genetic Engineering of Food in Central and Eastern Europe,” from 1996 was one of the first documents analyzing the GMO situation in these regions. Soon thereafter, Monsanto selected Poland as a potential target for its Roundup Ready and no-till technology and planned to launch a “Farmers Club” in 2000. Monsanto tried to convince farmers to follow the path of their colleagues in the United States, Canada and Argentina but, obviously, the PR campaign never took off. Several organic agriculture and environmental groups in Poland launched GMO awareness initiatives and started to lobby for a GMO-free Poland. At the end of the year, the Polish farmers union Samoobrona (Self-defense) called on consumers not to buy “Western” food, including GE food.

In 2000, the National Independent Farmers' Union Solidarnosc tested imported feed for GMOs and claimed that the loads were accompanied by falsified GMO-free certificates. Solidarnosc activists spotted a trainload at the Polish border and offloaded the wagons on the railway tracks. The union leader Mariam Zagorny was sentenced to one year jail due to his leading role in this action. After a year-long quarrel before the courts and international support for Zagorny, the court decision was finally suspended in November 2005. It was decided that the Solidarnosc action was not an illegal act but undertaken to protect Polish farmers and public health.

Widely reported outcomes of those early initiatives are the "Countryside Manifesto for 21st Century Poland (Charter 21)" from ICPPC, the project "GMOs – a threat to Poland's biodiversity" lead by the Social Ecological Institute, and the Farmers Tour. The Charter 21 from March 2001 linked the issues of globalization, safeguarding rural traditions, and rejecting GMOs. Amongst others, it called for a ban on GMOs and attracted some 450 signatures by Polish and other organizations. The Farmers Tour went through several European countries and was organized by ANPED; the Social Ecological Institute hosted the events in Poland. In early 2002, the tour brought Percy Schmeiser (Canada) and Gail and Tom Wiley (United States) to Poland, the latter had lost contracts for non-GE soy beans due to GE contamination. The Wileys from North Dakota welcomed the demand of Polish farmers to ban GE crops because this would support their own fight against GE wheat in the USA.

To give the GMO movement new momentum, ICPPC launched a campaign for a GMO-free Poland in summer 2004. It fell on fertile ground and soon gained country-wide attention. Building on the experiences from former GMO initiatives, the campaign focused on the threats for agricultural traditions by corporate influence and industrialization of the agricultural sector. A major trigger to start the campaign was the expected inclusion of maize varieties containing the MON810 event into the Common EU Catalogue of Varieties of Agricultural Plant Species. Seventeen of such Bt maize varieties – six from the French and eleven from the Spanish national seed list – entered this catalogue in September 2004 and thus could be bought, planted and marketed legally by all farmers in the EU (the MON810 event itself gained approval under the early EU GMO regulations in 1998 – before the EU moratorium).

The first GMO-free region in Poland was declared in August 2004 by 11 farmers in the province of Malopolska and by the community of Chmielnik in the province of Podkarpackie. The province of Podkarpackie in the Carpathian Mountains in southeastern Poland was the first of 16 provinces to declare itself GMO-free in September 2004. The ICPPC's campaign, which aimed at the province's administrative and political levels turned out to be highly successful. Already in March 2005, half of Poland was covered by GMO-free provinces. The province of Mazowieckie (including the capital of Poland, Warsaw) with a population of over five million people and the province of Wielkopolska (where intensive, large scale farming is prominent) became the sixth and seventh GMO-free provinces. Early in 2006, ICPPC could announce that, after only 20 months of campaigning, all 16 provinces followed the call to go for GMO-free agriculture. On February 6, 2006 the south-central province of Swietokrzyskie was the last region to join the campaign.

Parliamentarian activities

Under Polish laws, GMO legislation is a matter of the central government. Provinces and other lower legislative and administrative units do not have the right to adopt binding rules concerning GMOs. Besides lobbying at the regional and local levels, the ICPPC campaign on GMO-free zones had a second focus. With the support of some parliamentarians and politicians, ICPPC started lobbying for changes in the Polish laws that deal with or can affect the issue of GMOs in agriculture. The current Polish government made it clear in several statements that it supports the efforts to keep GMOs out of Poland: “Poland should be in principle a country free of genetically modified organisms (GMOs),” but, as stated by the Polish cabinet in March 2006, it is open to importing GM food “on condition it is clearly marked, and providing there is no possibility it is transformed” into other products. In 2006, the Polish Parliament and Government adopted extraordinary changes in three laws that deal with seeds and animal feed.

Ban on importation of not adapted EU maize varieties

In March 2005, the Polish government made use of Article 16 (2) (a) and (b) of Directive 2002/53/EC on the Common Catalogue of Agricultural Plant Species and applied for a two-year ban on 16 MON810 maize varieties. These varieties are contained in the EU seed catalogue but deemed as unsuitable to be grown profitably under Polish climatic conditions. The varieties’ maturity class is too high, thus, they are characterized by a long growing cycle and will not reach the necessary ripeness required at the harvesting stage. Later, Poland added one more MON810 and more than 700 non-GMO varieties to this request. On March 9, 2006, the EU Standing Committee on Seeds and Plant Propagating Material approved the request; the ban could be implemented immediately and without a time limit. In 2006, Poland evaluated if the Bt-varieties Bolsa and Novelis are suitable to be grown under Polish conditions; results are expected sometime during 2007.

