

វេទិកាផ្សារអង្គការមិនមែនរដ្ឋាភិបាល ស្តីពីកម្ពុជា  
*The NGO Forum on Cambodia*

ធ្វើការរួមគ្នាដើម្បីការប្រសើរឡើង  
*Working Together for Positive Change*

## Reflection on the Strategies to Support Small Landholders:

Through the Review of National Strategic Development Plan (NSDP),  
Key Informant Interviews and Case Studies



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**Reflection on the Strategies to Support Small Landholders:**

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Researched by: Suon Seng, Amaury Peeters, Chheang Sokmao and Chay Keartha  
Centre for Development Oriented Research in Agriculture and Livelihood Systems (CENTDOR)  
Layout Designed by: Mr. Phourn Yu, Information and Publication Officer

Address: #9-11 Street 476 Sangkat Toul Tom Pong 1,  
Khan Chamkar Morn, Phnom Penh City, Cambodia.

P.O Box: 2295, Phnom Penh-3

Tel: (855-23) 214 429

Fax: (855-23) 994 063

Email: [ngoforum@ngoforum.org.kh](mailto:ngoforum@ngoforum.org.kh)

Website: [www.ngoforum.org.kh](http://www.ngoforum.org.kh)

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## **List of Abbreviations and Acronyms**

|         |                                                                                     |
|---------|-------------------------------------------------------------------------------------|
| AC      | Agriculture Cooperative                                                             |
| ADHOC   | Cambodian Human Rights and Development Association                                  |
| ASSDP   | Agriculture Sector Strategic Development Plan                                       |
| CC      | Climate Change                                                                      |
| CEDAC   | Centre d'Etude et de Développement Agricole Cambodgien                              |
| CENTDOR | Center for Development Oriented Research in Agriculture and Livelihood              |
| CFAP    | Cambodian Farmers Association Federation of Agricultural Producers                  |
| CIAT    | International Center for Tropical Agriculture                                       |
| CIDSE   | Coopération Internationale pour le Développement et la Solidarité                   |
| CIRAD   | Centre de Coopération Internationale en Recherche Agronomique pour le Développement |
| CIRD    | Cambodian institute for Research and Rural Development                              |
| CSA     | Climate Smart Agriculture                                                           |
| DAC     | Department of Agricultural Cooperative                                              |
| ELC     | Economic Land Concession                                                            |
| EU      | European Union                                                                      |
| FA      | Farmer Association                                                                  |
| FAO     | Food and Agriculture Organization                                                   |
| FC      | Farmer Cooperative                                                                  |
| FNN     | Farmer and Nature Net                                                               |
| GAP     | Good Agriculture Practice                                                           |
| GDA     | General Directorate of Agriculture                                                  |
| GDP     | Gross Domestic Products                                                             |
| GIZ     | German Federal Enterprise for International Cooperation                             |
| HA      | Hectare                                                                             |
| HH      | Household                                                                           |
| ICM     | Integrated Crop Management                                                          |
| ICS     | Internal Control System                                                             |
| IVY     | International Volunteer Center of Yamagata                                          |
| KH Riel | Khmer Riel                                                                          |
| Kg      | Kilogram                                                                            |
| LICADHO | Cambodian League for the Promotion and Defense of Human Rights                      |
| MFI     | Micro Finance Institution                                                           |
| MOC     | Ministry of Commerce                                                                |
| NGO     | Non-Governmental Organization                                                       |
| NSDP    | National Strategic Development Plan                                                 |
| PDA     | Provincial Department of Agriculture                                                |
| PGI     | Protection of Geographical Identification                                           |
| RGC MEF | Royal Government of Cambodia-Ministry of Economy and Finance                        |
| RGC MoP | Royal Government of Cambodia-Ministry of Planning                                   |
| SNV     | Netherlands Development Organization                                                |
| SRI     | System of Rice Intensification                                                      |
| TOR     | Terms of Reference                                                                  |
| UNDP    | United Nation for Development Program                                               |
| USD     | US Dollar                                                                           |

Exchange rate: USD 1= 4,000 KH Riel

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On behalf of the assessment team: Suon Seng

