Summary Report

Organic Seed Production Workshop

18th – 19th April 2016

College of Natural Resources, Royal University of Bhutan, Lobesa, Bhutan

From the left to right: Hans and Wallapa van Willenswaard, TOA and Suan Nguen Mee Ma social enterprise; Dr. Sonam Tashi, Asst. Prof. & Dean, Academic Affairs and Dr. Phub Dorji, Director-General, College of Natural Resources, RUB; Lhab Gyem, Renewable Natural Resources Research and Development Center, Wangdue; Tshering Yangchen, National Organic Programme; Dillip Kumar Subba, Bhutan Alpine Seed Company, Paro; Siya Uthai, TOA; Daycha Siripatra, Khao Kwan Foundation; Dr. Yang Saing Koma, CEDAC

Photographer: Yangrey Lhamo, Center for Bhutan Studies and GNH research

Table of Contents

A) Background

After visiting Khao Kwan Foundation, Suphanburi, Thailand on 17th December 2015, TOA organic seed production workshop was held to design and develop programme in collaboration with TOA partners from Bhutan and Mekong sub-region countries

The first workshop started by joining of seed experts from Bhutan, Cambodia and Thailand to share experiences and opinions on seed production from their areas. After 2-day workshop, the initiatives to set the project of seed network has been conducted.

B) Key message from CNR-Director General Dr. Phub Dorji

Photo: Organic farming in Bhutan

- Bhutan focuses on happiness of people based on sustainability
- Agriculture is the key for country development and it has to take into account to environment and climate change issues in parallel with yields and productivity
- Pollution occurred by chemical usage, while organic agriculture concern to ecological and biodiversity protection
- Organic agriculture is an alternative individual agriculture and it is challenging in Bhutan
- Technological development for farming is needed
- Modern integrated farming can apply as the way of agro-ecology
- Lots of research evidence is required for seed issues
- CNR provides Bachelor and Master courses of organic agriculture

C) Participant perspectives on organic agriculture and seeds

Thailand	Cambodia	Bhutan
❖ Vegetable seed situation is in concerning ❖ CSA mechanism can help consumers to see and trust what farmer introduced their products ❖ Local seed conservation is important for Thai farmer livelihoods ❖ Focusing on GDP as a core development	❖ Experience from pesticide and chemical inputs learning in agricultural process can harm food system and people health ❖ Working with small-scale farmers to convince them in farming conversion to organic agriculture ❖ Pesticide can control	❖ Seed production as much as possible is needed for farmer demand ❖ The problem of organic agriculture is weed controlling ❖ The private seed company, Druk Alpine Seed works in the middle between organic and non-organic seeds ❖ Nationlal Organic

Thailand	Cambodia	Bhutan
is the cause of chemical usage in agriculture and bring agricultural products in low price and unhealthy ❖ Seeds should not be dominated by industrial paradigm instead of wellbeing of our living ❖ Business + Academic + NGOs working in seed production and link to consumers ❖ Seed companies and government control direction of seed production ❖ Big corporate owns seeds by legal system ❖ Chemical farming causes of disease and cancer among producers and consumers ❖ The governmental research institute distributes seeds that compatible with chemical farming ❖ Seed production is the core part in organic agriculture ❖ Agricultural system must be applied in holistic approach ❖ Organic agriculture needs its own technical development for distinguished context	weeds, just in a short time but it is dangerous in a long term ❖ When seed company control seed production, farmers must depend on the company for a lifetime	Programme serves as government development center and demonstrates organic planting project such as Buckwheat and Asparagus planting in Western Bhutan and Bumthang ❖ Organic agriculture and medicinal plant courses related to principle of sustainability ❖ Organic working and farming take time at the beginning but getting safe and productive food outcome ❖ The case of chemical usage in India causes lots of diseases and suicide among Indian farmers ❖ Conducting research should be start at a farm level

D) Seed production impacts

Dimension	Effect
Nature	1) Good soil contains micro-organism which is origin of organic farming to make healthy plants that good for animals and humans 2) Seeds can adapt themselves to fit soil, climate and environment 3) Good soil and organic seeds help in biodiversity and ecological

Dimension	Effect
	conservation 4) Cambodia faces the problem on vegetable organic seed production, i.e. cabbage and carrot because of climate
Livelihoods	1) Small-scale farmers have to learn in seed production themselves because seed must be in the hand of farmer, not government or corporate 2) Local seeds have been modified to hybrid seeds that fit to chemical farming are hybrid seeds but can use only one time, after that they cannot produce seeds themselves in the next season 3) Chemical agricultural approach separates everything for selling and taking money from farmers 4) Seed company can control the seed price, pesticide and inputs that farmers has to follow company demands for a lifetime
Government	1) GMO seed company as Monsanto controls US government 2) Green revolution in Thailand brought chemical usage to Thai farmer 3) In USA, laws and regulations support GMOs seeds, hence awareness and monitoring the situation in other countries are needed
Marketing	1) Organic seeds will be a better choice in agriculture business because of global trend 2) It takes time during conversion period, approximately 3 years in soil and seed improvement but more yields and higher price are the results

