

## **PROJECT PAPERS**

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# **"THE WAY FORWARD"**

## 'The way forward' DISCUSSION SESSION

*Summary by*

*Marco Wopereis,*

Farmers have stressed the need to have adequate small-scale machinery to develop inland valley lowlands into sawahs. Especially power tillers are needed for puddling and levelling. They mentioned frequent breakdown of power tillers and the need for training on repairs. With increased production the need is felt for small-scale equipment for harvesting and post-harvesting (threshing and milling). One NGO present has expertise in post-harvest issues (Technoserve). Access to credit is a major problem for farmers. It was proposed to include the banking sector more in project execution to overcome credit problems.

The need was felt to implicate national extension authorities and NGOs more in the next phase of the project. They should be part of the project from the design stage onwards.

There was consensus that in a next phase, the project should focus on two major components: (i) adaptive research and technology dissemination (scaling-up) and (ii) strategic research on key issues that are still unsolved. Strategic research would result in technologies or information that could be fed forward into the adaptive research and technology dissemination component.

The current project has developed 4 hectares of sawah lowland. Activities were focused on this small land area for good reasons, as the project focused on research. Scaling up would imply moving away from the current demonstration sites to more on-farm activities. This scaling-up activity concerns sawah development but potentially also other technologies developed within the first phase of the project or outside the project. To enable effective diffusion of the sawah technology, there is a need to determine the potential for sawah development in Ghana within the humid forest agro-ecology and in other agro-ecologies in Ghana. Moreover, guidelines (i.e. brochures in simple language) are needed. Such brochures need to explain the technology but also need to include information on the financial side, i.e. investments needed and a cost/benefit analysis. Diffusion will also require the organization of training courses ('train trainers'), and adaptive participatory on-farm research.

The need was felt to link diffusion activities to other initiatives on inland valley development, such as the FAO special program for food security or the inland valley consortium. The importance of rice for Ghana was emphasized and it was stated that the Ghana government wishes to decrease rice imports drastically. It was, therefore, proposed that Ghanaian research institutes consider bundling their forces and establish a rice centre for focused research and training on this important food crop.

With sawah development, application of fertilizer and insecticides are likely to increase. Biodiversity, i.e. flora and fauna in the inland valley lowlands will be affected and hydrology changed. These ecological implications need to be studied. Strategic research is clearly needed on such environmental and biodiversity issues, farmers' health and agricultural productivity and policy issues (especially related to land tenure). Other complementary technologies to the sawah technology that were presented in the workshop, such as aquaculture, agro-forestry, soil fertility and weed management and the use of cowpea after rice still require more research. Ghana universities can contribute to such research activities through the involvement of MSc and PhD graduate students. Strategic research should ideally be conducted at the sites that were used in the first phase of the project, i.e. in the Mankran area, where the Inland Valley Consortium has also their key site. This would ensure optimal use of existing information and data.

The need was felt for the establishment of an effective database and information management system on inland valley development to share results among scientists and extension agents, and to ensure that data are not lost. Such a database would also stimulate regional interaction on inland valley development, for example with the other IVC member countries, as it would facilitate data and information exchange. The database could also be used to feed into simulation models. If properly validated, simulation modelling can speed up research, and reduce research costs.

Summing up, there was consensus among the workshop participants that the way forward is to develop a project that consists of two major components: a strategic research component and a strong development component. The strategic research (R) component would ensure that sustainability issues related to sawah development are further investigated and that remaining key research issues are addressed. The development component (D) would ensure that proven technologies, such as the sawah system, are made accessible to many more farmers, in a participatory way, involving farmers, NGOs, national research and extension agencies, and financial institutions from the start. The emphasis of the project would be on the D side.