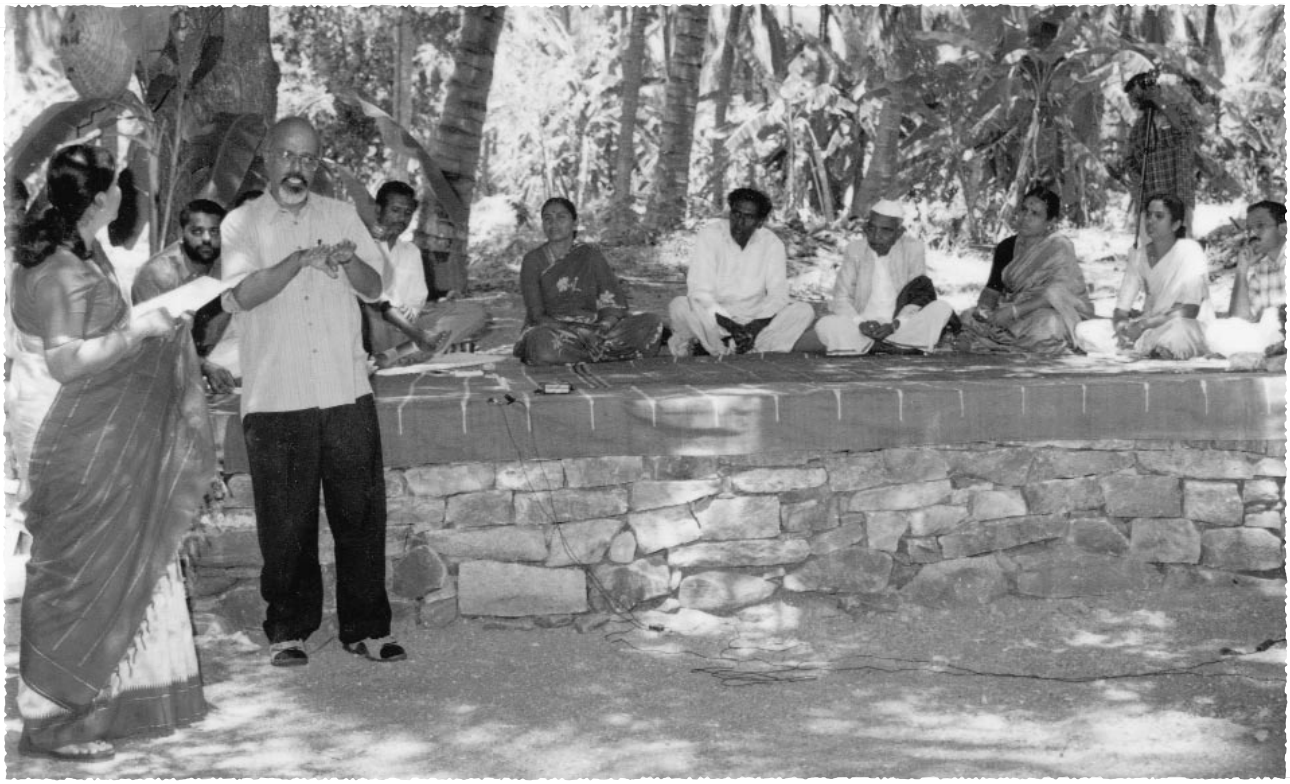

Dr PK Ghosh of Dept Biotech, GoI, presents the results of government tests of GM crops. Photo: AgroIndia

Citizens' juries on GMOs and farming futures in India

Michel Pimbert, Tom Wakeford and PV Satheesh

Over the past quarter century a number of 'participatory' methods have been developed in an attempt to democratise policy-making. Some of these methods and processes include citizens' juries, neighbourhood forums, consensus conferences, scenario workshops, multi-criteria mapping, participatory rural appraisal, visioning exercises and deliberative polling. These methods have the potential to empower people to move beyond being passive recipients of development policies or users of externally-imposed technologies, to become active "makers and shapers" of the policies and technologies that affect their lives.