Director of CENTDOR

## **Executive Summary**

The assignment entitled, “Reflection on the Strategies to Support Small Landholders,” was carried out by the consultant team of the Centre for Development Oriented Research in Agriculture and Livelihood Systems (CENTDOR). The assessment was conducted in January and February 2015. The National Strategic Development Plan (NSDP) 2014-2018, and policies related to agricultural development in Cambodia were reviewed. National key informants working in relation to agricultural development, and supporting small landholders were interviewed. Four commodity case studies of two NGOs (CEDAC and SNV) were conducted. The findings of this study will serve as recommendations for the government, and NGO Forum on strategies to support small landholder farmers in Cambodia.

The assessment aims to answer the following key research questions:

- To what extent do the policy priorities in agriculture mentioned in NSDP favour small-land holders or concessionaires?
- What role does the Royal Government of Cambodia (RGC) support small landholders and concessionaires in agriculture in Cambodia?
- What are the potential tensions between supporting both the expansion of large-scale agriculture projects, and supporting small landholders?
- What are the lessons learnt from case studies for supporting small farmers?
- Could the lessons learnt from case studies be replicated more broadly?

As a result, it is found that:

- The policies have prioritized the agriculture sector as mentioned in the NSDP. This sector represents one of the four pillars of the rectangular strategy of the RGC (Phase 3) and is recognized to play a major role in supporting economic growth, especially the development of the rural economy, but also in terms of equity and food security.
- The NSDP 2014-2018, however, does not explicitly prioritize large-scale or small-scale agriculture, but rather provides a set of initiatives for the improvement of the agricultural sector. These initiatives are driven by a focus on agricultural modernization aiming to move away from traditional agriculture to modern techniques, diversification by adopting crops of high added value, and mainly oriented to export markets, and commercialization which mainly consists in promoting trade and export of agricultural products.
- The NSDP 2014-2018 pushes in favour of a context where stakeholders who have capital to engage into this modern transition, can afford the new technologies, and can switch to cash crops. The same strategy also recognizes the advantages of farmers organizing themselves and the importance of access to market information and channels. Both concessionaires and the higher category of small landholders will be able to benefit from these initiatives, while most of the remaining small landholders may only benefit a little or be excluded from these changes.
- To support small landholders, a set of policies and laws were developed by the RGC and mandatory ministries. Those include rice seed and subsidiary crop policy, Cambodia

Agricultural Organic Standards policy, rice export policy, and the Agricultural Cooperative law. The Ministry of Agriculture, Forestry and Fishery (MAFF) plays an important role to lead, manage, support and ensure that policy statements and commitments on agricultural development are achieved, as well as to ensure food security and safety in Cambodia. Nevertheless, most of the key challenges, including dealing with quality standard produce, the high cost of agriculture inputs, poor quality seed, and limited financial capacity, remain unaddressed and require further attention in order to support all groups of small landholders in their diverse contexts.

- Land laws promulgated by the RGC already encourage private investment through the granting of state land for large-scale concessions. The 2005 Sub-Decree on Economic Land Concessions (ELCs) further supported the establishment of large-scale concession. Moreover, Directive 001 and the land titling of existing land occupants through the “leopard-skin” policy, were also carried out to solve conflicts between the local community, and large scale land concessionaires within the ELC boundary.
- National key informants have highlighted two key strategies to support small farmers; the formation of agriculture cooperatives, (ACs) and linking farmers’ produce to markets. Key informants emphasized production to fulfill household food security as a priority, before linking them to markets. They also acknowledged that farmers still faced a number of challenges to become well organized, to provide quality standard produce, to deal with the high cost of agriculture inputs, poor quality seed, and limited financial capacity.
- Results from commodity case studies showed that there are different approaches to support small landholders according to the commodities and philosophies of the respective target groups and implementers. At CEDAC, the development philosophy to support small landholders focuses mainly on self-reliant development, while SNV applies an inclusive business approach where involved stakeholders participate in improving and sustaining the business structure to share benefits. Innovative technologies to adapt to climate variation and change are also carried out by both NGOs.
- To link small landholders to markets, the global chains<sup>1</sup> and Filière approaches are adopted. These two approaches provide insights about how to support small landholders at different levels of business development. The Filière approach fits well with small farmers, especially at the beginning stage, when farmers are linked to markets, while the Global chain approach fits with large producers, and after farmers get organized as a group or AC.
- Self-reliant development and inclusive business approaches are also discussed. The two approaches provide benefits to small landholders according to their stage in business development. The strengths and weaknesses in implementing these two approaches are also presented. Self-reliant development helps farmers to control the business chain, but this process takes a long-term commitment to establish, while the inclusive business approach brings benefit to farmers after a short period of time, usually during the course of project implementation, but producers have no opportunity to control the business chain by themselves.

