## P6.06 New methodologies for risk assessment of GMOs: an experiment of public consultation in Brazil

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Recent developments in science and technology, especially in the biotechnology field, have brought about new challenges concerning the redefinition of the decision making process on controversial issues, such as the management of environmental and health risks. In the last decade the demand for turning science more democratic, opposed to the monopolization of knowledge by experts and establishing a transparent and empowering debate, has been addressed in the from the sociology of environment, social theory and the sociology of science. This confluence towards overcoming dichotomies between laypeople and the experts in innovations involving uncontrollable and uncertain risks started to become stronger in the period before the broad debate over transgenics. Even though, proposals would remain diffuse and imprecisely formulated.

The debate on GMOs risks has stimulated in some countries a demand for further debate over what are the forms of risks that societies are willing to take and over how it is to be decide, who should do it, and who will win and who will lose.. The implementation of several concrete public engagement experiences aimed at defining the public policies about the governance of GMOs, but this situation is not generalize. The differences in the national reactions in relation to the GMOs possible risks are also a question that extrapolates the field of GMOs. The conflicts around GMOs put the scientific field more openly closer to politics.

While in the US there was no significant reaction, and in many countries of the EU was reaction and the search and implementation of a process of science democratization and the implementation of the precautionary principle, in Brazil there was reaction, but without democratization. We will argue that this peculiar situation can be explain appealing to the Brazilian political culture, with a significant elitist and traditional character, that permeates the action of political parties, social movements, and other political actors. The debates took place in a restrict arena, without no discussion of how or why it was important to implement new political channels for a legitimate public debate. As we will analyze in this article, there was and still can be observed a clear and open confrontation between two different coalitions, pro and against the liberalization of GMOs, but for both sides broadening the participation was not an issue.

The Brazilian case will allow us to emphasize the impossibility of generalizing from the experience of more industrialized countries on the politics and governance of GMOs and the relevance of studying cross-national variations. Even if we are in a world risk society, risks are translated in different scientific and political traditions and cultures and some of these traditions show to be more resistant than others. The silence about public participation in Brazil and the noises of the confrontation of both coalitions, finally contributed to the strengthening of the standard tradition of science and its conventional relation to policy.

ERAs are traditionally a data-based process, conducted by scientists. Some of the scientists involved will have expertise about the technology in question and others will have expertise about the environments the technology could affect – in addition to any other expertise needed. The scientists evaluate the relative risk associated with the technology and the information derived is provided to decision-makers to consider as they make relevant policy determinations. However, many traditional ERAs do not generally move far beyond the domain of ecological effects in their studies.

There is a tendency in the traditional ERA model to focus primarily on science and environmental issues. These issues are clearly essential to the effective governance of GMOs. The complexity of issues and the prominence of uncertainties associated with GMOs, influences their societal acceptance. Considerations of GMOs seem to demand the inclusion of information about political, ethical, social, and economic issues.

Looking to this scenario and counting on previous experiences exercised within the GMO ERA project in Brazil (www.gmoera.umn.edu/public/regions/brazilpubl.html), and in the component "problem formulation and options assessment" (PFOA) of that project, a group of public researchers (with interdisciplinary background) used the participative methodology to focus on public perception about a transgenic crop under development at Embrapa Rice and Beans - common bean resistant to Bean Golden Mosaic Virus (BGMV). (See www.nisra.ufsc.br/projetopar)

With financial support of the Ministry of Science and Technology, we organized last March a working group comprising 18 people, representing key stakeholders of the sector, including bean growers, consumers, supermarkets sector, packing and transformation industries and rural researchers. During two days, the group went through the discussion of questions (plenary and group exercises) through the mediation of an expert in organizing public consultation. A group of experts in environmental risk assessment of GMOs from Embrapa presented the case study, the economic problem posed by the golden mosaic virus and its vector (white fly), and the impacts on the productive chain. Also some details on the options available to control this problem were presented.