Ban on GE plant variety approval

In addition to this maize variety ban, the Polish parliament included a ban on approval of all GE varieties under the Polish seed legislation. In July 2006, this law came into force and prohibits the sale and registration of GE varieties in Poland; however, planting is not covered because this is not within the scope of the seed legislation. This blanket ban was not covered by EU legislation; consequently, in October 2006, the European Commission opened an infringement procedure against Poland. Poland now has two months to respond before a second warning will be sent. If the Polish authorities agree with the Commission’s position, eventually the European Court of Justice will have to decide on the matter.

Ban on animal feed containing GMOs

In July 2006, the Polish Parliament passed an act on animal fodder and feeding that “bans the production, the putting into circulation and the use of genetically modified fodder and genetically modified organisms destined for fodder use in animal feeding.” Biotech companies now have

a two-year deadline to prove that GMO-containing feed is safe for animals, humans and the environment. This demand for specific safety measures was achieved shortly before the final vote by Senator Jerzy Chroscikowski, the chairman of the Senate Agriculture commission and Secretary of the National Independent Farmers' Union "Solidarnosc".

New GMO legislation

The Polish GMO Act from 2001 is under revision in 2006 to make it compatible with the new EU GMO legislation. The GMO-free policy as adopted in the two agricultural laws should also be incorporated in the new GMO legislation, which implies that:

- local government should play a role in approving the planting of GE crops;
- existing GMO liability provisions should be extended, costs caused by GE contaminations should be covered by the producers of GE seeds.

ANNEX POLAND

Internet Links

International Coalition to Protect the Polish Countryside – ICPPC

<http://www.icppc.pl/>

Greenpeace Poland

<http://www.greenpeace.org/poland/>

ANPED GMO Project

<http://www.anped.org/index.php?part=23§ion=publications&reference=83>

<http://www.anped.org/index.php?part=59§ion=workinggroups&reference=23>

United States Department of Agriculture – Foreign Agricultural Service – Attaché Reports

<http://www.fas.usda.gov/scripts/AttacheRep/default.asp>

Documents

In this document section you can find:

- A) the Charter 21 – Countryside Manifesto for 21st Century Poland,

Source: ICPPC, <http://www.icppc.pl/eng/index.php?id=106>

- B) the GMO-related paragraphs of the Law of the 27th of April 2006 on the revision of the seed law and the plant protection law

Source: Sejm, http://orka.sejm.gov.pl/proc5.nsf/ustawy/188_u.htm, translation provided by the Office of Bündnis 90/Die Grünen (Green Party) in the German Parliament

- C) the GMO-related paragraph of the Law of the 22nd of August 2006 on animal feed

Source: Sejm, <http://isip.sejm.gov.pl/servlet/Search?todo=open&id=WDU20061441045>, translated by Anja Janitzek

GMO-FREE REFERENDA IN EUROPE

Since GMO-free movements are true peoples' movements, it is not too surprising that the existing elements of direct democracy in European constitutions were used to launch referenda calling for GMO-free zones. In the following parts, three referenda in Austria, Switzerland and Lower Saxony, a federal state in Germany, are described. While referenda in Switzerland can directly change or amend the constitution and laws, referenda in Lower Saxony and Austria do not have an immediate legislative character. They can force parliament to debate the issue of concern and thus may initiate a vote on a new law, but the outcome of the debate and voting is fully in the hands of parliamentarians. In the German language, the legal terms for the respective referenda are "Volksbegehren" (DE, AT) or "Volksinitiative" (CH). For the purpose of this manual, these have been translated as "citizens' initiatives". Detailed information on legal and political background and the different initiatives can be retrieved through governmental and other web pages:

Lower Saxony / Germany:

Citizens' initiatives (in German)

http://www.mi.niedersachsen.de/master/C325056_N324325_L20_D0_I522.html

http://de.wikipedia.org/wiki/Volksbegehren#Volksbegehren_in_Deutschland

<http://mehr-demokratie.de/bremen-nds/>

Austria:

Citizens' initiatives (in German)

<http://www.bmi.gv.at/wahlen/volksbegehren.asp>

http://de.wikipedia.org/wiki/Volksbegehren#Volksbegehren_in_.C3.96sterreich

Citizens' initiative "gene technology" (in German)

http://www.parlinkom.gv.at/portal/page?_pageid=908,151562&_dad=portal&_schema=PORTAL

Switzerland:

Citizens' initiatives (in German)

<http://www.bk.admin.ch/themen/pore/vi/index.html?lang=de>

http://de.wikipedia.org/wiki/Initiative_%28Schweizer_Politik%29

<http://en.wikipedia.org/wiki/Referendum#Switzerland> (in English)

Citizens' initiatives 'for food from genetechn-free agriculture' (in German)

<http://www.admin.ch/ch/d//pore/vi/vis314.html>

1997: GMO-FREE REFERENDUM IN AUSTRIA

In Austria, citizens' initiatives can be started with a rather small group of supporting voters; currently this number is 8032. Since 1964, 32 initiatives were registered and came to a vote. Only one of them missed the quorum of 100,000 votes (since 1981), which is the threshold to bring the initiative to parliament for debate; however, parliament is not obliged to implement the demands in respective laws. In addition, the possible supremacy of the legal framework set by the EU has to be taken into account – as it is the case with the EU GMO laws.

Political background

The Austrian debate on the application of GMOs in food and agriculture was given an institutional frame when a parliamentary commission in 1992 started to work on recommendations for a law on GMOs. The outcome was adopted by parliament in November 1992. After strong criticism by the biotechnology industry and the scientific community, a draft law with less cautionary provisions was presented by the government; the final GMO law entered into force in 1995. Civil society organizations involved in the process complained that the law did not contain liability clauses, provisions for public participation in the approval process for field trials, and provisions for environmental risk assessments when GMO facilities were to be approved.

In 1996, two events triggered a wave of public protest, and thousands of protest letters were sent to the authorities: the German company AgrEvo and an Austrian research institute filed three applications for field trials of Bt maize and GE potatoes and the first imports of Monsanto's RR soybeans reached the EU and thus Austria. Confronted with the protest, the Minister of Health suggested a 2 year moratorium on GE crop trials be used for public consultations. Fearing a formal complaint from the European Commission, the Austrian Chancellor sacked this proposal. Bowing to strong public protest, the two applicants soon withdrew their applications for field trials.

Mobilized by this initial success, civil society organizations started a campaign preparing a citizens' initiative with three demands:³¹

- No food from biotech labs in Austria
- No field trials of GMOs in Austria
- No patents on life

31 http://www.parlament.gv.at/pls/portal/docs/page/PAGE/DE/XX/I/I_00715/FNAMEORIG_000000.HTML

The referendum was registered by a coalition of four major societal forces: ARGE Schöpfungsverantwortung (a Catholic environmental initiative); Österreichische Bergbauernvereinigung (an association of mountain farmers); the animal protection organization „Vier Pfoten;“ und „ÖKOBÜRO (coordination of Austrian environmental organizations). It also received support from numerous other groups and individuals. A major supporter and vehicle for critical opinions was the national newspaper „Kronenzeitung“. The voting took place on April 1997, and the referendum received the second-best results of all 32 referenda conducted since 1964: 1,226,551 Austrians (21.3% of the eligible voters) voted in favor of the three demands.

Referenda in Austria do not possess direct legislative power but force parliament to act on an issue – and preferably follow the will of the voters. The legal possibilities to implement the outcome of the referendum in national laws were very limited due to the existing EU laws on GMOs. And, although the government stated that the referendum sent a clear signal for a precautionary way to deal with genetic engineering, it was clear that immediate governmental action would theoretically only be possible with regard to the issue of patents on biotechnological inventions. This demand to refuse “patents on life” could be negotiated because the EU was still in the process of debating the EU biopatent directive.

Impact of the initiative

Due to the EU legal framework which constitutes a right for GMO and GE food applications and an approval process on a case-by-case basis, the Austrian parliament saw no chance to implement the results of the referendum into national laws.³² A parliamentary commission was installed to present recommendations on how to redraft the existing GMO law in light of the outcome of the referendum. Soon, however, it became clear that the referendum was not guiding governmental policy. For instance, in December 1997, Austria agreed to the EU biopatent directive. In protest, the initiators of the referendum left the commission. In April 1998, a revised GMO law was approved. The result of the referendum was translated into following new provisions:

- the legal entities involved in the application procedure of field releases – and thus having the right to appeal against the decision – are the applicant, the owner of the land, the community, all neighboring land owners and communities and the federal state, but not environmental organizations;
- the penalties for illegal releases were increased;
- GMO field trials (but not the marketing) would fall under the Austrian liability law;
- the nomination procedure for the members of biosafety advisory committees was changed to ensure that not only biotechnology promoters became members.

The legislative system of any EU country may foresee different elements of direct democracy at the communal, regional or even national level. However, the legislative power of any of

32 GMO legal framework in Austria:
<http://www.bmgf.gv.at/cms/site/inhalte.htm?channel=CH0252&thema=CH0264>

these elements is limited when the issue of the referendum is already regulated by higher-level legislation. In the case of national referenda, the higher level would be the current EU legislation. Due to the principle of the supremacy of law, national referenda cannot override current EU laws. Many parts and groups of Austrian society which were very clearly anti-GMO had to realize that, at first look, the successful Austrian genetechology initiative could not be translated into Austrian laws. A broad discussion began debating in which ways Austria, as an EU member, could choose to achieve its aim to maintain and secure its GMO-free status. Ten years after the initiative, it can be concluded that the first two demands have been implemented rather successfully through means other than national legal measures.

