

Impact Measurement and Valuation (GRI 203-2)

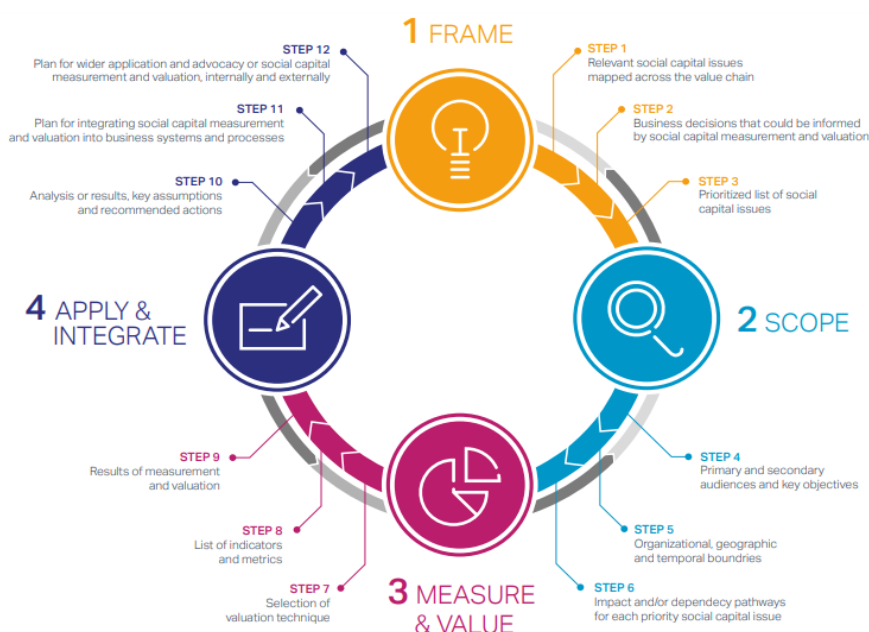
CPF has supported smallholder farmers through the **Contract Farming Scheme** since 1975. We have provided knowledge and technology from our academics and experts, marketing channels and the funding sources through our partner financial institutions.

We organize training for the participating farmers under the “Partnership towards Kitchen of the World” concept. The training entails aspects of quality, efficiency, animal welfare, labor practices, and society and environment. This reflects our social and environmental responsibility in doing the business. At the same time, it provides opportunities and business success to smallholder farmers.

The contracts of CPF’s Contract Farming Scheme were developed using the guideline from UNIDROIT to support the roles of farmers with the concept of “Partnership for Mutual Growth”.

In 2019, CPF primarily identifies and measures both externally positive and negative impacts on environment and society by estimating the profit and loss in the monetary value and quantitative value of the “**Contract Farming Scheme of Fattening Pig Business**”. For the initial case study, the **Guaranteed Income Model** is selected and applied natural and social capital protocol approaches to measure value of three environmental externalities and four social externalities.

