

RCE Contributions to a More Sustainable World:

*Celebrating Five Years of
Innovative Projects on
Education for Sustainable
Development (2015–2019)*

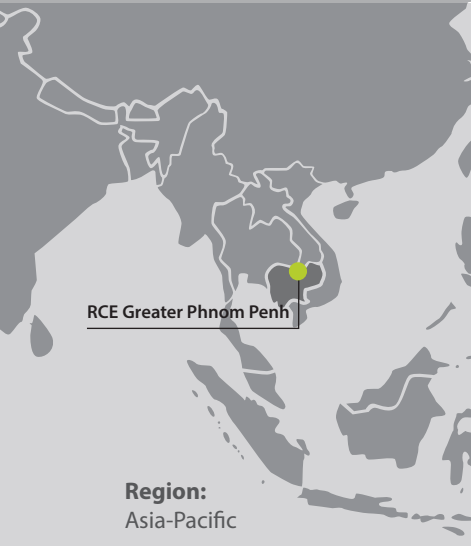
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Institute for the Advanced Study
of Sustainability





RCE Greater Phnom Penh

Region:
Asia-Pacific

 **Country:**
Cambodia


2 **SDG(s):**
Zero Hunger
4 Quality Education
12 Responsible Consumption
and Production

 **Theme(s):**
Agriculture, Plants and Animals

 **Target audience(s):**
Community, District and Provincial

 **Ecosystem(s):**
Agricultural

 **GAP Priority Action Area(s):** 5

 **Language of project:**
English, Khmer

 **Contributing organisation(s):**

- Institute of Environmental Rehabilitation and Conservation (ERECON), Southeast Asia Office
- Provincial Department of Agriculture, Forestry, and Fisheries (PDAFF) – Kampong Cham
- Kampong Cham National Institute of Agriculture (KNIA)
- Royal University of Agriculture - Cambodia
- Tokyo University of Agriculture - Japan

 **Year awarded RCE Award:**
2015



Farmers attend a workshop on sustainable agricultural practices.

Chapter People

Promoting ESD through Food, Agriculture, and Environment in Rural Communities in Cambodia

RCE Greater Phnom Penh



Rationale

In Cambodia, the usage of chemical fertilisers and pesticides has significantly increased to promote agricultural productivity. However, due to the inappropriate use of agro-chemicals such as overuse and application without sufficient knowledge, especially by small-scale farmers, this practice has caused various problems to both human and environmental health. Although agricultural productivity has increased temporarily, environmental issues such as soil degradation, water contamination from agro-chemicals, and water degradation through eutrophication have occurred.

Although many farmers realise the adverse impacts of agro-chemicals to human and environmental systems, they lack knowledge related to sustainable or alternative farming systems. Meanwhile, agricultural extension officials who are responsible for enhancing farmers' knowledge are simply not enough in number compared to any one assigned area. Hence, the intervention from the RCE and its partners such as NGOs and education institutes to tackle this problem is indispensable.

Objectives

This ESD project has the following three objectives:

- 1) To build the capacity of agricultural extension officers and other staff in the Provincial Department of Agriculture, Forestry, and Fisheries (PDAFF) and the District Office of Agriculture (DOA) in regards to the dissemination of skills, knowledge, and facilities for a cyclic use of natural resources in farming;
- 2) To use education for sustainable development to promote sustainable farming practices to local farmers; and
- 3) To use education for sustainable development to promote conditions for the sale of agricultural products with low chemical inputs.

Activities/Practices

Based on the project's objectives, through education for sustainable development, improved farming conditions based on sustainable agriculture were set up in the project areas. The following are

Farmers learn and try to make bio-pesticides from plants.

the practices employed by the project to meet its objectives:

- 1) Capacity building for agricultural extension officers through technical trainings in Cambodia and Thailand, and through publishing a series of guidebooks on sustainable farming with cyclic use of natural resources with the RCE members;
- 2) Building collaboration among universities, local government, and farmers through workshops and trainings facilitated by the RCE;
- 3) Establishing Centres within local government for promoting sustainable agriculture through education and training;
- 4) Promoting sustainable farming practices based on cyclic use of natural resources through agricultural extension services provided to local farmers; and
- 5) Promoting conditions for sales of agricultural products with low chemical inputs through public information campaigns.





Vegetable farm and paddy field that was applied with compost and bio-pesticide.

After more than five hundred compost boxes were set in the project area, farmers started to make compost and apply it in their farmland continuously. Moreover, after received training on making bio-pesticides from plants, farmers have applied bio-pesticides instead of chemical ones. Through the participatory training, farmers feed back their ideas to the project team to revise media and focus more on demonstration and practice rather than lecture.

Results

Through the series of activities of this five-year project, agricultural extension officers and farmers gained more knowledge of sustainable farming systems and have changed their practices from conventional ones, which rely heavily on agricultural chemicals, to sustainable farming practices that have led to responsible consumption and production, as well as healthy producers, consumers, and a healthier environment.

Before the project was started, agricultural knowledge dissemination was a one-way communication from agricultural extension

officials to farmers. Farmers were asked to attend meetings or workshops arranged by the agricultural office for the given district. Due to the limited number of extension official staff, the scope of education was not only one-way, but also very limited.

After two years of the project implementation, it was observed that the knowledge dissemination from agricultural extension officials to District Model Farmers and district farmers to general farmers in the project area is well practiced. District Model Farmers have become the centre of knowledge dissemination to farmers in nearby communities. Through this type of education, knowledge dissemination has become a two-way communication. Farmer's feedback to the project's curriculum outputs, such as posters and handouts, led to the improvement of both the curriculum and the outreach practices to make messages on sustainable agriculture easier to understand.

The capacity of agricultural extension officers has been greatly enhanced through technical training and practice in giving lectures to farmers,

especially for junior officers. Moreover, due to the multi-stakeholder approaches, more project stakeholders participated in the evaluation and monitoring process at regular intervals. This gives an opportunity for farmers to feed back their knowledge and practices learnt from the project's activities. Interestingly, some farms of District Model Farmers in the project have become a learning place for agricultural students from Kampong Cham National Institute of Agriculture (KNIA). Farmers shared their knowledge and sustainable practices to students in addition to farmers from nearby communities who regularly visited their farm to learn and exchange experiences of sustainable agriculture practices.

The project also contributes to the Agricultural Extension Policy in Cambodia in the aspect of improving human resource capacity and capability in delivering extension services in response to local needs by building capacity of agricultural extension officers through a series of trainings. The project has also contributed to the provincial and district agricultural strategic plans by promoting farmers in the province to produce low agro-chemical input or organic products to local markets. Moreover, the project also has enhanced food security at the household and community level through increased crop diversity and productivity.

Lessons Learned

As a result of the multi-stakeholder approach employed in the project, relevant agencies such as NGOs and educational institutes can play a vital role in promoting sustainable agricultural practices by partnering with local government agricultural extension services. The outcomes of the project can be taken into consideration by the Department of Agriculture, Forestry and Fisheries, at the national or sub-national level to involve more stakeholders and to implement more sustainable agriculture activities.

This is an ongoing project, but the challenges that were faced during the project implementation include the low literacy level of farmers. This has challenged the RCE to modify its conventional outreach material – such as pamphlets or handouts – into demonstrations, which can engage more farmers and make them understand the content and message of the curriculum more clearly. Encouraging farmers to monitor their resource use as well as reciprocal farm visits to learn from other farmers are some of the practices that encourage farmers to practice more sustainable agriculture practices.

Crops that farmers have been able to grow sustainably in the project areas include:

