



Case name and name of contact person/leader

Improving sustainability in farming and food systems by bringing in agroecological approach through action learning

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Brief description of the case

India is still majorly an agricultural economy driven country. Agricultural education, therefore, has a huge mandate in a) developing human resource, b) research and c) extension of the research to farmers. However, under the influence of Green Revolution, the emphasis of this mammoth agricultural education and research system has been on high external input and market driven agriculture. The link between these three major tasks is also weak, particularly because extension is still not as well recognized as the other two academic functions of the Agricultural University system. In the post economic liberalization era the extension system has weakened further. Moreover, it has, to a large extent, overlooked the agricultural anthropology, agricultural ethics and politics and its link with the food system. This has been reflected in the fact that India has managed to address phenomenal increase in agricultural production but remained 94th in the list of 119 countries in the Global Hunger Index. Though Right to Safe and Uncontaminated food is a fundamental right and the Food Safety and Standards Act, 2006 provides necessary framework to the Indian citizen, but due to lack of proper implementation and understanding of the players in the food value chain has caused marketing and promotion of unsafe food laden with pesticides, synthetic food preservatives and freshness inducing chemicals and ripening agent. The challenge of maintaining an ecological balance in the food production system had also been overlooked by the mainstream discourse which has come as a baggage of high input intensive green revolution technologies.

Keeping these challenges in mind, develop and conduct pilot courses on food and farming system to address the learning gap and inculcate the skills for achieving the goals of sustainability in food and farming system. Main target group for the pilot courses are 1) Farmer Trainers and extension workers 2) Entrepreneurs working with food value chain.

How will the case contribute to achievement of the NEXTFOOD objectives by action research as the main strategy?

In the course, the student will also follow the similar cyclic process in a) understanding and analysing gap in the food and farming system through field visit, study, staying in the farm b) visioning to develop future plans of a farm/business c) reflection of the scope, possibilities and hindrances d) application in the reality following the vision and f) reflecting back and fine tuning. The pilot courses, itself will go through continuous and comprehensive reflection process, so that it will not only improve the case as such, but also to gain insights that can be adapted and used elsewhere to pursue similar goals.

So, the approach taken both internally within a course and externally in the case, focuses more on creating real solutions and creating change agents to bring academia and the real world closure and to make a sustainable change in farm and food system. The achievement of the case will be, thus, in terms of

- Assessing the skills and competencies required and the pedagogic methods for acquiring those which is needed for addressing the gap between knowledge and action.
- Fine tuning the course structure by iterative pilot action process of running the course so that the uptake possibility is ensured by the higher education system in India.

How will the case study provide evidence to answer the NEXTFOOD research questions?

1. How can participatory and action-oriented learning strategies focusing on competences required to foster more sustainable agrifood systems, be designed and implemented?

The entire process of the case is based on creating knowledge through reflection on the existing and in the course to be developed in order to foster competencies for sustainable consumption and production. It will use the data generated from the a) primary research of looking at the current course content and transactional methods b) interviewing the players involved in the food value chain and the alumni b) learners report from their analysis and vision document of farming and food systems. Overall, it will reveal whether the adopted pedagogy promotes the competency to address the complexity of sustainable food and farming system. Furthermore, the NEXTFOOD research question is also being addressed through the iterative cyclic process (both in the case and within the method of the course) of finding the gap, developing the course, conducting the course, reflecting and fine tuning accordingly and adopting/promoting the course for the mainstream. This will be cyclically repeated throughout the duration of the project.

2. What are supporting and hindering forces for such alternatives to establish and develop successfully?

The report, curriculum and course material available from the programme of INCP in Education by Welthungerhilfe/UoC will be major supporting factors for establishment of the methodology. Which will again be supported by evidences produced through action research during the project on reflecting mainstream and alternative education system.

When do you plan to run the first cycle (starting and ending dates) of the educational activities (courses, seminars etc.)?

The course to be piloted under the case, after reflecting on the existing curriculum and transaction methodology, are

- **2 batches of 3 month's course on agroecology for Farmer Trainers and extension workers.**
Batch 1: April-July 2019
Batch 2: April – July 2020
 in Kolkata.
- **1 batch of 3 month's course on sustainable food system and business development for entrepreneurs in the food value chain business during Oct 2019-December 2020.**

What is the planned (expected) number of learners (students, farmers, etc.)?

Farmer trainers and extension workers: 30~40
 Food entrepreneurs: 30~40

What is the level of the course(s)? (BSc, MSc, other)

Certificate courses.

Who will be the teachers/learning facilitators?

Practitioners, farmers, university professors.

A description of the 'learning arenas':**Where will the activities take place, what will be the processes to enable co-learning between teachers, learners (students, farmers, etc.) and research persons in society (farmers and others)?**

The inherent transdisciplinarity of sustainability poses new challenges to educators on developing learning activities that will prepare future professionals with competencies like problem solving, creative skills, ability to think etc. Apart from the technical and generic skills, our graduates need leadership and entrepreneurial skills to build leading teams, and put innovations into practice and respond to competitive environments.

But knowledge about sustainability and development are essential but not sufficient for this large task, and new knowledge alone does not necessarily lead to responsible action. Education for sustainable development needs to address the large gap between knowledge and action by fostering competencies to overcome this disparity. Thus, the challenge is to design and implement an effective learning strategy that enhances both the students' understanding of complex situations and their individual and collective abilities and motivations to take responsible action.

To do this, we will pursue the following actions

1. Understanding the need of the entrepreneurs and practioners in the agriculture and food system, which might also be fed from WP1.
2. Develop 3 month's course for farmer trainers and food entrepreneurs with action learning pedagogy from 1 and previous experiences.
3. Conduct the courses
4. Analysing and reflecting on the course by following the research protocol set up by WP2.
5. Publishing the study in a peer reviewed journal

The course planning itself has to create scope of colearning, as agroecology learning still brings out the connotation and expectation of an organic agriculture or sustainable agriculture course. The course will deal with open ended real farm cases where the students will get learning opportunities through problem solving challenges rather than pre-fixed prescriptions. It will basically provide framework for how to study, design and manage agroecosystems that are both productive and natural resource conserving, and that are also culturally sensitive, socially just and economically viable. Such learning experience will not only will be new for the students but also for the faculties. So regular joint reflection after each session, and in each phase will be the major driving force for the next session/phase. Eventually, practitioners, farmers and university faculties together will be the session facilitators, and will also meet regularly for reflection on the process.