

## Impact Assessment of CEDAC's Rural Development Program

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Up to June 2007, CEDAC has been supporting around 65,000 farmer households in 1,827 villages from 15 provinces in Cambodia. To be able to assess the impact of CEDAC's Rural Development Program upon the livelihoods of farmers, particularly, their income from agriculture, CEDAC carried out an internal program assessment early in 2007.

This assessment included the random selection of farming households in those villages that had been collaborating in areas where CEDAC had been working for longer than three years. The total sample included 2,304 households in 171 villages, 79 communes, 25 districts in 8 provinces. The provinces included Kampong Cham, Kampong Chhnang, Kampong Speu, Kampong Thom, Kandal, Takeo, Prey Veng and Svay Rieng.

Program Director, Program Officers, Project Officers, Project staff and CEDAC trainees have participated in this evaluation exercise. Program Director, Program Officers and Project Officers mainly participated in facilitating the group discussion and project staff and CEDAC trainees participated in collecting data by using pre-designed format questionnaires. CEDAC researchers and trainers also participated in this exercise as facilitators of group discussion while administration staff also participated as observers.

Among the 2,304 sample households, researchers were able to divide the households into 4 groups, based on the situation related to their annual total income before collaborating with CEDAC. They are as follows:

- ↪ ¼ of the sample households with the lowest level of annual income : poorest group;
- ↪ ¼ of the total sample households with the annual income higher than the poorest group : poor group;
- ↪ ¼ of the total sample households with the annual income higher than the poor group : ¼ average; and
- ↪ ¼ of the total sample households with the highest annual income: better-off groups.

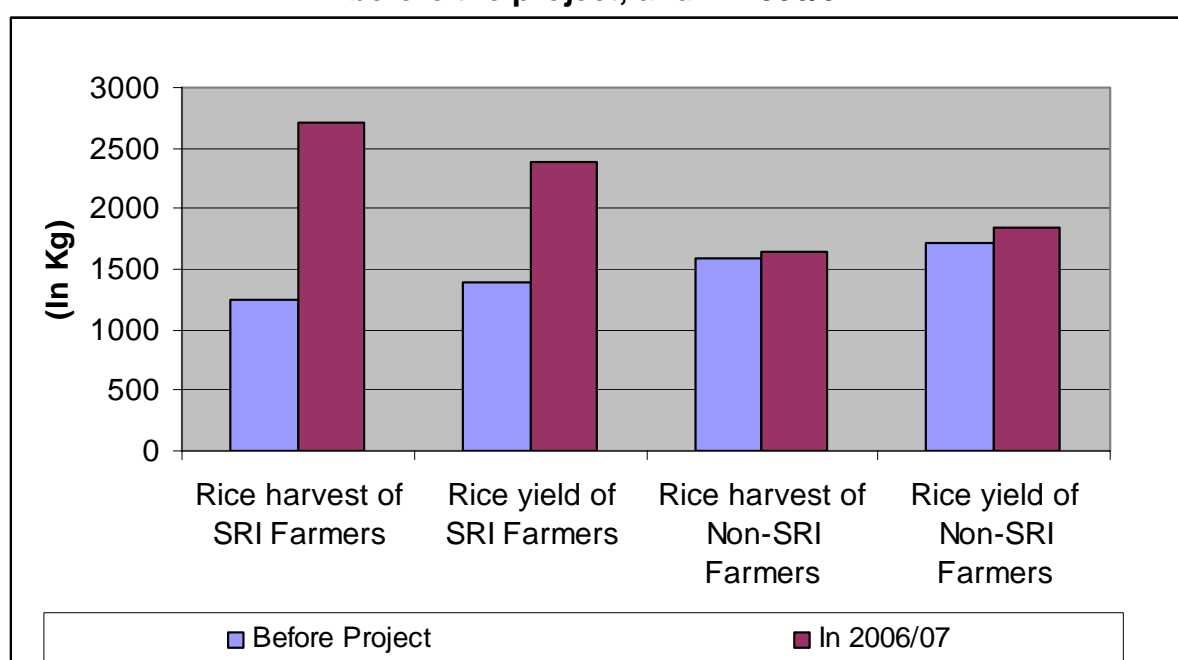
According to the assessment results, CEDAC estimates that the annual income from agriculture has averagely increased from 1,690,000 riel per household, in the year before the project operation, to 2,218,000 riel per household in 2006. This means that the income from agriculture for each household has increased 528,000 riel; or around US\$ 130), on average.

<b>Variation of annual income from agriculture</b>		
	Prior to cooperation with CEDAC (Riel)	In 2006 (Riel)
¼ poorest	608 ,400	1,211,000

¼ poor	118,700	1,907,400
¼ average	1,764,400	2262500
¼ better-off	3191900	3,490,300
Total average	1,690,000	2,218,000

One important contribution to the increase of agriculture income has been due to the increased levels of rice, vegetable and chicken production, as well as decreased expenses on chemical fertilizers. For example, among 25% of the collaborating farmer households successfully practicing System of Rice Intensification (SRI) on almost all rice fields. This has increased farmers' rice production around 110 % on average, decreased their chemical fertilizer use more than 50%, and decreased the number of seeds used from 70-80%.

