

EXTENSION: FROM DIFFUSION TO NETWORKS

Strengthening rural extension

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Introduction

International agricultural research increasingly has to justify its relevance in reducing rural poverty in a sustainable way. Uptake and impacts have become more important than outputs (technologies and methodologies). This contributes to orienting the CGIAR centres towards working more in an innovation systems mode, whereby uptake and partnerships have to be thought through from the beginning of the innovation process rather than at the end (as in the pipeline model of technology transfer).

Here I present the Poverty Elimination through Rice Research Assistance (PETRRA) project in Bangladesh in which the International Rice Research Institute (IRRI) developed and managed a tender mechanism that facilitated the emergence of multiple service providers, each developing locally embedded extension methodologies (see also Salahuddin et al., this book). The results confirm the key insight that farmers need to be presented with underlying scientific principles, rather than ready-made technologies. I go on to explore how CGIAR centres can play a role in developing regionally relevant learning tools that draw on this insight and that can be easily used by multiple service providers.

Managing diversity in extension methodologies: the PETRRA case

The PETRRA project established a values-based research management scheme in Bangladesh from 1999 to 2004. The 45 sub-projects had a focus on three broad areas: pro-poor policy (6), technologies (19) and uptake and extension (20). In what follows I highlight some of the findings related to extension and add new insights on how to improve the effectiveness of development interventions, as reported by Biggs and Smith (2003).

Learning helps to transform information into knowledge. Even if extension workers improve the poor's access to information, questions arise about the extent to which farmers can apply this information. What does it help to listen to a lecture or radio programme if the vocabulary is too pedantic or academic? And what is the best time and method to reach poor women, considering that the majority in rural areas are illiterate? Clearly, the effectiveness of learning

Zooming-in, zooming-out

Centres of the CGIAR are required to develop international public goods. Apart from producing regionally relevant rice videos, five years of process evaluation had allowed us to develop a new approach to enhance the efficiency of learning within national innovation systems. As extension systems become decentralized, many service providers develop their own materials and methods, with variable success. Most development actors are hungry for appropriate learning tools. Hence, based on experiences in different contexts the Africa Rice Center (WARDA) developed, tested and documented an approach for effectively communicating agricultural technologies with the rural poor. The Zooming-in Zooming-out (ZIZO) approach (Figure 4.1) provides guiding principles to produce high quality farmer-education tools that are locally appropriate and regionally relevant (Van Mele, 2006).

ZIZO starts with a broad stakeholder consultation to define regional learning needs. Only then are communities approached to get a better feel about their ideas, knowledge, innovations and the words they use in relation to the chosen topic (zooming-in). Educational videos are produced in close consultation with the end-users (and with farmers who have collaborated earlier in participatory research), and building on Rhoades' principle of communicating ideas rather than ready-made technologies. Consequently, when showing the draft videos to further villages (zooming-out), more novelty is identified, and further adjustments made.

If the topic is truly of regional relevance, multiple service providers will be ready to incorporate the videos in their own programmes. Some facilitation to make this happen may be required, such as networking and translating into local languages.

