

## Seeking opportunities for actors in the value chain to cooperate and improve livelihoods through organic agriculture in North Sumatra



### Why did we initiate the project?

The quick and dependable impacts of pesticides and fertilizers on controlling pests and boosting yields made the chemical products very popular amongst farmers in North Sumatra, Indonesia. However, over the years as the use of chemicals has increased, productivity has not risen at the same rate. Both Taman Semalem Resort (TSR) and its neighbor farms faced increasing yield losses, which directly affected their incomes, while pests became more resistant, and soil quality deteriorated.

### What did we do to improve the situation?

- ✓ Established a multi-stakeholder partnership which included the Taman Semalem Resort (TSR), the surrounding farmers and GIZ with support from the Indonesian Government and knowledge institutes to make agricultural production sustainable.
- ✓ Trained the TSR team in organic agricultural cultivation for their own practice and train farmers in the same aspect to enhance their knowledge and skills.
- ✓ Assisted TSR in farmer trainings by providing:
  - Expertise;
  - Training materials.
- ✓ During the trainings, TSR offered the farmers
  - Plots of land to practice their cultivation practices;
  - Necessary agricultural inputs:
- ✓ Assisted TSR and farmers to get certified as organic farms.
- ✓ Assisted TSR and farmers to establish contract farming agreements in which:
  - TSR provides inputs, handles post-harvest activities and buys organic products;
  - Farmers provide labor and land to produce the products.

**Location** North Sumatra, Indonesia

**Partner** Taman Semalem Resort (TSR), Ministry of Agriculture Indonesia, Islamic University of North-Sumatra (IUISU)

**Implemented by** ASEAN Sustainable Agrifood Systems Indonesia

### WHAT ARE THE RESULTS?

- ✓ The average income of farmers increased by 37 %.
- ✓ There are 50 TSR contract farmers. Some plan to expand their farms due to their success.
- ✓ The "Indonesia Organic" certificate has been awarded to TSR contract farms for the 2nd cycle of certification.
- ✓ The number of cultivated plant species increased by 63 % improving biodiversity.
- ✓ Via TSR, farmers were linked to 22 wholesalers and 34 retailers.

### WHICH FACTORS MADE THE PROJECT A SUCCESS?

- › A trustful collaboration between multiple stakeholders, in this case, the farmers, TSR and GIZ, supported by the Indonesian Government and knowledge institutes.
- › Each stakeholder in the value chain benefits in terms of stable and increased incomes, safer products, more variety of products and higher yields as well as better health and healthy food.

### What could be done to improve the project?

- ✓ Finding various links to the private sector to secure and increase the market channels for customers and consumers.
- ✓ Seeking commitment of the private sector to invest in smallholder farms to secure sources of raw material inputs.

### What is the long-term outlook?

Food security, safety and livelihoods of actors in the value chain from input supplier, smallholder farmers, processors, and consumers will be improved through the strength and collaboration of the different actors along the chain.



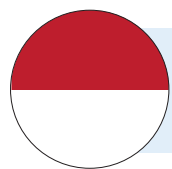
**Ms. Nurida Girsang, Contract organic farmer who have been with TSR since 2014:** "I was very happy with the contract farming scheme of organic farming production and market linkage that were developed under the TSR. In this way, the production and the market are secured. Through the support and service of TSR, farmers could make profit from their farming, our income is sustained, and we can contribute to the recovery of the soil conditions. With the technical assistance and supervisory support provided by TSR, my family has managed to increase our income from USD 47 to 173 per month on the average throughout the year, and we can consume domestically produced healthy vegetables without chemical residues. My children always requested me to cook the vegetables from our farm, and we can save money because I do not have to go to the market and buy vegetables. My children can have safe and healthy vegetables everyday and better nutrition from eating these home-grown vegetables."



**Mr. Eddy Tanoto Sukardi, Managing Director of Taman Semalem Resort, Indonesia:** "We decided to convert to organic farming with the support of the GIZ team in consideration of its long-term positive effects on production and soil fertility. GIZ encouraged us to work with the farmers, and, we continue to implement the initiative today. We still go with the farmers—we still supply them with seeds, fertilizer, organic fertilizer, liquid fertilizer, pesticides until we buy their products at higher prices than the market rate. This is how we convince the farmers to join us. From five types of crops we have increased our yield up to 55 crops. And thanks to the technical support of GIZ, all our commodities are certified organic."



**Mr. Tommy Nugraha, Head, Division of Horticulture Marketing, Directorate General of Horticulture, Ministry of Agriculture Republic of Indonesia:** "We have visited the resort, and met the farmers who partnered with the resort. We appreciated the business model in which different actors along the value chain collaborate to achieve sustainable production whilst also ensuring that all benefits are obtained. We will keep supporting organic production throughout Indonesia."



## Fruit fly management in Indonesia



### Why did we initiate the project?

The Karo highlands are one of Indonesia's main orange producing areas. Nonetheless, it still suffers from extremely low yields due to fruit fly infestations which ruin harvests. As a result of the fruit fly infestations:

- An estimated 63 million EUR is lost each year to 20,000 farmers in the highlands,
- And in some years, no production is even possible due to presence of fruit flies.

Not only farmers earn much less than they potentially could, but the national government also loses money on expensive orange imports.