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<sup>1</sup> The Global chain approach: Exporters contract local companies for the supply of traded commodities. Local companies coordinate with local producers to produce the required commodities to meet export needs. Such a top-down organizational structure is known as the global chain approach (More detailed explanation is provided in heading 3.4.1. Global commodity chain approach vs. Filière approach).

- It is also found that appropriate technologies are available at the project level; such as organic rice production methods, vegetable production with water saving methods, and dry season vegetable growing. In addition the approaches; inclusive business and self-reliant development are appropriate to the different stages of business development throughout the agricultural sector. However, advocacy, dissemination and policy discussions should be organized in order to allow an effective scaling up.

Therefore, it is recommended that:

- Government should speed up the establishment of the legal framework and technical services for the setting up of agriculture cooperatives; such as training/learning materials (a. Implementation and management of agriculture cooperative manual and b. Training of trainer manual). The roles of small farmers in the National Strategic Development Plan should be highlighted. The Filière approach should be adopted as a priority to organize farmer producer groups in the early stage. In addition, the Government should make funds available to support agriculture cooperatives or federations of cooperatives. The funds should also be accessible by ACs so that they are able to strengthen and expand their business operations.
- NGOs and NGO Forum should organize, without delay, public events to share these research findings. The Filière approach should be adopted to link farmers to markets. However, support to farmers should target production for home consumption, before gradually linking them to local, urban and export markets. At the same time, NGOs should document and disseminate good agriculture practices as wide as possible to other farmers and to other provinces.
- Farmers should organize themselves as a group or AC, to produce different commodities for markets. However, farmers first need to fulfill household needs, then supply to local markets. Farmers also need to learn about market requirements related to the specifications of the produce. In order to access external funds, agriculture cooperatives need to learn financial management, and prepare standard business strategic and operational plans. Furthermore, the achievement of ACs at the ground level is an asset. Communication and leadership are also very important for ACs.



## **I. Introduction**

Since the fourth mandate of the Royal Government of Cambodia (RGC), the government has aimed to secure high rates of economic growth to become an upper income country, but also ensure that growth is sustainable and inclusive. The National Strategic Development Plan (NSDP) is the main document to drive this initiative. Agricultural development, including the importance of land reform, improved land management and increased agricultural productivity are elements in the overall strategy. To increase food security, promote agricultural productivity and reduce poverty by increasing farmers' income through value-added agriculture, investment in agriculture, whether large-scale or small-scale, is a goal of the NSDP. It is in this context that we must understand that this study proposed by NGO Forum on Cambodia will generate findings to contribute to this on-going debate and discussion.