Adapted Four Stages of the Natural and Social Capital Protocols



The Four Stages of the Social Capital Protocol

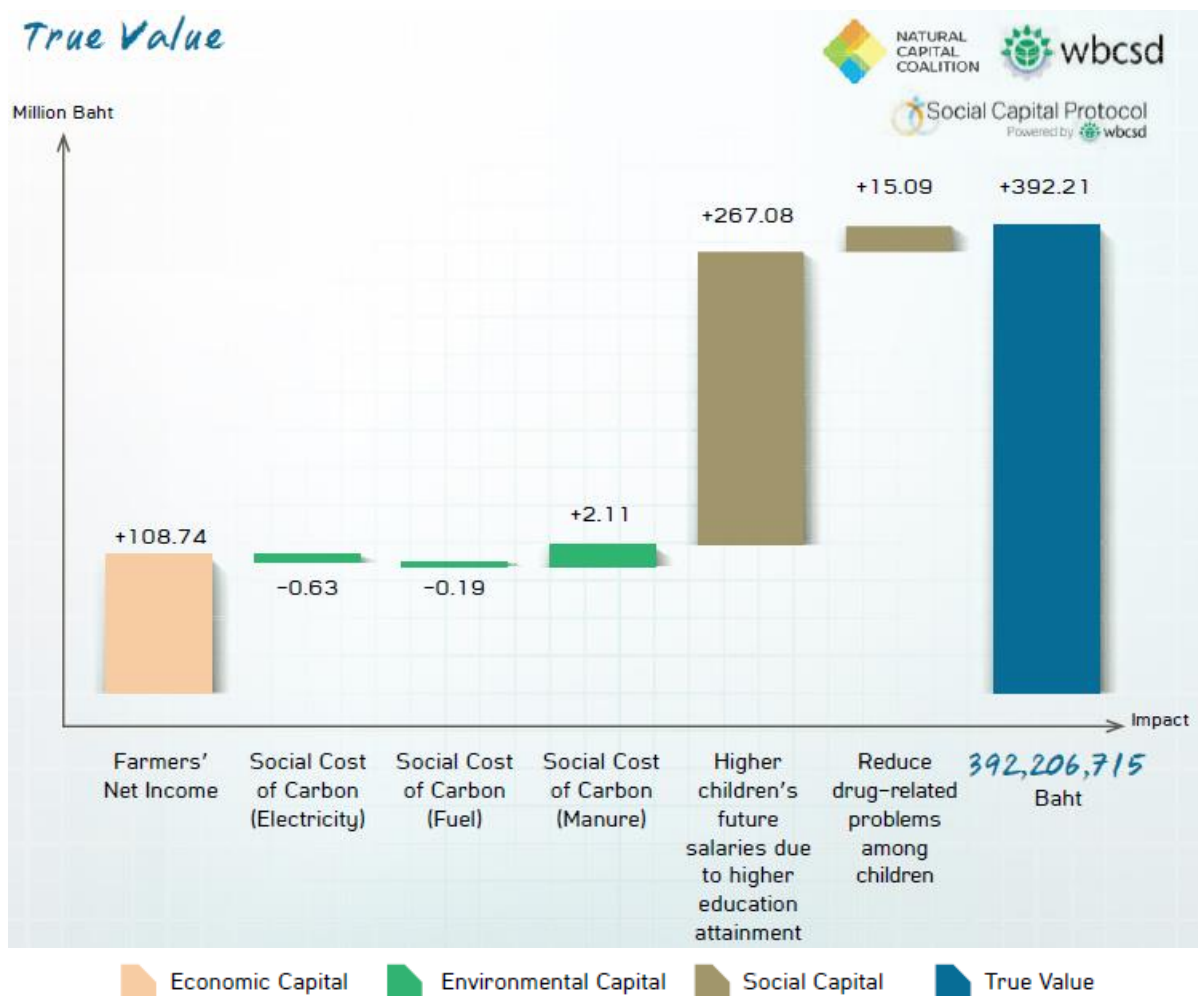


Impact Measurement and Valuation of Fattening Pig Business under Contract Farming Scheme

	Inputs	Activities	Outputs	Outcomes	Externalities	Indicators
Environmental	Electricity	Raising pigs	GHG emission	Climate Change	Various climate change impacts on the society	Social cost of carbon
	Fuels	Transportation - piglets - food - veterinarian - fattening pigs	GHG emission	Climate Change	Various climate change impacts on the society	Social cost of carbon
	Swine manure	Ferment	Biogas	Alternative Energy Consumption	GHG reduction	Social cost of carbon
Social	Money	Raising pigs	Employment	Change in net income of farmers	Reduce poverty rate of farmers	Farmers' net monthly income
					Chance for better income of farmers' children	Children's future salaries due to higher education ¹
	Time	Raising pigs	Employment	More free time	More free time with family	Hours to stay home after work
Better well-being of farmers and farmers' families					Rate of drug-related problems among children ²	

Remarks:

- Results from the questionnaire showed that 84.6% of farmers revealed that higher net income from the program gave them a chance to provide higher education to their children. Without this chance, the children could have a vocational diploma rather than a bachelor's degree.
- Results from the questionnaire showed that farmers can have approximately 2.4 hours more free time per day which can be spent with their family. Each farmer family has the average of 2 children and 92.3% of the farmers revealed that they had dinner with their children at least 5 times a week. As a result, these children are less likely to get involved with drugs. Based on the research, children who have dinner with family at least 5 times a week are less likely to use drugs. 12.4% of youth in school are involved with drugs. 13.3% of drug addiction in youth is caused by lack of love and warmth from family.



Regarding the **environmental externalities**, two negative and one positive impacts are as follows:

Negative impact 1: Various climate change impacts on society as a result of GHG emissions released into the atmosphere from electricity used for operation in farms.

Negative impact 2: Various climate change impacts on society as a result of GHG emissions released into the atmosphere from fossil fuel used for transportation as one of a process of swine farming.

Positive impact 1: GHG reduction by effectively utilizing swine manure for alternative energy consumption via biogas.

For **social externalities**, four positive impacts are as follows:

Positive impact 1: Improve quality of life of farmers' families by reducing the poverty rate of farmers.

Positive impact 2: Improve quality of life of farmers' families by giving an opportunity of better income to farmers' children.

Positive impact 3: Improve quality of life of farmers by giving farmers more free time.

Positive impact 4: Improve quality of life of farmers and farmers' families by reducing the chance of drug-related problems in their children.



The primary measurement of **true value** was more than **390 million baht**.



39.6% of farmers lived below the poverty line before joining the Contract Farming Scheme.

However, all of them are **currently living above the poverty line**.



Farmers now have **2.4 hours more free time a day** to spend with family.

Limitation:

- This initial study uses both primary and secondary data as proxies and assumptions to estimate the value of each externality and the True Value.