



Establishment of RCE Greater Phnom Penh for Promoting ESD in Cambodia

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Abstract Rapid development of agricultural technologies in Greater Phnom Penh has significantly increased agricultural production. The majority of farmers apply agricultural chemicals. Agricultural chemicals released from farmlands to downstream cause various environmental problems. So, the education for sustainable development (ESD) was focused on agricultural sector. Especially, the students in the elementary schools were prioritized as they will become farmers in the future. Forming RCE is expected to increase the opportunity to build the public awareness and perception of the importance of making harmony between farming practices and natural environment. This report deals with the background of RCE Greater Phnom Penh in Cambodia and its challenges. One of the challenges in the RCE is enhancing the food, agriculture and environment education for elementary schools through the organic farming activities at elementary schools and the facilitator training of elementary school teachers under the collaboration among government, university, local NGO and local community.

Keywords ESD-education for sustainable development, RCE-regional centre of expertise, Phnom Penh

INTRODUCTION

A RCE is a network among formal, non-formal and informal education organizations, mobilized to deliver education for sustainable development (ESD) to local and regional communities. A network of RCE provides the Global Learning Space for Sustainable Development. RCEs aim to achieve the goals of the UN Decade of Education for Sustainable Development, DESD, from 2005 to 2014 by translating its global objectives into the context of the local communities in which locals operate.

A RCE is expected to involve all levels as school teachers, professors at higher education institutions, environmental NGOs, scientists, researchers, governmental officers, representatives of local enterprises, volunteers, civil associations or individuals who work in the spheres of sustainable development such as economic growth, social development and environmental protection. Also, it aims to collaborate among institutions at the regional or local level in a RCE for promoting ESD jointly. Innovative platforms should be built for sharing information and experiences and for promoting dialogue among regional or local stakeholders for sustainable development. In addition, a local or regional knowledge base should be created to support ESD actors (Mochizuki and Fadeeva, 2008; UNU-IAS).

This report deals with the background of RCE Greater Phnom Penh in Cambodia, that is the first RCE established in Cambodia, and its challenges in the education for sustainable development, ESD, focusing on the food, agriculture and environment education.

TARGET AREA

Phnom Penh is the capital of Cambodia where more than 1.3 million people are living. Phnom Penh covering an area of 290 square kilometers is located in the south-central region of Cambodia at the confluence of the Tonle Sap, Mekong and Basac Rivers. These rivers provide potential freshwater and other resources.

As shown in Fig. 1, Greater Phnom Penh covers not only Phnom Penh but also surrounding provinces, such as Kampong Cham, Kampong Chhnang, Kampong Speu, Kandal, Prey Veng and Tako. The area and population of each province are summarized in Table 1. These provinces being close to Phnom Penh have a strong relation in food demand-supply and economical aspect. Total area and population of Greater Phnom Penh is 34,641 square km and 7,250,881, respectively. Also as shown in Table 2, more than 90% of population is in rural area in surrounding provinces, although 93% of population in Phnom Penh is in urban area.



Fig. 1 Location of Phnom Penh and Greater Phnom Penh

Table 1 Phnom Penh and surrounding provinces in Greater Phnom Penh

	Name of province	Area (Square km)	Population	Remark
1	Phnom Penh	290	1,325,681	capital
2	Kampong Cham	9,799	1,680,694	
3	Kampong Chhnang	5,521	471,616	
4	Kampong Speu	7,017	716,517	
5	Kandal	3,568	1,265,085	
6	Prey Veng	4,883	947,357	
7	Takeo	3,563	843,931	
	Total	34,641	7,250,881	

The economy in Greater Phnom Penh is based on agriculture. Agriculture is one of the important sectors of the Cambodian national economy. More than 70% of the total population in Greater Phnom Penh is in the agricultural sector. Most of households in Greater Phnom Penh depend on agriculture having the relation with sub-sectors such as livestock raising, fisheries or aquaculture for their livelihood. Agriculture produces a wide variety of crops in Greater Phnom Penh. However, the major crop is paddy rice. Agricultural sector remains unpredictability, because it still depends on geographical and weather conditions.