**Comparison of increase of rice production situation before the project, and in 2006/07**



<b>Examples regarding the impact of techniques practiced by the intervention project among farmers collaborating with the project</b>		
	Prior to cooperation with CEDAC	In 2006/07
Rice production among farmers practicing SRI on all types of rice field (samples = 380 households)	1,245 kg/HH or 1,390 kg/ha	2,713 kg/HH or 2,380 kg/ha
Rice production among farmers who do not practice SRI (samples = 209 households)	1,59 kg/HH or 1,720 kg/ha	1,640 kg/HH or 1,840 kg/ha
Average household income from selling vegetables per year (samples = 2,304 households)	189,400 Riel/year	230,100 Riel/year
Average household income from selling chickens per year (samples = 2,304)	110,400 Riel/year	177,700 Riel/year

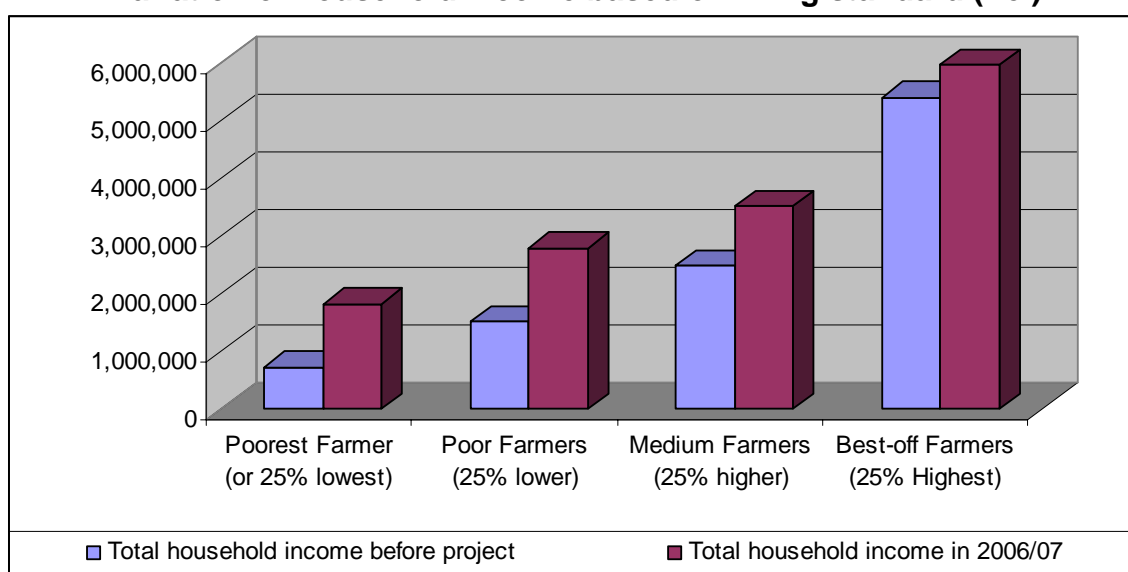
households)		
Average quantity of chemical fertilizer used per household (samples = 2,304 households)	141 kg/year	104 kg/year

It can be estimated from the assessment of this study that there are at least 8,500 households (13% of the households collaborating with the CEDAC's development program no longer use pesticides and 4,500 households (7%) no longer apply chemical fertilizers to their crop production.

By looking at the classification of living standards, we observed that the percentage of the annual income from agriculture for the poor and poorest groups is higher than the average and better-off groups; double the income if compared to the period before they are collaborated with CEDAC.

It can also be observed from the study that increased income from agriculture is strongly connected to the growth of household resources such as motorbikes, bicycles and pumps which were bought between 2004 - 2006 ( $R^2$  - motorbike = 0.84 and  $R^2$  - water pump = 0.90).

**Variation of household income based on living standard (riels)**



<b>Variation of income and resources</b>		
(sample = 2,304 households)	Before cooperating with CEDAC	In 2006/07
Average household income from agriculture	1,690,000 Riel/year	2,218,000 Riel/year
Average total household income	2,530,000 Riel/year	3,520,000 Riel/year
Number of households possessing motorbikes	16%	41%
Number of household possessing water pumps	15%	27%

Considering that only 50% of farmer households cooperating with CEDAC have had their income from agriculture increased, we can assume that in 2006/07, CEDAC's rural development program has contributed to the increase in the total household income of its beneficiaries of 17,000 million Riel or 4.22 millions US dollars, whereas, the **operation** of this development program cost 1.2 millions US dollars in 2006.

Therefore, we can estimate the ratio of total income from agriculture of those farmers collaborating with CEDAC by comparing the capital that the organization has invested in its operation ( $4,22 : 1,2 = 3.5$ ). It should be noted that increased income from agriculture does not take into account the indirect impact of CEDAC's work with other organizations, and its social and environmental benefits.

It can be concluded that CEDAC's Rural Development Program plays an important role in contributing to the reduction of rural poverty in Cambodia.