Two new applications concerning the release of GE potatoes and Bt maize by Agrana and Pioneer were finally withdrawn by the two companies. In August 1998, the Austrian labeling regulations for GE food entered into force which, in contrast to the respective German regulations, provided workable definitions for GE-free food. The organization ARGE Gentechnik-frei was founded and developed standards for companies which decided to trade and sell GMO-free raw products and food.³³ As a result of the Greenpeace Austria campaign, all major retailers declared not to sell any products which carried a GMO label. A country-wide campaign was started to lobby for GMO-free zones at the municipal level. In 1999, more than 700 mayors supported the demand against GE crop trials on communal land.

National GMO bans

The Austrian government's Federal Environmental Agency initiated the most comprehensive scientific studies and reviews dealing with the effects of GMOs in agriculture and food in the EU.³⁴ As a result of the critical review of risk assessment documents presented by the biotechnology industry and the evaluations performed by the respective national/EU authorities, Austria banned the entry of three GE maize and one GE canola varieties (see table).³⁵ The GE maize bans were first challenged by the European Commission – which did not go as far as to involve the European Court of Justice – and finally by the United States, Canada, and Argentina in their WTO complaint from May 2003.

33 For more information about GE-free food in Austria see: ARGE Gentechnik-frei, <http://www.gentechnikfrei.at/>

34 For example: International Conference "Scrutinizing GMO Risk Assessment" in 2003 and <http://www.umweltbundesamt.at/en/umweltschutz/gentechnik/gtveranstaltungen/scrutinizing/> Conference "The Role of Precaution in GMO Policy" in 2006 <http://www.umweltbundesamt.at/en/umweltschutz/gentechnik/gtveranstaltungen/precautionandgmos/>

35 Feral Oilseed Rape – Investigations on its Potential for Hybridization, Sept 2006 and <http://www.bmgf.gv.at/cms/site/detail.htm?thema=CH0255&doc=CMS1144914646396> Review of scientific evidence including latest findings concerning Austrian safeguard measures for GM-Maize lines MON810 and T25, Oct 2006 <http://www.bmgf.gv.at/cms/site/detail.htm?thema=CH0255&doc=CMS1161157975708>

Austrian GMO bans

DATE OF BAN	GMO	COMPANY
Feb 1997	Bt176 Bt maize	Ciba Geigy (now Syngenta)
Jun 1999	MON810 Bt maize	Monsanto
Apr 2000	T25 LL maize	AgrEvo (now Bayer CropScience)
Apr 2006	GT 73 RR canola	Monsanto

The WTO Appellate Body ruled that the Austrian bans were inconsistent with the WTO rules of the SPS Agreement and the Body's earlier rulings and interpretations. The WTO's main argument is that Austria's documents do not fulfill the criteria spelled out for environmental risk assessments that would be necessary to justify a ban under the SPS agreement. Those risk assessments not only have to show the possibility of damage but they also have to elaborate on the likelihood that this damage will occur. Austria's conclusions that existing risk assessments were not performed well enough and were not based on sound science was not sufficient to justify bans; it had to present results of its own or new research that could substantiate the claims of risks for the country's environment.

National Seed Purity Law

The planting of 200 t of GMO-contaminated, illegal seeds on 6000 ha in 2001 triggered the development of a National Seed Purity Law. To secure the demand for GMO-free agriculture and food, the Austrian Government enacted this law in 2002 setting rules for "technically" GMO-free seeds. All seeds marketed in Austria may not contain more than 0.1% GMOs. Despite all warnings from the biotechnology industry and science, supplying Austria with seeds in compliance with this law appears, at the time of publication, not to be a problem.

State GMO Precautionary Laws

After more than a decade of discussion, almost all Austrians still reject GMO field trials and GE food, and several hundred communities declared themselves as GMO-free. As a result, the state governments began to think about providing the call for a GMO-free Austria with sound legal standing. Upper Austria chose the most radical way by adopting a law banning GMOs. When the law was sent to the European Commission for notification – because it counters EU legislation – the Commission rejected it after the European Food Safety Authority gave it a negative assessment. The struggle finally ended at the European Court of Justice which again rejected the law. A softer approach was chosen by Carinthia and followed by other states. These states set up legislation to regulate GMO planting near and in protected areas, to create coexistence rules and, in addition, some of these laws prescribe liability regimes. In contrast to other legal approaches presented in this manual, these laws not only deal with the management of GMOs but also make

it obligatory that any use of GMOs require additional approval, beyond that already set under EU/Austrian law. In the end, Upper Austria followed this approach as well. Eight of the nine states enacted so-called “GMO Precautionary Laws;” only Vorarlberg opted for an amendment of the nature protection law that allows the government to take action on GMOs.³⁶

GMO-free zone initiatives

Upper Austria, Salzburg, Burgenland, Styria, Carinthia, Tyrol, and Lower Austria are part of the European Network of Regions developing legal approaches to restrict GMO releases and plantations without breaching EU laws. In addition to their legal approaches, Vorarlberg has joined the German GMO-free region Bodensee. Carinthia and Tyrol together with Slovenia and the Italian region Friaul have founded the three-country GMO-free initiative „Alpe Adria“ promoting regional and organic agriculture and food.