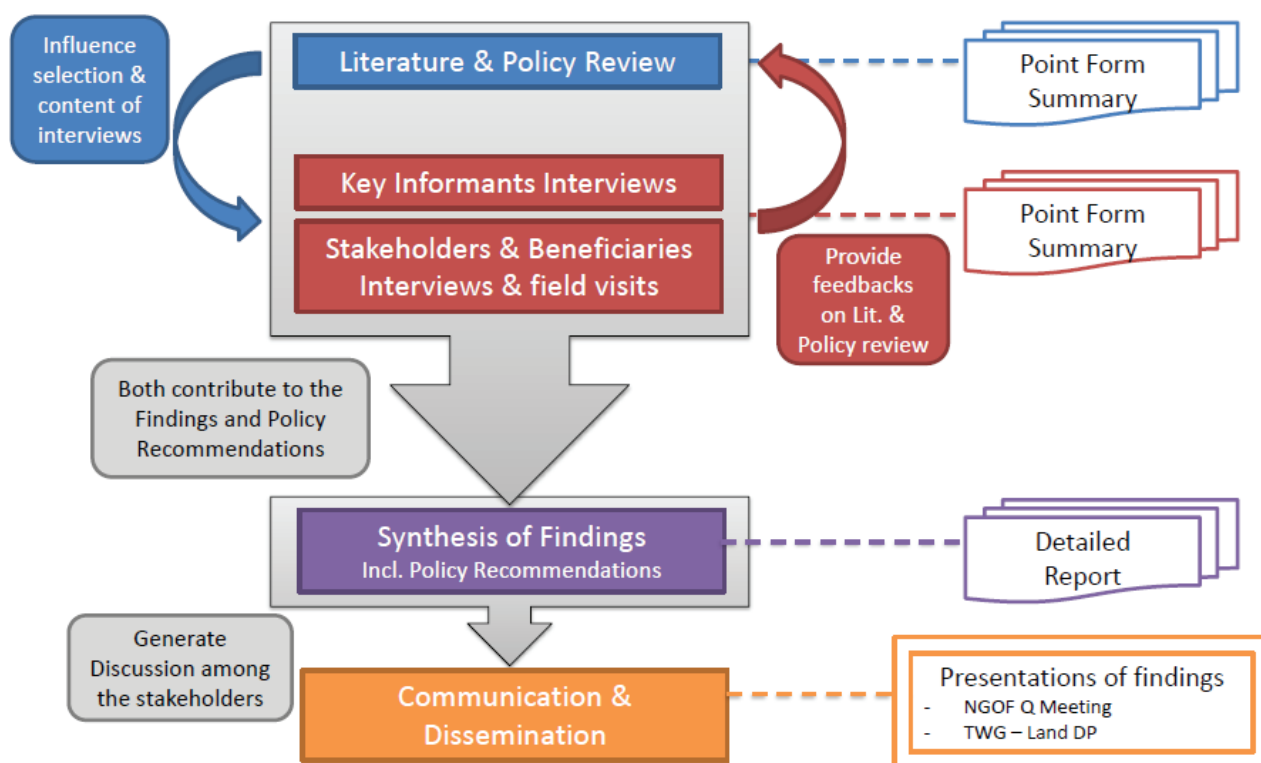
The Center for Development Oriented Research in Agriculture and Livelihood Systems (CENTDOR) is a not-for-profit development non-governmental organization. CENTDOR aims to contribute to debates about rural livelihoods and livelihood issues to concerned stakeholders to improve decision making. CENTDOR agreed with the objectives and the research questions as stated in the TOR.

**Objectives:** To conduct research on the priorities that the NSDP gives to smallholders and large scale land concessionaires with the advantages and disadvantages of these two approaches to agricultural development to be compared. This was followed by two case studies, which looked into the successful lessons supporting smallholders in terms of increasing land productivity. Key findings of the research will be used to advocate to the Royal Government of Cambodia (RGC) to extend support to smallholders and grant them priority over large scale acquisitions. The report will include recommendations for the government and NGO forum.

## **II. Approaches and Methods**

Activities related to this project started from mid-December 2014 and went to February 2015. The draft report was submitted to NGO Forum in March 2015. The study is framed within issues affecting small landholders. This includes policy directions on agriculture development, consequences of large-scale landholders, and case studies of projects supporting small landholders.

In order to start the desk review, key research questions stated in Term of Reference (TOR) were broken down into different points which were used as guideline for the review. Then, the results from the literature and policy review were used to develop a checklist of elements for key informant interviews. Next, the results from the key informant interviews were used to develop a list of points for project and household case studies. The results from national key informant interviews elaborated on the challenges and prospects of small landholder farmers following the analytical framework of this study (figure 1). Strategies and experiences of the development projects which were obtained from the case studies were also developed and explained, according to the analytical framework.



**Figure 1: Data collection framework and sequence of activities of the study**

### III. Research findings

#### 3.1. Policy priorities to support agriculture development in the new NSDP (2014-2018)

As the agricultural sector represents one of the four pillars of the rectangular strategy of the RGC (Phase 3), it comes as no surprise that the NSDP includes the promotion of the agricultural sector. This sector is recognized to play a major role in supporting economic growth, especially the development of rural economy, but also in terms of equity and food security (RGC MoP, 2014).

