SATNET Intraregional Visits for Smallholder Value Chain Actors in South Asia

18-23 August 2014 (Nepal) and 1-7 September 2014 (India)

Introduction

Building upon the positive outcomes of the two 'Intraregional Visits for Smallholder Value Chain Actors' organized in Southeast Asia as part of the European Union-funded 'Network for Knowledge Transfer on Sustainable Agricultural Technologies and Improved Market Linkages in South and Southeast Asia' project (SATNET Asia), CAPSA organized two more such visits in South Asia, namely in Nepal and India, in collaboration with regional and national partners. These visits focused on exposing smallholder representatives to good practices and technologies in Integrated Pest Management (IPM), climate resilient agriculture, and post-harvest issues in order to complement the SATNET workshops and training programmes already organized in these areas. The objective was to enable them to see the efficacy of these practices, interact with local champions, and thus support the dissemination and adoption of these practices in their own communities.

Participants of Nepal visit

Participants of India visit

Organization and participants

The visit in Nepal was organized from 18-23 August, 2014 in partnership with International Development Enterprises (iDE) Nepal, while the visit in India took place from 1-7 September 2014 in close collaboration with three NGO partners, namely Kudumbam, Concern Universal and the Rashtriya Gramin Vikas Nidhi (RGVN). At the regional level, CAPSA also collaborated with the Asian and Pacific Centre for Transfer of Technology (APCTT) which is leading SATNET's capacity building activities in South Asia. Around 35 participants from Afghanistan, Bangladesh, Bhutan, India, Nepal and Pakistan representing progressive farmers, village community leaders, NGO extension workers and staff from government agencies took

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part in the visits. As in case of the visits in Southeast Asia, the participants were selected through the SATNET network based on the strength of their role in disseminating knowledge and information for sustainable agriculture in their communities.

Technologies and practices demonstrated

In *Nepal*, the participants visited a number of IDE's project sites in the south including those of the European Union-funded Agriculture and Nutrition Extension Project (ANEP). They met community groups who demonstrated IPM and organic practices in their locations, and interacted with village-level Marketing and Planning Committees which collect produce from members, provide backward and forward/marketing linkages, and enable the growers to bargain better with traders to realize higher prices. Innovative and climate-friendly technologies for off-season vegetable cultivation, bio-gas production, aquaculture and irrigation were also showcased.

In *India*, the Kudumbam site in Tamil Nadu province offered the participants an opportunity to see the NGO's work in preserving traditional knowledge of farmers and promoting organic farming and certification through a community-based approach. They witnessed the beneficial results of techniques that have helped to rejuvenate greenery on barren land like rainwater harvesting and planting of drought tolerant tree varieties. The participants took part in a Farmer Field School session aimed at finding community-driven solutions for sustainable agriculture, and also saw methods of preparation of various bio-inputs including plant growth promoters, bio-pesticides, pest repellents, and bio-fertilizers. In the second stage of the visit in Assam province, the partners Concern Universal and RGVN demonstrated sustainable technologies like Pheromone insect trap, floating vegetable garden (suitable for flood-prone areas), and low-cost vermicompost pit.

A sample of the technologies demonstrated to participants during the visits is as follows (country where demonstrated is indicated in brackets):

1. *Multiple Use Water System (MUS)* (Nepal): A highland drinking water source feeds a collection tank for drinking water. The overflow from this tank is channelled to a second collection tank for irrigation (including drip irrigation purposes) so that drinking water use is prioritized over irrigation. Distribution to end users at downhill locations takes place through a network of pipes. This technology is suitable for hilly areas, and supports climate change adaptation through water resource conservation. It is particularly helpful for women who otherwise have to climb long distances to collect drinking water for their households. A committee of community members is constituted to manage and monitor the operation of the MUS.
2. *Off (rainy)-season tomato cultivation* (Nepal): The creepers are grown under a 'plastic house' along bamboo poles fixed in the ground which helps to prevent waterlogging. Drip irrigation is used for watering the crop. Such off-season cultivation allows the farmers to obtain higher prices for their produce.
3. *Floating Vegetable Garden* (India): Water hyacinth, which is usually considered unproductive, is collected, beaten with sticks to form a floating bed, and allowed to decompose for 20 days. The bed of decomposed hyacinth is then used to grow vegetables which is otherwise not possible to do in the rainy season. Moreover, once the vegetable cultivation is over, the fertile, decomposed water hyacinth material is compressed into compact balls and used for raising vegetable seedlings in a home

nursery. The seedlings are then transplanted into the field once flood waters recede, thus reducing the time required to grow vegetables by around 20 days. In the backdrop of climate change, this technology is especially relevant for food and nutrition security of vulnerable groups in flood prone areas.

4. *Low-cost Vermicompost Pit* (India): Usually a concrete pit is recommended for Vermicomposting, but this can prove expensive for farmers. The cost can be reduced by making a pit within a bamboo frame, enclosed from the sides and below with a sheet of plastic. Layers of organic matter, cow dung and soil are added in addition to earthworms. The compost generated is very rich in nutrients. The liquid by-product obtained in the process is also good for soil application as a growth promoter.
5. *Aquaponics and Vegetable Cultivation* (Nepal): A net cage placed in a pond is used for rearing fish which are released into the pond upon maturity. Moreover, a bamboo frame structure extending from the edges of the pond over the water provides additional space for cultivating vegetables (particularly creeper varieties).
6. *Low-cost Bio-Gas Generation Units* (Nepal): These units utilize cow dung and human excreta. They can bring many benefits such as smoke-free cooking, greater cleanliness and better health conditions. The slurry from the bio-gas digesters is also applied in farmers' fields as manure, resulting in cost saving on account of the reduced application of chemical fertilizers.

1. Multiple Water Use System collection tank

2. Off (rainy)-season tomato cultivation under plastic house

3. Floating Vegetable Garden

4. Low-cost vermicompost pit

5. Aquaponics and vegetable cultivation

6. Bio-gas generation unit component

Outcomes

The participants highlighted the usefulness of the practical exposure they had gained as well as of the understanding acquired about new ways of implementing existing processes. The promotion of low-cost innovations, scaling-up of sustainable technologies, and community engagement were some of the key areas of knowledge enrichment. In particular, exposure to innovative irrigation systems (eg. MUS), off-

season tomato cultivation under plastic house, preparation of bio-inputs for pest management and enhancing plant growth, organic farming practices and certification, bio-gas generation, aquaculture techniques, and floating vegetable gardens were cited as especially valuable.

The participants committed to applying the knowledge gained for promoting sustainable agriculture in their own communities. For instance, some of the participants expressed their immediate plans to apply the floating vegetable garden technology and the off-season tomato cultivation technique. In addition, it was encouraging to note that the participants actively shared their own knowledge with the local communities as well, making this a two-way flow of knowledge.

In sum, the two intraregional visits for smallholder value chain actors in South Asia enabled south-south learning amongst a target group that needs it most. They also provided a unique opportunity to the participants for establishing networks and cross-border peer linkages.

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