GMOs and Global Governance

OK, so the theme of the final lecture of the course (!) was GMOs and global governance. I opened with a pretty straight forward reflection on why GMOs are considered a global issue, despite the fact that the subject is grounded in biology. The fact is, just as climate change is not just about atmospheric science, GMOs are not just about biology! This gives the course an interesting bit of symmetry: climate change as a global issue in the realm of the large, and GMOs as a global issue in the realm of the small.

The GMO debate has become a global phenomenon because GM foods produced and consumed worldwide, debates and dialogues on GM food safety and environmental impacts are ongoing in dozens of countries, there is an international campaign against GMOs (which have included the protests blocking the unloading of GM food shipments and the destruction of GM crops), and an international treaty on biosafety has been negotiated.

I also tried to stress that GMOs are a global issue because they are intimately connected to many of the key aspects of globalization. This includes the global character of food production, transport, processing and marketing, the development of transnational civil society actors and a global "space" to communicate and coordinate anti-GM campaigns, the anti-globalization themes of the democratic deficit, corporate power, and eroding national autonomy and sovereignty, and food related globalization issues such as food security, and the survival of culture, tradition, and farming practices around the world.

What are the terms of the debate? Advocates argue:

- genetically modified crops can end world hunger. GMOs, they say, can increase the yield of such crops as rice, which feeds millions in Asia, and cassava, a tuber commonly eaten in Africa. There are several ways that GMOs can increase crop yields. By creating pest-resistant GMOs, scientists can reduce crop losses to pests, especially in developing countries that cannot afford expensive insecticides.

  In addition, GMOs can boost agricultural production by making new cropland available. For example, scientists have bred a tomato that grows in salty soil. Proponents of GMOs argue that bioengineering could greatly boost agricultural production in areas of the developing world with poor soils that cannot otherwise be used for farming. Scientists also are working to develop crops that can withstand drought and tolerate cold.

- Pest-resistant and herbicide-tolerant GMOs reduce the need for spraying crops with large volumes of unhealthy chemicals that can enter the food supply. In turn, reduced use of such chemicals would result in cleaner runoff from fields and a lower risk of poisoning water supplies and harming the environment.

- GMOs can greatly improve nutrition, say supporters. Rice, the staple food of millions of Asians, lacks vitamin A, and vitamin A deficiency can cause blindness. Scientists have developed a gene for rice crops that will produce the missing vitamin. Genetic modifications to other crops can address similar nutritional needs.

On the other hand, opponents argue:

- The introduction of GMO crops will leave world agriculture increasingly dependent on the products of corporations (especially seeds) destroying traditional agricultural practices and knowledge.

- World hunger is best addressed through national and local agricultural development, anti-poverty strategies, and restoring local food production by moving away from the cash crop grown for the global market.

- The introduction of GMO crops threatens local biodiversity and the prospects for traditional crop varieties to survive or be used for local diets.

- Human safety.

Global Governance and the Cartagena Protocol

The Cartagena Protocol on Biosafety is the first international treaty regulating international trade in GMOs. The Cartagena Protocol was open for signature on January 2000 (and came into force in September 2003).

The international process began at the United Nations Conference on the Environment and Development (UNCED) in 1992, when developing countries called for an international agreement on biosafety to regulate GM products. The developing countries feared they would be come a testing ground for GM products and their own agricultural sectors would become dominated by GM crop varieties. So they called for GMOs to be covered in the Convention on Biological Diversity (CBD) which was under negotiation and ultimately signed by 150 governments at UNCED in 1992. The US and Europe refused to consider international GMO regulation in the CBD. Europe did agree to "consider" such regulations under the CBD framework in the future. The US did not sign the CBD at all.

In the subsequent Conference of the Parties (COP1 and 2) to the CBD in 1994 and 1995, the developing world (with an unusual level of unity) called for a treaty on biosafety. When the EU agreed, this added momentum to the idea of a formal treaty, and despite US opposition (from the outside) COP 2 agreed to draft an international treaty on biosafety, and a working group was established in 1996.

The negotiations were contentious, and by 1999 had become highly publicized. In the debate, three primary groups squared off against each other: the US (acting as a non-party) and a group of agricultural exporters including Canada and Argentina (the Miami Group); the EU and a group of NGOs and domestic agricultural producers; and the developing country Like Minded Group. They were divided by a fundamental set of issues:

- the scope of international biosaftey regulations: what were the regulations to cover? The LMG said all GM products should be covered; the EU said regulations should be based on health and risks to the environment; the Miami group said there should be no regulations at all on GMOs.
- the question of liability and redress: developing countries insisted that exporters and producers be held accountable for any harm done by their products; the EU was skeptical, arguing that standards of proof and estimates of harm made liability and redress impossible to quantify in a treaty; the Miami group said there should be no liability or redress at all.

