

**REFLECTIONS ON GM & AGRI-  
FOOD IN EUROPE:  
DO WE KNOW WHERE WE ARE  
GOING?**

A contribution to the **COST** Exploratory Workshop,  
**“What role for GM technology in future  
competitiveness of European agri-food sector”**

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# History

Public discussions on biotechnology policy issues since 1974

Early years: generic issues - research safety, ipr; then

Sectoral work: starting with agriculture and food.

1. **contained use:** good practice in laboratories handling dangerous or unknown micro-organisms;
2. **field release:** unconfined use of gm crops, processes and derived products

The list of applications has expanded rapidly, in response to benefits in practice, and continuing progress in basic science – especially in genomics. Rate of progress reflecting scale of economic opportunity or technical success, and political sensitivity.

**BUT:** In Europe, especially in the 1990s, a **loss of trust**, leading to conservative regulatory protocols.

Applications in agriculture and food attract suspicion and hostility, from:

- Environment Ministries (who are often “Chefs-de-file”);
- “environmental” NGOs (who are good at attracting attention, and support);
- the popular media (who are scientifically illiterate).

This has translated into rigid regulatory procedures at all levels ranging from local government to global protocols – the “**Precautionary Principle**” is much cited (though little understood).

These events have moved the handling of modern biotechnology up the political agenda.

The European Commission, on the **precautionary principle**, communication COM(2000)1: 6 key points, as follows:

“Where action is deemed necessary, measures based on the precautionary principle should be, *inter alia*:

- **proportional** to the chosen level of protection,
- **non-discriminatory** in their application,
- **consistent** with similar measures already taken,
- *based on an examination of the **potential benefits and costs** of action or lack of action (including, where appropriate and feasible, an economic cost/benefit analysis),*
- **subject to review**, in the light of new scientific data,
- *capable of assigning responsibility for producing the **scientific evidence** necessary for a more comprehensive risk assessment.”*

Written into various international instruments, e.g.:

- the **Rio Declaration**, 1992
- the **Cartagena Biosafety Protocol**, 2000

**We now have major policy differences between countries, which cause problems:**

1. they impinge on competitiveness, trade, and quality of life, and impede international collaboration on problems with global dimensions;
2. we fail to make maximum use of recent S&T progress, delaying or blocking more productive and effective practices in agriculture and environmental protection, at a time of growing global need;
3. opposition to the new technology is blocking academic research, and threatens the advance of science and technology in this field.

Europe has been at the conservative end of the spectrum.

## **Main elements of the policy environment providing incentives or disincentives for biotechnology R&D:**

1. Regulations, safety issues and coherence – at national (and provincial), European and global levels (the Cartagena Protocol);
2. international coordination of efforts on risk assessment and management (cf the current problem of “zero tolerance” of GM crops not yet approved in Europe – cf June 2007 communication from DG Agriculture);
3. international cooperation and information exchange;
4. public acceptance (but the extent of this “problem” is being exaggerated, except where it is stirred up by NGOs and other special interests);

## **Influence of these factors on investment in biotechnology R&D**

- Public support in OECD member countries for agricultural research has diminished greatly over the past two or three decades;
- leading countries such as China and India are now making large investments in research and development of agricultural crops;
- but this will take some years to produce significant effects. More can be achieved short-term by more effective diffusion of existing knowledge, materials (germplasm) and techniques, including those of modern biotechnology. This is not yet recognised – cf the IAASTD Report.

Meanwhile, the reports continue to accumulate:  
of three types:

- **Scientific** reports, essentially saying, “**No significant problem** with these products – they are **as safe as, or safer than, existing conventional products**”.

- Reports on **public opinion**, essentially saying, “There is **little concern, except where a specific campaigning effort by NGOs has been raising the temperature**”.

- **Reports from Environment Ministries and their camp followers around the world**, which usually express some combination of the following sentiments:

- We don't like Monsanto;
- we don't like multinational capitalist firms;
- we don't trust the scientists;
- the regulations do not allow for evaluation of the social and economic impacts of innovation;
- we don't like gm technology, which is, to quote Prince Charles, "the biggest environmental disaster of all time".

**The International Assessment of Agricultural Science and Technology for Development** was a three-year collaborative effort (2005-2007). Its final report was published in April 2008, when the results and conclusions of the project were reviewed and ratified during an Intergovernmental Plenary Meeting. It was an international effort initiated by the [World Bank](#) that evaluated the relevance, quality and effectiveness of agricultural knowledge, science, and technology (AKST), and effectiveness of related public and private sector policies and institutional arrangements. Its overarching question was: "How can we reduce hunger and poverty, improve rural livelihoods, and facilitate equitable, environmentally, socially and economically sustainable development through the generation, access to, and use of agricultural knowledge, science and technology?" The project developed out of a consultative process involving 900 participants and 110 countries. The IAASTD was launched as an intergovernmental process, with a multi-stakeholder Bureau, under the co-sponsorship of the [FAO](#), [GEF](#), [UNDP](#), [UNEP](#), [UNESCO](#), the [World Bank](#) and [WHO](#). Several of the industrial scientists withdrew from the study, dis-satisfied with its conservative approach to new agricultural biotechnologies.