This article describes the use of some of these methods in enabling citizens to assess the pros and cons of using Genetically Modified Organisms (GMOs) in small scale farming, in India.

Citizens' Jury on GMOs, Karnataka

This citizens' jury was organised by ActionAid India and took place on a farm in a small village in the state of Karnataka, India. This dryland area of the Chitradurga district contains a high proportion of marginal farmers and landless peasants.

As it is the lives of small farmers that would be primarily affected by the introduction of GMOs, the jury was composed of fourteen small and marginal farmers, six men and eight women. They represented the variety of farming traditions, income levels and social groupings. The jury also included expert witnesses who presented evidence for and against GMOs and other participants and observers. Scientific Institutes, commercial biotechnology corporations (Monsanto), development NGOs, Farmers Unions and Government agencies were represented among them.

A multi-stakeholder panel ensured that the jury event was conducted in a trustworthy and fair manner. All deliberations were filmed and subsequently made publicly available ensure complete transparency.

The jury spent three to four days hearing information from 'witnesses' on the merits and limitations of GMOs. The subject under discussion was the possible future role of GMOs in the context of reducing rural poverty and promoting sustainable agriculture.

No to GMOs

Having heard four days of evidence, the jury gave its verdict on the question: Would you sow the new commercial (GMO) seeds proposed by the Indian Department of Biotechnology & Monsanto on your fields? The results were: 4 yes, 9 no, 1 invalid ballot paper (by secret ballot). The jury's rejection of the GMO seeds was not simply a negative response. It was supplemented by a list of actions that should be taken by the government and transnational corporations to get better acceptance for their new seeds.

- Microbes and beneficial insects should not be damaged. Also new seeds should not cause damage to animal populations and other environmental elements.
- They should be lawfully released only after extensive field trials for 5-10 years in which farmers shall be involved, not only in yield assessments, but in safety, environmental and other aspects.
- They should not damage the next crop that is grown on the same field or adjoining fields.
- The success of the new seeds should be judged not just under lab conditions, but also, on fields involving farmers.
- The technology must be easy to adapt.

Surmangala, a woman farmer, cross questions a witness about insect resistance to GM crops. Photo: AgroIndia

A proportion of the jury felt that there was no use of such technologies since they were inherently eco- unfriendly, and would destroy biodiversity. Others in the jury were ready to grow the new seeds so long as certificates from the concerned company were issued to protect them from any potential risk to their livelihood. Yet others felt that GM crops were OK, so long as it was kept to non-food crops.

The jury responded cautiously to the issue of increasing farmer confidence in multinational corporations (MNCs) and biotechnology:

- A proportion of the jury was afraid of any contact with MNCs, having heard about them in the context of WTO and patents. They felt that the powerful MNCs, which develop their seeds in laboratory conditions, could ultimately gain control over seeds and farmers' sovereignty.
- If the seeds fail for any reason, whether to do with the technology itself, or weather conditions, the MNCs should not only compensate for the loses, but also buy up the whole crop at double the price.

Citizens' Jury / Scenario Workshop on Food Futures for Andhra Pradesh

Prajateerpu, the citizens' jury on food and farming futures in Andhra Pradesh (A. P.), was another exercise in involving rural people in decisions that have a strong impact on their livelihoods. This participatory process was jointly organised and facilitated by the UK-based International Institute for Environment and Development (IIED) and the Institute of Development Studies (IDS) and the India-based Andhra Pradesh Coalition in Defence of Diversity, The University of Hyderabad, AP and the all-India National Biodiversity Strategy and Action Plan (NBSAP).

This citizens' jury was made up of small and marginal farmers, food processors and consumers. Reflecting the reality of rural Andhra Pradesh, the jury also included a large proportion of Dalit (untouchable caste) and indigenous (known in India as 'adivasi') people. Over two thirds of the jury members were women, reflecting the greater role women have in agricultural work. The jury members were presented with three different scenarios. Over a period of four days, they listened to and cross-questioned twelve witnesses including representatives of the Government of A.P., the Indian branch of the International Federation of Organic Agriculture Movements (IFOAM) and Syngenta, one of the world's largest biotechnology corporations. It was up to the jury to decide which of the three scenarios, or combination of elements from each, was most likely to provide them with the best opportunities to enhance their livelihoods, food security and environment twenty years from now.

Three visions for the future

Vision 1: Vision 2020.

This scenario was put forward by Andhra Pradesh's Chief Minister backed by a loan from the World Bank. It proposes to consolidate small farms and rapidly increase mechanisation and modernisation. Production enhancing technologies such as genetic modification will be introduced in farming and food processing, reducing the number of people on the land from 70% to 40% by 2020.

Vision 2:

An export-based cash crop model of organic production. This vision is based on proposals within IFOAM and the International Trade Centre (UNCTAD/WTO) for environmentally friendly farming linked to national and international markets. It is also increasingly driven by the demand of supermarkets in the North to have a cheap supply of organic produce and comply with new eco-labelling standards.

Vision 3:

Localised food systems. A future scenario based on increased self-reliance for rural communities, low external input agriculture, the re-localisation of food production, markets and local economies, -with long distance trade in goods that are surplus to production or not produced locally.

Here, too, the jury/scenario workshop process was overseen by a panel consisting of a variety of interest groups (donors, government, civil society organisations). It was presided over by a retired Chief Justice from the Supreme Court of India. The panel's role was to ensure that the entire process was carried out in a fair and unprejudiced way. As part of the methodology, media professionals were also involved in relaying information on the event to a larger audience.

Jury supports localised food systems

The key conclusions reached by the jury – their 'vision' – included a desire for:

- Food and farming for self reliance and community control over resources
- To maintain healthy soils, diverse crops, trees and livestock, and to build on our indigenous knowledge, practical skills and local institutions.

And opposition to:

- The proposed reduction of those making their livelihood from the land from 70%-40% in Andhra Pradesh
- Land consolidation and displacement of rural people
- GM Crops - including Vitamin A rice & Bt cotton
- Labour-displacing mechanisation
- Contract farming
- Loss of control over medicinal plants including their export

Some key lessons

a) The voices of small and marginal farmers can enter the policy process when appropriate methodologies are used as in the two cases mentioned. For example:

- putting the perceptions, priorities and judgement of ordinary farmers at centre stage,
- conducting the events in a rural setting : under a tamarind tree on a farm (Karnataka) and a the farm of a rural training centre (Andhra Pradesh),
- getting government bureaucrats, scientists and other expert witnesses to travel to farmers in order to present evidence on the pros and cons of new technologies,
- using television and video technology to ensure transparency and free circulation of information on the process and the outcomes

b) In both Karnataka and Andhra Pradesh, the jury process demonstrated the competence with which farmers, many of whom had not finished basic schooling, or were even illiterate, could discuss often highly technical issues to which they had no previous exposure, such as genetically engineered crops. They achieved this by carefully eliciting from each witness the information relevant to their livelihoods. Rather than attempting to build up a basic knowledge of genetics, they asked whether the 'new seeds', as they called them, could address their needs, such as returning organic matter to their soils, and reducing their susceptibility to rapidly changing market prices for their harvested produce.

c) As in the case of a controversial technology such as GMOs, a wider understanding of the inter-linkages between biotechnology, corporate control, and local power structures is more likely to be achieved by taking a scenario approach than by merely asking a jury to say yes or no to a particular technology. In Karnataka, the comparison was of two starkly different technological approaches to agriculture (or visions) – one based on GM seed and continued chemical use, the other on saved indigenous seeds, traditional technologies and organic methods. In the "Prajateerpu" example, the jury was able to compare and evaluate three contrasting whole scenarios, each being the logical product of a series of interdependent values, assumptions and predictions. GMOs were thus not taken and judged in isolation - they were perceived and evaluated as an integral part of a wider system or development model.

d) In a recent briefing paper on GM crops and the Third World, the UK Government's Overseas Development Institute condemned the "poorly informed arguments" that used "formulae, slogans and slick advertising". It called for greater research towards providing sound evidence on the risks and potential benefits of GM crops for the South. "The most pressing need", it concluded, "is for good information". Citizen juries, scenario workshops etc. clearly offer appropriate methodologies to address this information deficit. More fundamentally, these methods and approaches can help overcome the *current deficit in democracy in policy processes, science and technology.* At the very least this means moving beyond the rhetoric of "listening to the voices of