GMO precautionary laws of the nine Austrian States

ENTRY INTO FORCE	AUSTRIAN STATE
Aug 2002	Vorarlberg
Sep 2004	Salzburg
Jan 2005	Carinthia
Mar 2005	Tyrol
Jul 2005	Burgenland
Aug 2005	Lower Austria
Sep 2005	Vienna
Jul 2006	Upper Austria
Sep 2006	Styria

Source: <http://www.greenpeace.at/3870.html>

36 Greenpeace Austria provides an overview and links to the legal texts at <http://www.greenpeace.at/3870.html>

ANNEX AUSTRIA

Internet Links

Environment Protection Agency Vienna

<http://www.umweltbundesamt.at/umweltschutz/gentechnik/>

ARGE Gentechnik-frei

<http://www.gentechnikfrei.at/>

Global2000

<http://www.global2000.at/pages/introGENTECHNIK.htm>

Greenpeace Austria

<http://www.greenpeace.at/gentechnik.html>

BioAlpe Adria

<http://www.bioalpeadria.info/>

eco-risk – Büro für ökologische Risikoforschung & Consulting

<http://www.eco-risk.at/>

Documents

In this document section you can find:

- A) Text of the genetechonology referendum, published April 25, 1997

Source: Austrian Parliament, translated by the author

http://www.parliament.gv.at/pls/portal/docs/page/PG/DE/XX/I/I_00715/FNAMEORIG_000000.HTML

1998: GMO-FREE LABELING REFERENDUM IN LOWER SAXONY (GERMANY)



Official logo of the initiative

German federal and state constitutions traditionally did not envisage referenda as an element of direct democracy. After the reunification of East and West Germany, however, the states' constitutions had to be adjusted, and elements to enable more direct democratic processes were taken up in many cases. Since 1994, the citizens of Lower Saxony, a state in northwestern Germany, have been able to use new legal provisions to send a law to the state parliament. Parliamentarians are required to debate and vote on this law to enact it. The first step involves collecting 25,000 signatures to apply for a citizens' initiative at the state authorities. In a second step, 10% of eligible people have to vote for the proposed law to send it to parliament. Only six referenda have been initiated in Lower Saxony since 1994. Three of them

did not reach the first quorum of 25,000 signatures. A fourth referendum did not receive the 10% support in the second phase. Only one initiative went through both phases and resulted in a law that was adopted by the state parliament. The sixth referendum, „GE-free from Lower Saxony,“ is described here.

Political background

Research and application of gene technologies have been followed by critical German citizen movements and NGO campaigns since the 1980s, mainly triggered by the decision of the German Parliament in 1984 to launch a parliamentary commission on the “Chances and Risks of Genetic Engineering”. In 1986, the GenEthisches Netzwerk was founded by GE activists and groups as an independent network organization to inform citizens about all aspects of genetic engineering in research, agriculture, food production, human health and reproduction. The GenEthisches Netzwerk is still active at the time of publication of this manual. In November 1996, when the first shipment containing GE soy reached Hamburg's harbor in northern Germany, three organizations – Greenpeace Germany, BUND and the Working Party of the Consumer Associations – launched a series of public protests and activities. One of the major concerns regarding the use of GE soy in food and feed was the fact that labeling of the food was not obligatory at that time. The relevant EU Novel Food Directive, which also stipulates GE food labeling, only entered into force one year later in November 2007. But because the necessary national regulations to implement this directive were not developed, GE food still remained unlabeled after November 2007.

Lower Saxony is a center of plant-breeding. In 1993, the first German field trials with agricultural GE crops were planted in the area, and during the following years it became home of a large part

of all GE crop field trials in Germany (for example, 52 out of 266 trials in 1998). In reaction to steadily increasing numbers of trials, numerous local initiatives were founded to protest these trials; this triggering a wide-reaching public debate on genetic engineering in agriculture. In late 1997, a broad coalition decided to make use of Lower Saxony's new constitution and started an initiative for a referendum on a state law for food labeling introducing the label "GE-free from Lower Saxony". The coalition did not lobby for a referendum on creating GE-free zones. Because of the existence of a federal law on genetic engineering that regulates all aspects of GMO approvals, the states have no legal power to regulate GMOs. A citizens' initiative calling for GE-free zones in Lower Saxony would not have been approved by the authorities. A state law on GE-free food labeling was regarded as legitimate because no relevant federal rules existed in 1997.

The referendum coalition

The coalition constituted a broad range of organizations. It was able to bring together the regional branches of BUND, Birdlife Germany (NABU), the Working Group for Rural Agriculture (AbL), the Lower Saxony Student Union (a public body responsible, amongst others, for catering services in universities that had already adopted a GE-free food policy in 1993), an MP from the Green Party, the Association of Health and Organic Food Shops, the Organization for Rural Services of the Protestant Churches, and a restaurant. In the end, the coalition was supported by 110 other regional organizations. Two matters unified these different organizations: They all supported food that does not contain ingredients from GMOs and they were all convinced that initiatives supporting this target had to be launched by a broad-based grassroots movement.

