

## Agriculture - A Consensus on the Need for Change

Dr. Hans Herren, IAASTD

The way the world grows its food will have to change radically to better serve the poor and hungry if the world is to cope with a growing population and climate change while avoiding social breakdown and environmental collapse. That is the message from the report of the International Assessment of Agricultural Science and Technology for Development, a major new report by over 400 scientists which have researched the implications and impact of agricultural knowledge, science and technology (AKST) from the past 50 years and what will be needed in terms of new AKSTs to address the key challenges ahead.

The authors' brief, developed by over 600 stakeholders covering a cross section from society in the five regions considered for the study, was to examine hunger, poverty, the environment and equity together.

The assessment main findings are that modern agriculture has brought significant increases in food production. But the benefits have been spread unevenly and have come at an increasingly intolerable price, paid by small-scale farmers, workers, rural communities and the environment.

The report has assessed that the way to meet the challenges lies in putting in place institutional, economic and legal frameworks that combine productivity with the protection and conservation of natural resources like soils, water, forests, and biodiversity while meeting production needs. It also emphasizes the importance of the small-holders in assuring food production who are already producing the bulk of the food and need now renewed attention from the agricultural sciences and investors alike.

More needs to be done in terms of developing the science and technologies to support sustainable agriculture, that will restore and maintain soil fertility and also the ecosystem services upon which agriculture itself, and other life supporting systems depend. The Report suggests that farmers be paid for maintaining ecosystem services.

In many countries, it says, food is taken for granted, and farmers and farm workers are in many cases poorly rewarded for acting as stewards of almost a third of the Earth's land. Investment directed toward securing the public interest in agricultural science, education and training and extension to farmers has decreased at a time when it is most needed. The need to pay more attention to the women in agriculture has been emphasized, from training to land ownership issues and on how to lessen the burden through appropriate mechanization.

On how much biotechnology may contribute to the sustainable agriculture, the report says that the jury is still out on how much what is available today will contribute to sustainable agriculture, an agriculture less dependent on external inputs (i.e., energy), while many traditional biotechnologies are in use already (tissue culture for vegetative multiplied crops, vaccines, etc).

The report did emphasize that productivity increase is needed to provide the needed food for the growing population, a population that is also more demanding in food variety, but that the increase has to be done in line with sustainability principles.

On trade, the report did highlight the need to have a level playing field, to benefit from the advantages that free trade may bring.

The authors have assessed evidence across a wide range of knowledge that is rarely brought together. They conclude we have little time to lose if we are to change course. Continuing with current trends would exhaust our resources and put our children's future in jeopardy.

It says the willingness of many people to tackle the basics of combining production, social and environmental goals is marred by "contentious political and economic stances".

Hans R Herren, Co-Chair, IAASTD