Brazilian small-scale farmers and poor consumers reject GMOs

The second citizen's jury on GMOs took place in Belem do Para, capital of the Amazonian State of Para, Brazil, in September 2001. 800 small-scale farmers, landless people and poor urban consumers attended the event, organised by ActionAid Brasil, FASE (national Brazilian NGO), Assema (associations of small farmers from Maranhão State), MST (land less movement), CUT (central of labour unions) and the municipality of Belem.

Before the event, the organisers chose 6 community-based associations (2 landless settlement associations, 2 rural workers' labour unions and 2 urban associations). These organisations provided the organisers with complete lists of membership. 4 members, 2 men and 2 women, were picked at random from these lists, in public and in the presence of the local press. Thus, 24 potential members for the jury were identified. The first activity of the jury was to select, at random, 7 members from this list for the jury (4 women and 3 men). After that, the judge, head of the Law faculty of the Federal University of Pará, read the case, which had been agreed upon by the prosecution and defence, prior to the hearing. This case presented a definition of GMOs, the scope of the jury – GM agricultural varieties tolerant to herbicides, insects, plant diseases and new nutritional qualities, and the questions that the members of the jury were suppose to answer: 1) Can GMOs address the problem of hunger? 2) Can GMOs improve the food security of small-scale farmers? 3) Is there enough evidence that GMOs do not threaten the environment? 4) Is there enough evidence that GMOs do not threaten food safety? 5) Is the process of liberalisation of tests and commercial use of GMOs democratic, transparent and careful enough?

After the presentation of the case, the prosecution and the defence lawyers made their first speeches, presenting the main arguments against and in favour of GMOs. The prosecutor was a lawyer from the municipality of Belem, and the defence lawyer was a researcher on biotechnology, from the Federal University of Pará. After the opening statements, the lawyers invited their witnesses, three each. Each witness gave a 20-minute long presentation, and was then cross-examined by the defending and prosecuting lawyers, the judge and the members of the jury. The witnesses of the prosecution were an economist - a specialist on patents and transnational corporations, a geneticist - professor at the University of São Paulo and a specialist on environmental matters, and an anthropologist - a specialist on rural sustainable development. The defence witnesses were two biotechnology researchers from EMBRAPA, the national agricultural research institute, and a professor from the Federal University of Paraíba - a specialist in biochemicals and a member of the national commission on biosafety.

After the presentations and cross-examination of the witnesses, the defence and prosecution made their closing arguments, after which the members of the jury went with the judge and an assistant to a closed room to proceed with the secret ballot on the 5 questions above. The members of the jury voted unanimously against GMOs with a clear NO to all five questions.

This event had various outcomes. The sentence itself has confirmed the position of the national campaign for a GMO-free Brazil, which states that GMOs threaten the environment, food safety and small-scale farming. But the main outcome is not the sentence itself, but the strong, new experience that these 800 poor people had, listening and learning about the very different opinions on GMOs for 2 days. These people, always excluded from the process of policy-making in issues that affect them very much, had the opportunity to access all the information and to decide about it via the members of the jury. Another outcome was the appropriation of the methodology. Several months after this event, some students from a very poor area of Maranhão State have organised a citizen's jury on GMOs in their schools!

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the poor" to actually planning, funding and acting more on the basis of the poor's own definitions of life and well being. It means taking their policy futures and visions of food and farming as starting points. Donors, and the think tanks they rely on, need to experiment more with initiatives such as those described here and re-orient their theory and practice accordingly.

e) The results of the jury had a significant impact in global media and lobbying arenas. However, the process has so far not been conducted over a long enough time-scale so as to bring pressure on national and state governments, donors and corporations that are significant forces in the lives of India's rural poor. Once citizens' juries reach their conclusions it is essential that appropriate intermediary individuals and channels exist to act between the jury and those with the power to create change. NGOs, federations of farmers' organisations and consumer organisations have a role to play and can use the findings of the juries for their campaigns and lobbying activities.