E) Challenges and Opportunities

1. by sector

Sector	Issue	Challenges
Farm level	Knowledge and Technical support for farmers are needed	• Government Development Center mission is to produce more seeds because farmers do not collect seeds for the next season • Technical learning of rice growing are important for farmers • Farmers expects to get higher yields and more technical development • Burning rice is another major problem result that seeds cannot be collected • Soil improvement functioned to

Sector	Issue	Challenges
		control weeds and using rice straw as fertilizers
	Time-use in conversion to organic farming	• Seed selection in each season starts by selecting the best one and collect for breeding next season • It is necessary in planning for farmers in all over area of Bhutan to keep seeds themselves and bring to company for selecting and breeding which a seed company provides training and support
	Climate and Environment	• The facing problem is to get rid of weeds and sometimes insects • Chili and tomato seeds are easy to produce in organic process but cabbage is more difficult • There are bad weeds and good weeds in nature
Government Policy	No practical policy in organic agriculture	• Governmental unit provides seed breeding to the selected farmers but it released in a short term and farmers are still in control of government • In Thailand, local rice as similar as glutinous rice has been collected for the next season farming but the rice for export mostly are modified seeds from government's production • Seeds from government fit to chemical farming, not for organic farming • Modified rice seed by government (wild rice + chemical rice) can become weeds and hard to get rid off but water could terminate weeds and keep seed growing because there is oxygen in water that can help seed growing
	Policy and regulations support corporate and commercial purposes	• National Seed Centre (NSC) in Paro, Bhutan runs by government to provide seeds but not organic • 100% organic agriculture policy serves for export and macroeconomics • Trade legislations facilitates big companies to control the seed market
Market	Seed production is controlled by a few big seed companies	• Private seed companies need to produce organic seeds at the same price of chemical seeds

Sector	Issue	Challenges
		• Price and cost comparison between organic and non-organic products are needed
	Modified and hybrid seeds are not compatible in organic agriculture	• Intensive farming and chemical farming bring lots of suffering to farmers because they can sell products but getting less profits • Organic seed production by focusing on quantity and variety of vegetable following the concept organic for food safety and people health is in challenge of small-scale farmers

2. by country

Country	Challenges
Thailand	- Policy and vision of government on organic issue - 99% of chemical inputs are import products - Thailand promote organic agriculture and food but not practicable - Vegetable seeds are controlled by private companies - Seeds from private companies also imported from Taiwan and China which are hybrid seeds - Contract farming system that manipulates by CP, a food corporate imports seeds from China and sells to farmer
Cambodia	- Government is not accept organic agriculture in policy actions - Mostly, NGOs is the key stakeholder to work on organic movement - Organic products are the premium product for high-end consumers - Local people trust local farmers and CEDAC tries to work intensively for increasing organic products in the market - Seeds also imported from Thailand and China - Organic farming is still complicated among general farmers, thus only 1% of farmer in organic farming - Merging organic food with tourism is a part of advocacy
Bhutan	- The market is so small - Lack of organic seed varieties because local seeds are limited - The government play a key role in farming intervention - Private sector found the difficulty to run the company for providing best seed quality - In the case that NSC (National Seed Centre) cannot provide some seeds, farmers find out seeds from private sector instead - 100% organic country policy purposes for export products, while farmers get cheaper products from India

3. Opportunities

- Local wisdom supports organic farming and seed production in applying local knowledge and techniques from the past to adapt in farming conversion
- Local innovation can be emerged from smart farmers who adapted local knowledge and modern technology to apply in organic farming and create their network to work with government, academic institution and farmer groups
- Private enterprise is a significant sector to educate and motivate consumer behavior to work as the consumer movement
- NGOs or civil society have to work with government for advocacy from small scale units to national level

F) Work plan

1. Sharing and networking in a form of seed banks that controlled by farmers

2. Discussion from multi-stakeholders to get involves and support small-scale farmers on seed production (research and training)

3. Land is required as the area for technical demonstration in planting and saving organic seeds

4. Working models of organic seed production are essentials for network collaboration which developed from the workshop to practical project setting

4.1 Consideration

4.2 Lesson learnt

Production process by government	**VS**	**Production process by private company**
- Seed experiment in research center - If it fails, the project ended - Not continue, not succeed		- Import seeds - Seed testing by USA lab - If it's not fit, adapt it - Able to use after seeds are adapted