- The precautionary principle: the LMG and the EU argued that importing countries should be free to impose trade restrictions on GM products if they were suspected of causing harm; the Miami Group argued that trade restriction should only be permissible if proof of harm had been established (can you see the pattern developing here?!).
- How to distinguish between GMO food, GMO feed, and GMO products used in processing. The latter are not intended for uncontrolled use or consumption, and include the use of GM processing aids like enzymes (proteins that catalyze chemical reactions) that do not appear in the final product (baked goods, cheeses, baby food, paper manufacturing, and contact lens solution, for example). The LMG and the EU wanted these particular "GM commodities" regulated in the same way as GM products intended for human consumption. The Miami Group did not want such products covered by the CBD, on the grounds that they were not intended to be in the food chain, and are so widespread in use that controlling them would really affect international trade.
- How should a biosafety treaty relate to WTO rules? The EU and the LMG argued the biosafety treaty should take precedence over WTO rules, so that GMO import restrictions could not be challenged under WTO trade rules. The Miami group wanted any treaty to be subordinate to the WTO rules.

The talks broke down in acrimony and recrimination, but resumed informally until a grand bargain was reached between the Miami Group and the EU and the LMG. Canada acted on behalf of the Miami Group in working toward this compromise, this lowest common denominator. Canada has been criticized as a mouthpiece or puppet of the United States in this process, but remember that Canada's interests in these talks were broadly similar to those of the US, so perhaps it is unsurprising that our position was aligned with the American view.

- On scope, the treaty covers a broad interpretation of GMOs (LMOs)

"This Protocol shall apply to the transboundary movement, transit, handling and use of all 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." (Article 4)

Pharmaceuticals were excluded from the Protocol (terms do not apply)

- There was no agreement on liability and redress except a commitment to consider the issue in future talks

- The Precautionary Principle was expressed in Article One of the Protocol:

  > "In accordance with the precautionary approach contained in Principle 15 of the Rio Declaration on Environment and Development, the objective of this Protocol is to contribute to ensuring an adequate level of protection in the field of the safe transfer, handling and use of living modified organisms resulting from modern biotechnology that may have adverse effects on the conservation and sustainable use of biological diversity, taking also into account risks to human health, and specifically focusing on transboundary movements."

  And in Article 10:

  "Lack of scientific certainty due to insufficient relevant scientific information and knowledge regarding the extent of the potential adverse effects of a living modified organism on the conservation and sustainable use of biological diversity in the Party of

import, taking also into account risks to human health, shall not prevent that Party from taking a decision, as appropriate, with regard to the import of the living modified organism in question as referred to in paragraph 3 above, in order to avoid or minimize such potential adverse effects." (Article 10:6)

Furthermore, the precautionary principle was inserted into the Protocol in the form of the Advance Informed Agreement (AIA) procedure, which requires GMO exporters to provide information on GMO content of products and to seek the importing countries permission before shipment of the product into or through the importing country. Importing nations are to carry out a risk assessment on the product and can invoke the precautionary principle to exclude the product.

- On the GM commodities issue, the Miami group succeeded in having GM commodities excluded from the AIA procedure. And instead have them subject to a simplified procedure that would be less damaging to trade. Parties to the treaty have to inform other parties of any decision to authorize domestic use of a GMO commodity that may be exported. This information goes to a Biosafety Clearing House (website) and importers can make a decision on whether to allow those products in to their countries or not.

- There was no agreement on how the protocol would relate to the WTO rules: leaves the door open for future disputes on the role of the WTO and the Protocol in relation to one another on the trade of GM products (agreed to disagree).

So, like other international treaties (including the United Nations Framework on Climate Change which we looked at in the climate change section of the course) the Cartagena Protocol was a compromise (the lowest common denominator). It can be argued that despite the US opposition to many international environmental treaties and initiatives since the early 1990s, a critical mass of countries has persisted and established treaties and norms without the support (and even opposition) of the Americans. Recall our discussion of the management of public goods: does this demonstrate that we are now in an era of multilateral management of environmental concerns, and the US (which used to support and in fact was instrumental in building) environmental treaties and norms is not necessary for progress?

I hoped you all enjoyed the GMO section!