Agricultural Extension in the Mekong Delta of Vietnam
The Case of Integrated Agriculture-Aquaculture

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1. Background

The Mekong Delta of Vietnam has a total area of 39.739 km² (12 % of country) but contributes to more than 50% of rice and 60% of aquaculture production (figure 1). Agriculture in the region is characterized by small scale rice-based farming. Integrated Agriculture-Aquaculture (IAA) is a common production system which has a major contribution to rural poverty reduction (De 2006; Nhan 2007).

However, farmers' adoption of IAA is still slow. The key question of this study remains how agricultural extension can facilitate development of IAA systems.

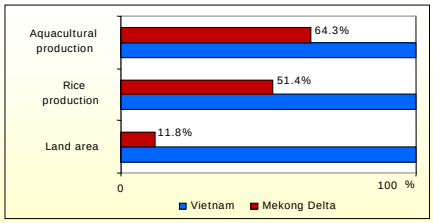

Figure 1. Share of rice and aquaculture production in the Mekong Delta on total production in Vietnam (Source: Adapted from GSO, 2005)

2. Integrated Agriculture-Aquaculture

- The average farm size of IAA systems in the Delta is 1.5 ha and includes: homestead and orchard (31%); fish pond (17%); livestock pen (including in homestead); and rice field (52%) (Nhan, 2007).
- An important characteristic of IAA is the recycling of nutrients between sub-systems to gain synergy effects (figure 2).
- Main benefits from IAA farming: risk reduction; use of idle family labor; income generation; and environmental protection (Nhan, 2007).

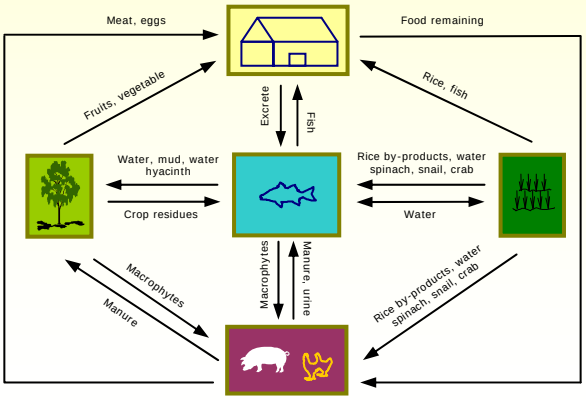

Figure 2: Diagram of IAA nutrient flows (Source: Modified from Nhan, 2007)

3. Current Agricultural Extension Services

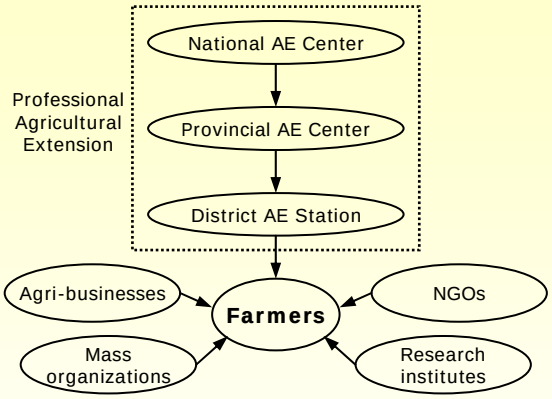

Figure 3: Structure of Vietnamese agricultural extension systems (Source: Modified from De, 2006)

- Agricultural extension (AE) in Vietnam was established in 1993 as illustrated in figure 3.
- A main activity of extension is the transfer of technology (TOT). So far, TOT has played an overall role for agricultural development in Vietnam, especially in the Mekong Delta.
- However, AE has mainly focused on rice production using a top-down approach that often fails to address farmers' needs (De, 2006).

4. Participatory Technology Development: A New Paradigm for IAA System Development ?

IAA is basically pointing at a variety of linkages between different farm enterprises (Prein, 2002). However, current extension activities in the region are neglecting these interrelations. In order to increase the IAA adoption rate, existing extension approaches are required to change. Participatory technology development (PTD) has been suggested for research and development of small-scale integrated farming systems. The application of PTD (since 2002) for research and extension of IAA development in the Delta has proven many positive impacts in terms of economic, environmental and natural resource management aspects (Nhan, 2007).

5. Conclusions

- IAA systems are complex and require a high level knowledge relating to both technical and management issues.
- Mandatory for the facilitation of IAA development is a fundamental change from currently practiced AE towards an inclusion of participatory and multi-disciplinary components, such as PTD.
- A critical issue remains the institutional involvement into extension activities to improve rural development in the Mekong Delta.
- In particular, a comprehensive collaboration between professional AE and other stakeholders (e.g. research institutes, NGOs, private enterprises, media, etc.) is a key concern towards a facilitation of IAA development.

Images: (a) three components of IAA; (b) water hyacinth in fish pond; and (c) gathering golden snail as feed for fish/livestock

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