Table 2 Population in urban and rural areas in Phnom Penh and surrounding provinces

	Name of province	Population in urban area (%)	Population in rural area (%)	Remark
1	Phnom Penh	93	7	capital
2	Kampong Cham	5	95	
3	Kampong Chhnang	8	92	
4	Kampong Speu	7	93	
5	Kandal	9	91	
6	Prey Veng	5	95	
7	Takeo	0	100	

Source: Commune Database 2004

REGIONAL CHALLENGES

Phnom Penh being the capital of Cambodia is the center of economic, industrial, commercial, cultural, tourist and historical aspects. Number of people living in Phnom Penh is rising every year. Recently, rapid increase in population causes many problems in environment, life quality, education and health, etc. Although education is the key to develop the human resources, it is not easy to improve education system, because of lacking teachers, school facilities and low income of people.

A net admission ratio for elementary school is 93.3%, however a net enrollment ratio of lower secondary school is 34.8% and of higher secondary school only 14.8% based on the education statistics of MoEYS (2007/2008). Female students from rural areas or students from the poor family are all grossly underrepresented in education statistics. Big number of students who didn't continue to secondary schools starts working in agricultural sector.

In the provinces of Kampong Cham, Kampong Chhnang, Kampong Speu, Kandal, Pray Veng and Takeo, the conditions of education are much insufficient for children comparing to that in Phnom Penh. The parents in rural area need their children to work in the farmlands. The poverty of farmers (Table 3) is a barrier for children to continue their study at elementary or secondary schools.

Table 3 Poverty rate based on population under poverty line

No.	Name of province	Poverty rate (%)
1	Phnom Penh	11.9
2	Kampong Cham	12.1
3	Kampong Chhnang	44.6
4	Kampong Speu	18.2
5	Kandal	18.4
6	Prey Veng	53.1
7	Takeo	15.2

Source: WFP 2002

Agriculture plays an important role for economic growth with reducing poverty of the people. Rapid development of agricultural technologies has significantly increased agricultural production. Currently, the majority of farmers apply agricultural chemicals, such as chemical fertilizers, herbicide or pesticide, to maintain high levels of crop yields. However, the overuse of agricultural chemicals is damaging the long-term soil fertility and productivity of farmlands. Also, agricultural chemicals released from farmlands to downstream cause the degradation of water environment. This degradation is progressively accelerated with the transport of suspended substances caused by soil erosion. It means that intensive farming practices depending on agricultural chemicals cause various problems for natural environment and human health.

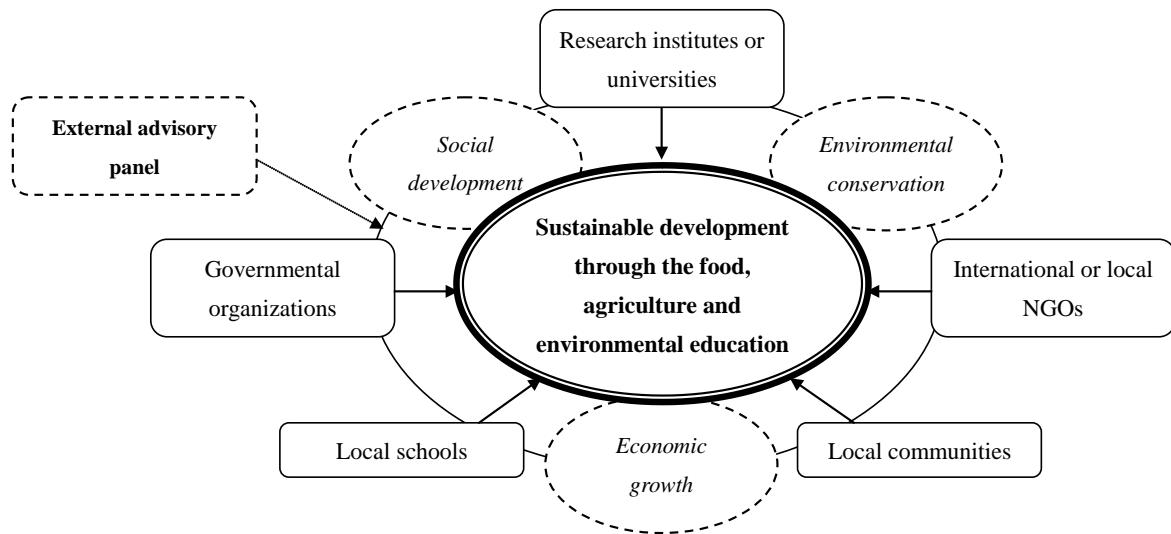


Fig. 2 RCE Greater Phnom Penh focusing on the food, agriculture and environment education