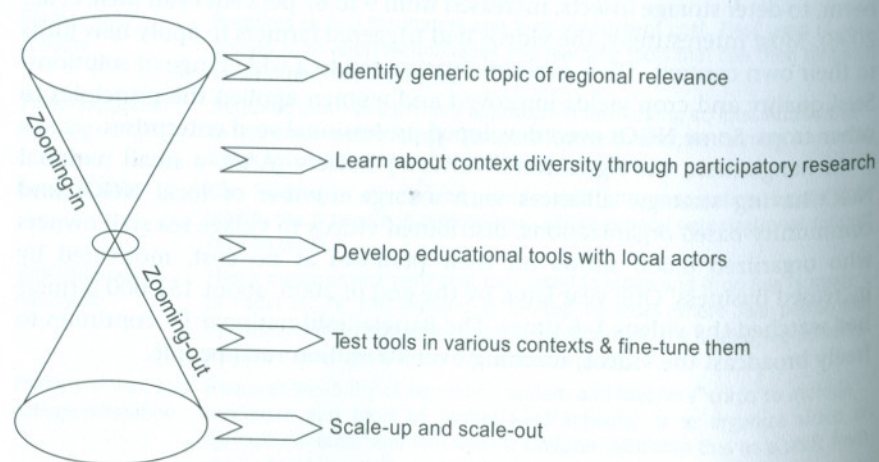


Figure 4.1 Zooming-in zooming-out: scaling up sustainable innovations

Evidence shows that based on a few well-selected local innovations, and merged with appropriate scientific knowledge, video was able to explain underlying biological and physical principles. The more these principles resonated with what farmers already knew and did, the more video became useful as a stand-alone method. Facilitation increased the level of experimentation with sustainable technologies, but was not always a prerequisite (Van Mele et al., 2008). Ideally, FFS graduates or farmers engaged in participatory research should take part in developing videos.

The relevance of the technologies alongside a creative communication approach has resulted in the videos being scaled-up to millions of farmers in Asia and Africa through both facilitated group discussions and non-supervised learning, such as video shows in tea stalls and mass media. Farmers can learn by watching other farmers on video, if the programmes are well planned and simply structured. The ZIZO approach can be applied for any learning tool, whether videos, radio programmes, posters or fact sheets. ZIZO aims to enhance the efficiency and effectiveness of pro-poor rural learning systems.

Policy implications for agricultural R&D

- Experiential learning can be stimulated in many ways, and considering the limited financial resources of national extension systems, more attention needs to be paid to improve ways of unsupervised learning.
- The role of International Agricultural Research Centres (IARCs) can and should extend to building national capacities in developing high quality, learner-centred education tools and strategies. This will require them to open up to a different type of professional.
- IARCs have a role to play in facilitating processes, mechanisms and institutions supporting farmer-centred approaches in both technology development and dissemination.
- IARCs can help in scientifically assessing the efficiency and effectiveness of uptake methods, rather than just focusing on measuring the impact of their home-grown technologies.
- IARCs that have strong links with the national R&D systems ought to play a role in facilitating and documenting processes of innovation.

Stimulating IARCs to expand or modify their roles in national innovation systems requires donors to create more flexible learning environments and move away from logical frameworks with pre-set quantifiable targets. Development returns to donor investment in research will only be boosted if linkages between multiple actors in the innovation system are strengthened, not if the focus remains on strengthening scientific capacities in isolation. In developing countries, 'R&D is mostly about learning, rather than about creating new knowledge' (Arnold and Bell, 2001).

To move beyond the 'islands of success' of participatory research and interventionist reflections on innovation systems, more resources will need to be allocated to a different type of research, including research on pro-poor and gender-sensitive 'extension' tools, mechanisms and alliances. Without this, innovation systems' thinking is unlikely to make a positive contribution to the livelihoods of poor farmers in developing countries. Donors have a part to play in supporting organizations equipped to strengthen the quality and effectiveness of the multiple extension and service providers.

Institutionalizing values-based research: lessons from the PETRRA Project, Bangladesh

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A values-based research approach

The Poverty Elimination through Rice Research Assistance (PETRRA) was a research project implemented in Bangladesh from April 1999 to August 2004. It operated with a budget of £9.5 million, funded by the UK Department for International Development (DFID) and managed by the International Rice Research Institute (IRRI) in close partnership with the Bangladesh Rice Research Institute (BRRI). The project aimed to enhance the livelihood security of poor farmers by increasing production and productivity of rice-based farming systems through poverty-focused research. Its objective was clearly reflected in the title of the project, which contained 'poverty' and 'elimination' as key words. Rice was the entry point, and research was to support a strategy for poverty elimination. Rather than target production technologies and large producers, PETRRA started with resource-poor farm households (Orr and Magor, 2002; see also Van Mele, this book).

PETRRA identified a number of cross-cutting issues which formed the value-base of the project and played a crucial role in conceptualizing and materializing PETRRA's agenda:

- working with resource-poor farmers to address *poverty*;
- conducting research as per *demand* and priority of resource-poor farmers;
- conducting, sharing and evaluating research with both *men and women* of resource-poor households;