The campaign to collect the first 25,000 signatures started in December 1997; the necessary support had to be gained within six months. The campaign was highly successful, and 37,500 signatures were collected by May 1998. The second step was to convince at least 10% of eligible voters, or 593,000 people, to sign it. Since the Lower Saxony referenda are not open for voting at central places, initiators have to collect signatures which are consequently validated by the state authority. Through its many supporters, the campaign could be active throughout the state and reached many different parts of society. It also could build up sufficient political pressure on the government and parliament to make them debate the topic of GMOs in food and agriculture and GE-free labeling even before voting took place on the initiative.

One noteworthy outcome of this initiative was that the government of Lower Saxony, supported by some other German states, launched an initiative in the German Upper House (the representation of the states) stating that the EU Novel Food Directive from 1997 was insufficient because it lacked provisions on GE-free labeling. The Upper House urged the government to include such a clause in implementing regulations of the Novel Food Directive. Finally, in July 1998, a regulation at the federal level was adopted that set up rules for GE-free labeling.

At essentially the same time, however, the coalition in Lower Saxony was poised to register the referendum. The movement was faced by a new situation, since the proposed regional law was now superseded by a national law that contained almost identical provisions. In the end, the

coalition decided not to register the referendum and to stop the campaign. They declared that its political aim had been reached despite the cancellation of the referendum – not only at the regional but even at the federal level.

Impact of the initiative

The activities around the GE-free labeling referendum in Lower Saxony added substantially to other national activities that were triggered by criticism regarding and resistance towards GE crops and food in Germany. It led to increased political pressure on national decision makers who finally, in 1999, supported the EU moratorium on GMO approvals. With respect to the concrete aim of the referendum – a GE-free label – it quickly became evident that the opportunity being given by a federal regulation was not being used by food producers. The provisions of the regulation were so strict that they hindered GE-free labeling. The risk that companies might violate the rules and thus be sued of fraud when they used the labels was too high. The federal government was accused of setting up the regulations exactly for this inhibitory purpose. Nevertheless, the food chain was kept almost free of GE ingredients because all major supermarket chains were lobbied, mainly by Greenpeace Germany, to adopt a GE-free policy; their suppliers reacted by buying ingredients from non-GMO sources.

ANNEX LOWER SAXONY

Internet Links

Articles on this initiative in German

<http://www.stachel.de/98.02/2gen.html>

<http://www.bund-niedersachsen.de/presse/magazin/9802/gentec.htm>

<http://www.nabu.de/nh/498/gen498.htm>

Draft law on the labeling of GMO-free products from Lower-Saxony (in German)

<http://www.bund-niedersachsen.de/presse/magazin/9802/gengesez.htm>

1998 & 2005: GMO-FREE REFERENDA IN SWITZERLAND



Switzerland's political system is built on the principle of direct democracy, meaning that the Swiss people can introduce and vote on amendments of the constitution and on new laws by referenda. For such citizens' initiatives, 100,000 votes have to be collected by the initiators within 18 months in order to register the referendum. Of course, Switzerland also has a parliament and a government that possess legislative powers. These bodies can react on an announced citizens' initiative by developing their own legislative initiatives covering the issue under debate, with the objective that voters will reject the referendum and that Parliament can instead adopt the alternative initiatives. Switzerland is not part of the European Union and is therefore not bound nor overruled by EU laws.

First GMO-free referendum: Gene-Protection-Initiative 1992 – 1998

In 1992, parliament amended the Swiss constitution by a new paragraph calling upon the Federal Council – the ruling cabinet – to create legislation dealing with the use of germplasm and organisms' genetic material, based on the need to protect the dignity of living beings, humans, animals and the environment against the perils of modern biotechnology.

In May 1992, in response to an amendment of the constitution, the citizens' initiative “on the protection of life and environment against gene manipulation (gene-protection-initiative)” was started that demanded a moratorium on three issues:³⁷

- GE animals
- GMO releases into the environment
- GMO patents

The demand was initiated by the Swiss Working Group on Genetechnology and supported by more than 70 Swiss organizations. The legal argument of the initiators was that the government had not implemented the respective amendment of the constitution. The Swiss pharmaceutical industry, a major sector of the Swiss economy and significant generator of the country's wealth,

37 Citizens' initiative 'zum Schutz von Leben und Umwelt vor Genmanipulation (Gen-Schutz-Initiative)'

Procedure: <http://www.admin.ch/ch/d/pore/rf/cr/1997/19970105.html>

<http://www.admin.ch/ch/d/pore/vi/vis240.html>

text: <http://www.admin.ch/ch/d/pore/vi/vis240t.html>

launched a massive counter-campaign against the initiative. It argued that the further use of GE animals and GMO patents were of crucial importance for its economic success. In 1997, the Federal Council responded to the people's initiative with a counter-proposal to draft a GMO law to close the implementation gap. The parliamentarians emphatically rejected the initiative: The National Council (the Parliament) voted against it 107:44, the Council of States (the representation of the Swiss cantons) with all its 40 votes. Their main argument was that the moratorium would endanger scientific research in the pharmaceutical industry and universities and thus undermine Switzerland's prime status as a leader in medical research. Finally, in June 1998, the Swiss citizens rejected the initiative with a sound 66.7%.

