

## “Local knowledge of farmers has to be in the centre of any agricultural future”

by Carsten Schulz, Agridea

Agriculture is closely linked to many concerns, including biodiversity loss, global warming and water availability. Despite significant increases in productivity, malnutrition and poverty still plague many parts of the world.

In order to address ways how to overcome food crisis, keywords as *small-scale agriculture, local knowledge, sustainable livelihoods* are back on the political agenda and will remarkably influence development cooperation strategies in the next years. RDN spoke with Prof. Dr. Hurni<sup>1</sup> about the process and results of IAASTD.

The International Assessment of Agricultural Sciences and Technology for Development (IAASTD) focuses on how to make better use of agricultural science, knowledge and technology to reduce hunger and poverty, improve rural livelihood, and foster equitable and sustainable development.

### What is the International Assessment of Agricultural Sciences and Technology for Development (IAASTD) about?

The IAASTD was a three years process, involving about 400 experts around the world working under the auspices of 30 governments and 30 representatives of civil society. Five UN agencies were involved: the Food and Agricultural Organisation (FAO), the UN Development Programme (UNDP), The UN Environmental Programme (UNEP) the UN Education, Science and Cultural Organisation (UNESCO) and the World Health Organisation (WHO).

On 15 April 2008 the synthesis report as main result of the IAASTD was released and presented to the public during a conference in Johannesburg, South Africa. RDN asked Prof Hurni some questions regarding the outcomes of the IAASTD process and its relevance and importance for rural agriculture and farmers in south countries and particularly for extensionists and extension services.

#### 1. Mr. Hurni, can you tell us something about the purpose, why the IAASTD has taken place?

The main purpose was to make an assessment of the situation of agriculture in its broadest sense, including topics as cultivation, grasslands, forestry and fishery. In the focus was the impact of science and technology for the situation of agriculture at present and in the future – talking about agricultural production systems in 2050.

The IAASTD was organised in a similar way as the IPCC<sup>2</sup> but with a broad participation and larger inclusion of participants of countries in the south. The IAASTD Director Robert Watson was the coordinator of the IPCC before, so he used a similar approach and conceptual frame for the whole process.

It was intended as a new push for a knowledge system for agriculture and for backing the CGIAR<sup>3</sup> – the agricultural research network.

#### 2. What has been achieved so far? What are concrete outputs of the IAASTD process?

Five sub-global assessments for five regions i.e. Sub-Saharan Africa, Arab countries, Asian countries, Latin America, and the Northern countries (USA, Europe,

<sup>1</sup> Prof Dr Hurni was Coordinating Lead Author of Chapter 1 of the IAASTD Global Report and one of the authors of the IAASTD Synthesis Report. He participated in all relevant meetings during the last 3 years.

<sup>2</sup> IPCC = Intergovernmental Panel on Climate Change

<sup>3</sup> The CGIAR is the Consultative Group on International Agricultural Research (CGIAR).

Russia) and a global report have been written. You can say that the main output is 6'000 pages of documents, well documented and well referenced to literature.

The real achievement besides the documents was: a global group of more than 500 people negotiated about the future focus of agriculture and the contribution of science towards agriculture. Actually, there were two points that I wanted to bring into the discussion and I was really surprised to what extent these two points were present in the discussion already – I was in a big group of supporters for these points. For me the main outcomes of the IAASTD were:

- Recognition of smallholder farmer: About 40% of the world population is engaged in small-scale farming, but productivity is very low. If you want to achieve poverty reduction and food security, than you have to look at smallholder farming.
- Importance of local knowledge: We realised, that scientific knowledge is only one side of the agricultural knowledge, that traditional or indigenous knowledge is equally important as the one based on scientific studies. Local knowledge has to be in the centre of any agricultural future and the reflection about how it can be supported.

You can say that the improvement of productivity of small-scale farming and the frame conditions for this improvement is the opportunity for agricultural development for the next 30 or 40 years!

*3. Mr Hurni, you mentioned these two very interesting outcomes of the IAASTD. What can be the consequences for supporting organisations, the research or donor agencies in the context of development cooperation?*

I don't know what it means yet, but we realize that agriculture is back on the agenda. In the last 20 years there has been a certain fatigue about this topic by many donors because research did often not reach the small-scale farmers in marginal areas but dealt more with the intensification in more favourable areas and industrialised agriculture. And regarding research systems IAASTD brought the point that industrialised agriculture should not be the only model for agriculture anymore.

There is a need of a new type of agricultural research that has to go back to the traditional farming system and not just back to research in a traditional sense like commodity research, crop production and mechanisation. The situation of small-scale farming has to be in the centre, together with its resources like water, soils, and biomass. Other important topics are the integration to markets, and how to organise extension services differently, more suitable for the small-scale farmers, not based on a simple model of technology transfer but rather in a way to favour innovation and adaptation.

These important points can be politically used to influence development cooperation because the governments of 57 countries have acknowledged and signed IAASTD papers, including the Swiss Agency for Development and Cooperation (SDC).

*4. What was the role of the Swiss Government and Swiss NGOs in this process?*

Without the support from the Swiss Government, namely SDC, we as Swiss delegation wouldn't have been able to participate in the whole process. The Swiss Government delegated the participation during this process to us. In the final meeting in South Africa in April 2008 representatives from SDC participated as well. During the process we had two meetings with the Federal Office for Agriculture (FOAG) and the involvement of Hans Herren who was the Co-President of IAASTD.