Accordingly, as regional challenges in the education for sustainable development (ESD), an attention has been paid to sustainable processes for rural development. Although there are some factors constituting sustainable rural development as economic growth, social development and environmental conservation, the food, agriculture and environment education was focused as a first step for approaching sustainable rural development in the area of Greater Phnom Penh as shown in Fig. 2. Especially, the students in the elementary schools were prioritized, as they will become farmers in the future. So, one of current challenges in RCE Greater Phnom Penh is enhancing the food, agriculture and environment education for elementary schools through the organic farming activities at elementary schools and the facilitator training of elementary school teachers under the collaboration among government, university, local NGO and local community.



Fig. 3 Food, agriculture and environment education through cultivating vegetables at school organic gardens in Phnom Penh and Kampong Cham

ON-GOING ACTIVITIES

The program on the food, agriculture and environment education has been conducted since 2006 under the collaboration among government organizations, universities, local NGOs, local communities and elementary schools in Phnom Penh and Kampong Cham. In the initial stage of

RCE Greater Phnom Penh, all organizations in RCE Greater Phnom Penh are also involved and collaborate in the program. The contents of the program are as follows.

- To make a model for enhancing the food, agriculture and environment education for elementary schools in Phnom Penh and Kampong Cham through conducting seminars and practicing organic farming at schools.
- To publish and distribute various textbooks or guidebooks written in Khmer.
- To conduct the training courses for deeper perception on the food, agriculture and environment education under the collaboration among government, university, local NGO and local community.
- To hold the workshop or conference for illuminating various ESD activities conducted not only in Cambodia but also in other countries.
- To construct the network among governments, universities, local NGOs, local communities, elementary schools and so on for managing RCE Greater Phnom Penh.



Fig. 4 Food, agriculture and environment education through composting and students' activity report at elementary schools

RCE Greater Phnom Penh comprises member organizations from various fields with a wide range of expertise which are engaged in ESD and its related activities. The stakeholder organizations include Royal University of Agriculture (RUA) and Institute of Environment Conservation and Rehabilitation, Cambodia Branch (CaM-ERECON), which work as coordinators of RCE Greater Phnom Penh in the Secretariat Committee, Ministry of Agriculture, Forestry and Fisheries, Ministry of Rural Development, Ministry of Education, Youth and Sports, several elementary schools in Phnom Penh and Kampong Cham and so on.

In addition, Tokyo University of Agriculture, Institute of Environment Conservation and Rehabilitation and Association of Environmental and Rural Development are in the external advisory panel of the RCE Greater Phnom Penh.

CONCLUSION

RCE Greater Phnom Penh is established to promote ESD through the food, agriculture and environment education for sustainable development in the area of Greater Phnom Penh. This is the first RCE established in Cambodia.

In a short term for 2-3 years after the establishment of RCE Greater Phnom Penh, the food, agriculture and environment education for elementary schools is focused as a challenge of the RCE. Also, some conference or workshop is held in Phnom Penh regularly for promoting the discussion or the sharing of ideas concerning sustainable processes for rural development. This conference or workshop held in Phnom Penh is expected to increase not only the quality of educators but also the collaboration among school teachers, professors at higher education institutions, facilitators at

environmental NGOs, scientists, researchers, governmental officers, representatives of local enterprises, volunteers, media, civil associations or individuals.

In a long term after 2-3 years passed from the establishment of RCE Greater Phnom Penh, the activities on the food, agriculture and environment education for elementary schools will be advanced at other provinces in Greater Phnom Penh, in addition to the activities for local communities.

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