The emerging GMO regulation: Gen-Lex-Initiative 1997 – 2004

During the parliamentary process of drafting the GMO regulation, the moratorium idea was supported by the Department (Ministry) of Environment, Transport, Energy and Communications. At the end of 1999, it recommended a 10-year moratorium to the Federal Council. But the Federal Council decided against this advice and introduced a GMO law which set up conditions and procedures for an approval system in 2000. After a long public debate and amendments that made the law more protective, it was adopted in March 2003 and entered into force in 2004.

GE plant field trials

During the debate on the new GMO law, the Federal Office for the Environment (FOEN) rejected the first two applications for field trials in Switzerland in April 1999. One was on GE potatoes that were said to be resistant to Phytophthora and the other on LibertyLink herbicide tolerant maize T25. After receiving official statements by several public institutions, FOEN concluded that the environmental and health risks were still under evaluation and that, due to probable outcrossing of transgenes with maize pollen, negative effects on Swiss agriculture could occur. Researchers replied that the criteria of the public institutions were so strict that approval procedures – if they were successful at all – would take years. As in the EU, a de facto moratorium on GMO releases would exist in Switzerland.

The third application for field trials was launched in 2001, when the University of Zurich (ETH) applied for testing fungal disease resistant GE wheat. This application was fought fiercely by Greenpeace Switzerland on both political and juridical levels. A first negative statement by FOEN was contested by ETH, which finally won the case at the Supreme Court. In October 2003, FOEN granted approval under several safety measures and despite doubts that the trials were very useful – in a previous experiment the GE wheat appeared to be more susceptible to the disease than its non-GE counterpart. This only field release of a GE crop in Switzerland was conducted in the growing period 2003-2004. ETH claimed a scientific success when the trial GE wheat plants demonstrated around 10% better protection against the fungi than the control plants.

Second GMO-free referendum: Gene-Free-Initiative 2003 – 2005

While the legislative process was still taking place, Swiss civil society organizations began to work on a second referendum on a GMO moratorium. Many activists were convinced that their organizations should continue their fight for a GMO moratorium in Switzerland. Polls had repeatedly shown that Swiss people's resentment against GMOs was not correctly reflected in the official decisions against the first moratorium initiative. Analyses looking at reasons for the first referendum's failure revealed that the use of genetic engineering in contained facilities for research and drug production was not the people's major concern. As a result, the counter-campaign of the pharmaceutical industry fell on fertile ground and could convince all parts of the legislative system to reject the broad moratorium. The people's major concern is the use of genetically engineered organisms in the environment and in food production. This attitude of the Swiss public is of a more general nature; numerous polls and studies throughout Europe generated comparable results.

The initiators of the second moratorium referendum consequently concentrated their demands on keeping Swiss agriculture GMO-free.³⁸ Drafting the moratorium text took almost a year and, in the end, it was rather similar to the moratorium recommendation of the Ministry of Environment in 1999. The suggested amendment of the constitution only dealt with GMOs in food production and agriculture, banning the commercial use of GE plants and animals. The moratorium neither dealt with research in contained facilities nor with experimental field trials. For many, the ongoing work on the draft GMO legislation appeared to be on the right track, leading 'automatically' to a precautionary framework for GMO research. To insist on a *de jure* moratorium on field trials seemed not to be worthwhile when a good opportunity was sensed on installing a legally binding moratorium on GMO agriculture.

Collecting the necessary 100,000 votes to register the initiative started in February 2003. Within a mere 85 days, 100,000 votes could be submitted for registration. The strategy of the initiators was to build a broad basis of supporters in all German, French, Italian, and Romansh speaking parts of Switzerland and from as many political parties and societal sectors as possible. Numerous organizations, 96 members of the National Council from five out of the six parties, and 1112 members of all 26 canton parliaments subscribed to the initiative as supporters. Only the Liberal Party with all its members of parliament objected to the moratorium initiative. A second pillar of the strategy was to go to rural areas spreading the idea to go GMO-free at the farm level, and gaining farmers' support. The idea proved to be successful: many farmers supported the GMO-free movement. Finally, in April 2003, the initiative gained substantial weight when the mainstream Swiss Farmers' Association decided to support the moratorium. The third pillar was formed by a campaign to lobby municipalities to adopt GMO-free resolutions. In the end, 79 of 2740 Swiss municipalities from around the country took the opportunity to declare

38 Citizens' initiative "für Lebensmittel aus gentechnikfreier Landwirtschaft"

<http://www.admin.ch/ch/d/pore/rf/cr/2005/20051572.html>

<http://www.admin.ch/ch/d/pore/vi/vis314.html>

Text: <http://www.admin.ch/ch/d/pore/vi/vis314t.html>

themselves GMO-free; compared with the total number of municipalities, this is a relatively small amount.

A group of 98 scientists supported the initiative, many of them working in environmental and organic agricultural sciences. They signed a declaration dealing with the pertinent questions concerning GMO agriculture and warned of still unanswered questions regarding ecological, health, as well as socio-economic risks. In particular, the declaration focused on the unsolved matter of coexistence between GMO- and non-GMO-agriculture in small-scale farming systems.

Resistance by Government and Parliament

The second GMO-free referendum faced stiff opposition in government and parliament. Their main argument was that the new GMO law passed in 2004 would provide enough protection against possible risks for the environment and health, and a more precautionary approach would be unjustified. In August 2004, the Federal Council voted against the initiative, in spring 2005, the Council of States followed suit. In June 2005, the National Council, with a very narrow margin (93/92/4), rejected the initiative as well. The vote of 92 parliamentarians from five parties for the moratorium initiative signaled broad support for the idea of a GMO-free Switzerland in many parties, and not only the Green Party.

Resistance by food industry and scientists promoting GE plants

Due to the focus of the moratorium on GMO-free agriculture and the unsolved problems of coexistence in small-scaled Swiss agriculture, the Swiss pharmaceutical industry could not be the forerunner of the counter-campaign because its stakes were hardly challenged by the initiative. Representatives from the food industry and plant biotechnology became the proponents of that campaign. Coordination was made through the platform Internutrition, sponsored by the food and feed industry with the backing of Syngenta, the ETH, and many scientists working in biotech-oriented fields. In total, 242 scientists signed the „Manifest for a Future of Plant Research in Switzerland,“ which argued that GE crops are indispensable for solving the world’s food and health problems. If the moratorium were adopted, research, for example, on Golden Rice or GE pharma crops, which could produce life-saving drugs, would no longer be conducted in Switzerland. Because field trials to develop the necessary technology would no longer be performed, Switzerland would lose its appeal for young researchers and its reputation as a prime location for bioscience research and development.

The counter-campaign, continuing the strategy of the industrial campaign against the first moratorium initiative, attempted to convince the public that a „yes“ would mean the end of scientific research and a threat to the supply of new medicines. But, since this strategy did not exactly meet the content of the moratorium initiative, it was perceived by many as an initiative of scientists fearing a decrease of funding and work opportunities. Although the initiative explicitly exempted GMO research and field trials, the industry’s approach of confusing people appeared to be partly fruitful. Analysis of over 100,000 people’s voting behavior revealed that 13% of those who rejected the moratorium initiative nevertheless stated that they were against genetic

engineering – this paradoxical behavior could be a result of the counter-campaign. In addition, Internutrition formed a group of farmers calling for GMO agriculture. Its membership never exceeded 50, and its effect in light of the Swiss Farmers' Association's decision to support the moratorium was marginal. The counter-campaign was also supported by the Liberal Party and several business organizations.

Impact of the initiative: GMO-free Swiss agriculture 2005 – 2010

In November 2005, Swiss citizens adopted the initiative with 1,112,400 (55.7%) „Yes“ to 896,400 (44.3%) „No“ votes; the total number of votes was 42.2% of eligible voters. Thus, a five-year moratorium on the commercial use of GE plants and animals was installed. The outcome of this referendum made the Gene-Free-Initiative unique in Swiss history; of 161 initiatives that had come to a vote since 1893, it is the only initiative that was accepted by the majority of citizens in all cantons against the decisions of the Federal Council and the two houses of the Parliament. This referendum sent a strong political signal to GMO-free campaigns worldwide. Switzerland is home of powerful biotechnology industries and research institutions, as well as several organizations which have provided key information on genetic engineering for many years. The Swiss people had debated these controversial issues for over a decade and made their decision to accept GMO research and field trials in a stringent framework that evaluates environmental, health and societal factors of GMO activities. But they also opted for a break in the commercialization of GMOs in agriculture. This time granted through this moratorium should now be used for further research on the possible risks of GMOs. Meanwhile, the government has set up a research program, and it is the hope of civil society organizations that not only scientists who worked against the moratorium but also those who supported the initiative can find enough incentives in this program to participate.

ANNEX SWITZERLAND

Internet Links

Swiss Working Group Genetechnology

<http://www.gentechfrei.ch>

<http://www.gentechnologie.ch>

Intranutrition

<http://www.internutrition.ch/>

Research for Life

<http://www.forschung-leben.ch/>

FOEN

<http://www.bafu.admin.ch/biotechnologie/index.html?lang=en>

WWF Switzerland

http://www.wwf.ch/de/tun/tipps_fur_den_alltag/essenundtrinken/gentech/index.cfm

ETH

Institute of Plant Science

http://www.ipw.ethz.ch/index_EN

International Project on GMO Environmental Risk Assessment Methodologies

<http://www.plantecology.ethz.ch/spotlights/gmo>

FIBL – Research Institute for Organic Agriculture

<http://www.fibl.org/forschung/gentechnik/index.php>

Documents

The texts of the two Swiss genetechnology moratoria are attached in an unofficial translation by the author:

A) Text of the first moratorium initiative rejected in 1998

Source: Swiss Federal Chancellery, <http://www.admin.ch/ch/d/pore/vi/vis240t.html>

translated by Hartmut Meyer

B) Text of the second moratorium initiative accepted in 2005

Source: Swiss Federal Chancellery, <http://www.admin.ch/ch/d/pore/vi/vis314t.html>, translated

by Hartmut Meyer