*5. The synthesis report was published on April 15<sup>th</sup> 2008. What does the IAASTD report mean for smallholder subsistence farmer in developing countries?*

As I have mentioned before, the IAASTD report clearly says that the future is with the smallholder farmers. This is such because the potential for a production increase in order to assure food security worldwide is with small-scale farmers, based on their knowledge system, but combined with scientific knowhow. I mentioned as well, that so far research has focused very much on industrialised, high input agricultural production systems – far too less has been invested in research for small-scale agriculture in developing

countries. This has to be changed. Smallholder farming needs most of our attention in the next years to come! This includes as well a certain responsibility for extension services and skilled extensionists.

In the Summary for Decision Makers IAASTD gives a word of caution towards too rapid liberalisation of agricultural production and trade, because it could be detrimental for smallholder agriculture to be exposed to competition from the North at a time when it is not prepared. This is a very political issue but one that is potentially very important for smallholder farmers.

*6. What does the IAASTD report say about natural resources, especially land tenure, water availability etc.?*

The IAASTD process, particularly in the consultation of the sub-global regional reports, says a lot about topics such as natural resources management, biodiversity, land tenure, soil degradation and water scarcity etc. In fact, it clearly highlights environmental degradation as major threats to food security. It also clearly says that agricultural production contributes itself to major environmental problems such as climate change and biodiversity loss. That is why IAASTD calls for a new approach for agricultural knowledge, science and technology!

It is therefore quite remarkable that IAASTD acknowledges the multifunctionality of agriculture, meaning that food security is closely linked with environmental and social issues. This is a big statement, because for many donors and agencies multifunctionality was not opportune as a concept, for example the USA.

Initially there was a big resistance against the concept of multifunctionality of agriculture, also amongst the IAASTD experts from the South, because it was on the one hand seen as paternalism from northern governments – after all the northern countries have themselves developed agricultural systems based on monocultures in many areas. On the other hand, the multifunctionality of agriculture was seen as an excuse of Northern countries to justify subsidies for their own agricultural production. But at the end this concept (which we also use in Switzerland's agricultural policy) found broad acceptance in the IAASTD group.

This means that for agricultural research next to food production other topics such as soil degradation, biodiversity and natural resources management are equally important. Smallholders normally look well after their land if they have the means to do so. Unfortunately they face many constraints to do it properly! A lot of support will be needed in the future.

*7. Was biotechnology and GMOs a topic in the IAASTD report?*

Of course the topics biotechnology and GMOs were discussed in the IAASTD process. There was, however, a certain aversion against this biotechnology topic as the participants consisted also of many NGO representatives from southern countries who had a strong resistance against this technology. So this was a very controversial issue. Unfortunately the two prominent participants Syngenta and Monsanto distanced themselves from the process and finally left the IAASTD panel because they did not agree with the contents of the report with regard to biotechnology. So, not only in the IAASTD but also in the discussion in Switzerland you can see how politicized this topic is.

I regret very much that the discussion wasn't more balanced and it really caused some frustration. On the other hand it has to be said that it was a democratic process. Whatever the case – the IAASTD report is rooted and based on research literature. The full IAASTD reports to be published soon will show these references and also the arguments of both sides.

*8. What is the message of the IAASTD process towards the agricultural extensionists and extension services worldwide?*

The message is clear: reaching more than 2,5 billion people cannot be done without bridging the gap between research centres and the farm gate.

From my point of view, extension services are essential. You don't need more research if you don't have the link to the smallholder farmer.

But it has to be improved. What I can observe is that most of the researchers don't go out to the field to have a closer look to reality. There must be a reform in the way how researchers generate knowledge and how they

transfer this knowledge to the smallholder farmers. Extension and research should respect local knowledge much more, and trying to link themselves to local knowledge systems including local innovations.

*9. What are the next steps after the approval of the IAASTD report by 57 countries? Are there any concrete actions planned? What are the challenges of agriculture in the future?*

I am afraid there are no concrete actions planned beside the publication of the reports and the sub-reports in book form in autumn 2008. But these documents will be of importance in the policy dialogue in the participating countries. IAASTD is completely voluntary – it's not a convention that has to be ratified or adopted in national policy.

But what the IAASTD results will do – they will influence policy in different UN organisations. For example in the context of climate change: agriculture will play an important role for the mitigation of and the adaptation to climate change. With regard to mitigation- in a medium or long term perspective agriculture has an important potential for carbon storage in developing countries because through certain agricultural techniques carbon can be stored in the soil and in the vegetation.

In the field of adaptation a multitude of measures are necessary to increase the resilience of agriculture with regard to short term climate variability and to adapt to changing climate condition in the long term. This concerns agricultural planners, researchers, extensionists and farmers. Many efforts, such as water and soil conservation measures, are already underway but need to be enhanced. One interesting element can be forecast systems in order to reduce risks of droughts and floods. Thanks to researchers the models of seasonal weather forecasts are slowly getting better. There are interesting projects underway where researchers, extension services and farmers work together in adapting crop mix, varieties and agronomic techniques to seasonal forecasts.

*Thank you very much, Mr Hurni!*



Prof Dr Hurni is Director of the Centre for Development and Environment (CDE) of the Geographical Institute of the University Bern/Switzerland, and was Coordinating Lead Author of Chapter 1 of the IAASTD Global Report and one of the authors of the IAASTD Synthesis Report. He participated in all relevant meetings during the last 3 years.

*The full reports are expected to be published in September – November 2008. Further information about IAASTD under <http://www.agassessment.org/>*