To sum up, the Karnataka citizens' jury on GMOs and "Prajateerpu" were both innovative attempts to include the genuinely poor and socially excluded into policy-formulation processes. Bringing perspectives of the developing world's farmers to national and global debates about the pros and cons of GM crops is based on a belief that rural people in the South have a democratic right, and sufficient knowledge, to judge the issue for themselves. The jury outcomes will hopefully encourage more public deliberation and pluralism in the framing and implementation of policies on poverty, food and agriculture in India, thus contributing to better democratic governance. ■

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- More information on **Prajateerpu** at:
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http://www.ddsindia.org/

Discussing genetic engineering with communal farmers in Zimbabwe

Zimbabwe is surrounded by countries (South Africa, Malawi, Zambia and Mozambique) where testing or commercial production of Bt cotton and/or Bt maize has already taken place. Zimbabwe-based seed companies - Monsanto, Pioneer and Pannar - are awaiting permission from the Zimbabwean Biosafety Board for Bt cotton and Bt maize field trails. For communal farmers, maize is the staple crop and the most common cash crop. As such, they should be able to make informed and reasoned choices about the introduction of GM crops, argue many NGOs. They emphasise that sharing information on what GE technology is, whether it is needed and the possible alternatives is important. The "impact assessment methodology of GE organisms on the livelihoods of resource-poor people", developed by ITDG (Intermediate Technology Development Group) is one such information-sharing initiative.

In Zimababwe, the assessment was carried out as a comparison between two technologies: IPM/IPPM (Integrated pest management and Integrated production and pest management) and genetically modified crops. The exercise consisted of six steps:

Step 1: Introduction of the programme, Group discussions on farming systems (community strengths and assessment of assets related to crop/animal production).
Step 2: First group information sharing on GM crops and Bt-maize. Second group: information sharing on IPM/IPPM.
Step 3: Farmers' response, questions and clarifications about the technologies
Step 4: Assessment of the technology (Bt-maize and IPM/IPPM) under the Sustainable Livelihoods Framework.
Step 5: Overall assessment by farmers.
Step 6: Feed back on the communication approach and process.

An interesting feature of this methodology was the use of drawings to explain genetic engineering to farmers who did not have an education in biology. This methodology helped farmers to get insight into the topic, and to ask questions like: "How does the Bt gene get expressed in the stalk and the leaves but not in the cob?", Are the Bt genes passed on to the progeny?", Which other insects die besides the stalk borer". Farmers also discussed aspects such as fertility requirements, weevil resistance, environmental impact etc. "What effect would it have on soil structure, and on the crops that are grown thereafter?" was another question asked. Farmers also raised their concerns about resistance build-up in pests. They were also keen to find out about the economics related to the price of Bt seed and the cost saving in pesticides.

Other important categories were health, religion and power-relations. Farmers wanted to know whether the toxin that kills maize stalk borers wouldn't also affect them in the long term, by eating the stalks and the cobs, by eating meat of animals fed on Bt-maize stalks. A strong feeling of powerlessness towards the seed sector/agribusiness was often mentioned. One farmer said: " if farmers see a variety that kills all insects, they will want it, because they don't understand the other factors". On which another remarked: "marketing companies don't give the full picture, for example Dieldrin, they just said how good it was, but said nothing about the human health effects or how to use it safely."

"We may be given seed, or sold it cheaply by companies for a while, but then the subsidy may be withdrawn and we've all lost the varieties we used to use".

Another farmer raised the issue of control mechanisms against contamination of their varieties: "we talked to our neighbours to try and reduce contamination by keeping the maize varieties separated from each other... but without by-laws we can't make decisions as a community on excluding varieties". Another remarked: "Even if there is a law against a variety, people may still want to grow that variety, Any law must be monitored for enforcement, otherwise it is pointless".

This exercise shows, once again, that farmers, given the chance, are perfectly capable of discussing technical issues related to GE and in making their choices.

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