### What did we do to improve the situation?

- ✓ Multi-stakeholder workshops were organized to:
  - Quantify the actual damage that the fruit flies were causing.
  - Identify constraints in managing this pest on the part of farmers.
- ✓ Subsequently, farmer group discussions were held to decide with farmers on the type and kind of support they would need to manage the fruit flies. Government officials also participated in these discussions.
- ✓ Based on these workshops and discussions, technical support was provided in the form of:
  - Trainings of extension officers and farmers on the use of eco-friendly technologies, like fruit fly traps, to improve their tools in fruit fly management.
  - Actual installation of fruit fly traps in the farmers orchards.
  - Demonstrating the effectiveness and profitability of fruit fly management techniques to show its sustainability and to make it attractive for farmers to implement.
  - Supporting the development of a supply chain for ME blocks so that they can be supplied to farmers. Private sector entities were especially involved here.

**Location** Karo highlands, Indonesia

**Partner** Ministry of Agriculture, Indonesia, District-DOA (Department of Agriculture)

### WHAT ARE THE RESULTS?

- ✓ An average reduction of 50% on damages was attained.
- ✓ Yields on 10,156 ha of land owned by 20,000 farmers increased 5 fold. From only 3 tons/ha to approximately 15 tons/ha.
- ✓ This has resulted in **additional income of 45 Million EUR** for the 20,000 farmers in this area.

### WHICH FACTORS MADE THE PROJECT A SUCCESS?

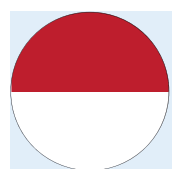
- › The elaborate workshops and discussions that were done to identify what would be the best method to solve the fruit fly problems. By including both farmers and government officials, a broadly endorsed solution could be implemented.
- › The demonstration plots were an eye-opener for farmers and governmental officials that encouraged them to adopt the fruit fly management.

### What could be done to improve the project?

- ✓ Better participation model for the different agencies involved to improve their cooperation and effective implementation of the project.
- ✓ A closer cooperation with farmers to further improve and refine the technological solutions that were implemented to deal with the fruit fly infestations.

### What is the long-term outlook?

- ✓ The large increment in yield that caused significant income increases for farmers brings the Indonesian Government a step closer to its goal of food self-sufficiency.



## Emergency aid assistance project



### Why did we initiate the project?

In 2015, Sinabung Volcano erupted in Northern Sumatra. As a result, hundreds of farmers were displaced and much of their farm lands were destroyed.

- In the short term, the displacement resulted in numerous homeless families and not all basic needs were being met.
- In the long term, their livelihoods were endangered since their farming lands had been destroyed, making it impossible to secure their income from farming.

### What did we do to improve the situation?

- ✓ In the short term, relief aid was given through the distribution of basic needs like food and water.
- ✓ To secure their income and ensure long-term livelihood security, the farmer-evacuees were given a choice:
  - To return to their lands and receive trainings and agricultural inputs to continue farming, or
  - To be relocated to different areas and learn new skills to earn their livelihoods.
- ✓ For those who returned to farming:
  - Agricultural inputs, like fertilizers and pesticides, were distributed to the farmer-evacuees. A study was conducted to identify what inputs were necessary for each individual farmer-evacuee.
  - Trainings were provided to farmer-evacuees focusing on:
    - Improvement of soil fertility after volcanic damage.
    - Sustainable farming practices which support the recovery of the soil like Integrated Pest Management (IPM).
    - Reduction of production costs by learning how to produce and use compost for healthy soil.
- ✓ The farmer-evacuees that were relocated received the following skills training:
  - Handicraft making
  - Duck farming or fish farming (instead of crops)
  - Cassava or potato chips production

**Location** North Sumatra, Indonesia

**Partner** Government District of Karo, Ministry of Agriculture Indonesia, University of North Sumatra, Maricena, Local NGO

**Implemented by** ASEAN Sustainable Agrifood Systems Indonesia

### WHAT ARE THE RESULTS?

- ✓ 86.6 ha have been recovered from the volcano's damage.
- ✓ 209 farmers were supported with organic fertilizers, 3 times more than initially intended.
- ✓ 596 farmer households were trained.

### WHICH FACTORS MADE THE PROJECT A SUCCESS?

- > The combination of short and long term aid. This secured short term support in terms of basic needs that provided farmer-evacuees with necessary skills to adopt alternative livelihood.
- > The choice that the farmer-evacuees had between farming and other skills like handicraft making. This provided them with an opportunity to rebuild their livelihoods, and created ownership of their own future since they could choose which opportunity to pursue.

### What could be done to improve the project?

- ✓ A clearer identification of the type of stakeholders falling victims to the volcano eruption. This will allow a project to better support the victims of such a disaster in the future.

### What is the long-term outlook?

The refugees were enabled to rebuild their livelihoods through the new skills and support that they received from the project.



**Mr. Tarkelin Brahmana, The Major of Karo District:** "Implementation of the SARP program by providing support to our communities that were affected by the Sinabung Volcano eruption was very helpful and valuable. At all levels of project implementation, goals were reached and often exceeded. I am thankful to GIZ and BMZ for their visit to the field in person during the implementation of the program, and for their cooperation and support".



**Mr. Juandra Ginting, Director of Maricena, Local NGO who partnered with GIZ for SARP field intervention:** "The SARP Project provided a series of field interventions that provided farmer-evacuees with shelter and support to recover from the disaster. Beneficiaries were very satisfied with the intervention and support."



**Mr. Surya, Farmer at Perbaji Village, District of Karo:** "I have 1 Ha of land and was given 28 sacks of organic fertilizer from SARP. Fertilizers helped me to restore soil fertility and establish an income. The support and trainings were very useful and have increased our passion as farmers getting back to farming"