4.3. Seed production model in Bhutan

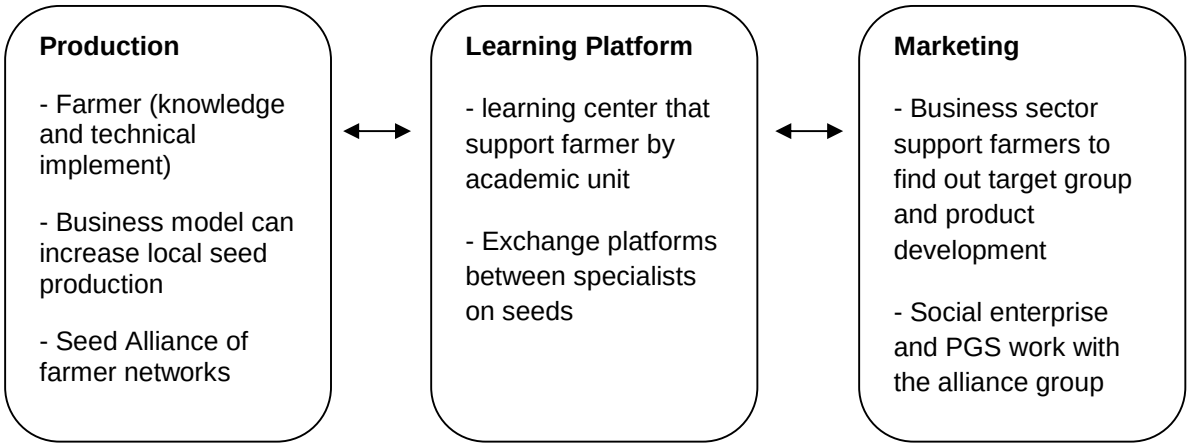

Photo: Organic rice seed selection

G) Project initiatives

Bhutan natural organic center (the model is similar to Mae Tha model, Chiang Mai) will be set by Dillip Kumar Subba who intended to start his own independent project for organic seed production. This mission needs investment which could be provided partially through the planned social enterprise. However, the company will spend about 3 years in conversion period to get certified from National Organic Programme.

Therefore, the center will collaborate with TOA partners during 3 years in the project of ***TOA Local Seed Network*** with focuses on 4 angles;

1) Investment

- Organic seed social enterprise needs to have marketing (business) plan
- Testing variety and listing of seeds, especially, vegetable seeds

2) Learning exchange and knowledge center

- Target groups are farmers and young people under the concept of seed production
- Rice seed training course at Khao Kwan Foundation, Supanburi is available

3) Networking with other countries; China, India, Vietnam, Laos and Myanmar

4) Legal aspects - regulations and laws on seed import-export and seed protection rights

5) Core Group:

Bhutan – CNR and Dillip
Thailand – Suan Nguen Mee Ma and Khao Kwan Foundation
Cambodia – CEDAC
And TOA executive committee

H) Draft objectives of the project proposal

Participants in the workshop helped to formulate bases on intensive dialogue, exchange of views and experiences - a new three-year organic seed project called ***TOA Local Seed Network***. The Project would help to strengthen local seed sovereignty and develop a social enterprise towards achieving the following objectives:

Objective 1	Objective 2	Objective 3
- support local seed banks and production - provide fair access to appropriate organic seeds which are not locally available/ feasible to produce locally	- develop a knowledge platform for exchange of experience, expertise, innovation, knowledge multiplication and best practices on organic seed production among existing organizations and networks as well as marketing and investment	- contribute to strengthening the general benefits of organic agriculture, agro-ecology and sustainable agriculture.

I) Participants

Name/ Organization	Country
1. Mr.Dilip Kumar Subba, Bhutan Alpine Seed	Bhutan
2. Ms. Lhab Gyem , RNR Research Development Center	Bhutan
3. Ms. Tshering Yangchen, Nationa Organic Programme	Bhutan
4. Dr. Sonam Tashi, CNR, Royal University of Bhutan	Bhutan
5. Ms. Yangrey Lhamo, CBS and GNH research	Bhutan
6. Dr. Yang Saing Koma, CEDAC, Cambodia	Cambodia
7. Mr. Hans van Willenswaard, TOA, School for Wellbeing	Thailand
8. Mrs. Wallapa van Willenswaard, TOA, Suan Nguen Mee Ma Social Enterprise, Thailand	Thailand
9. Mr. Daycha Siripatra, Khao Kwan Foundation	Thailand
10. Dr. Siya Uthai, TOA-School for Wellbeing, Thailand	Thailand