Agriculture, forestry and fisheries contributed 31.6% to GDP in 2013 (RGC MAFF, 2015) and, after a little lag in 2014, the sector is estimated to increase its contribution in 2015. The growth rate of the agriculture sector, which varies in accordance with the yearly climate conditions, has fluctuated around 3% - 4% during the period from 2009 to 2013 and is expected to reach 4% again in the next few years (RGC MAFF, 2015; RGC MoP, 2014). The promotion of the agricultural sector in the NSDP has a focus of modernization, diversification and commercialization. These aims were also in the rectangular strategy Phase 2 and the major achievements and challenges reported for the NSDP 2009-2013 (RGC MoP, 2014).

**Modernization** is seen as a way to improve the productivity through increasing mechanization, irrigation and the introduction of new technologies. Moreover, diversification is aimed towards high value products with a focus on cash crops and potential export commodities (e.g. rubber, cassava, pepper, corn, sugarcane, cashew nut). This move is supported by strengthening and expansion of the supporting services structures at the local level: extension services, market information, seeds and agro-processing. In the NSDP, a certain number of laws and regulations are expected to contribute to this modernization, especially those on seed production, agricultural inputs importation, contract farming, agricultural land use, crop protection, water user associations and human resource

development, which are presented as providing a supportive framework for the development of the agricultural sector. The development of human resources in the agricultural sector is planned with a focus on modern practices, diversification and on finance and markets.

The objective of **commercialization** in the NSDP mainly consists in promoting trade and export of agricultural products. Agricultural cooperatives have a recognized role in this effort, helping to develop agri-business networks. This increased commercialization relies on an enhancement of processing capacity, a strengthened logistics system, better access to markets and the facilitation and the simplification of trade. In addition, as a consequence of the focus on export, the quality of the products should reach international standards. It is worth noting that, besides better links between producers and traders and better access to affordable credit, improving partnerships between large scale agro-industries and household farming is mentioned as a contribution to this focus on commercialization. Nevertheless, no additional information is provided on how these links should be established. The implementation of a law on agricultural cooperatives, the policy on promotion of paddy production and rice export, the Cambodian natural rubber development strategy 2011-2020, are put forward as regulations supporting the commercialization objective.

**Diversification** in the NSDP is mainly oriented to high value products with a potential for export. The overall goal of these initiatives is to increase the value-added per hectare for all crops by 50% compared with 2007 by the end of the current plan in 2018 (RGC MoP, 2014). Agricultural research and development plays a central role to provide not only technological innovation, but also some reflection about the adaptation of the different techniques to the local context and the model promoted. The market-orientation of agricultural products is clear as the emphasis is put on the (national) standards and also on the quality of the products in terms of food safety and on its control. A distinction is also made between domestic, regional and international market requirements.

It should also be noted that among the specific proposals of the NSDP, Good Agricultural Practices (GAP) are promoted, as well as Integrated Crop Management System (ICM). GAP is recognized as one of the ways to increase smallholder productivity. ICM is a whole-farm approach which is site specific and aims to achieve a proper balance between the economic production of crops, and positive environmental management by a combination of crop rotations, appropriate crop varieties, and minimum use of artificial inputs. It combines modern technology with basic principles of GAP for a long term strategy. (Kumar and Shivay, 2008). In terms of strengthening the agricultural system, territorial analysis of agro-ecosystems at different levels and spatial land use planning, are among the planned actions of NSDP. These three concepts briefly mentioned in the NSDP, are considered as proposals to support smallholders and to contribute to sustainable agriculture development.

From these major orientations, it seems that an automatic link is made between value-added products, increase of income and poverty reduction. Nevertheless, the (pre)conditions of this successful sequence are not really discussed nor explained. This raises the following questions: Can all small farmers, and especially the poor, access value-added agriculture? And in general, are these small landholders able to afford and master this package of technology, and benefit?

Given the diversity of small landholders' and their complex livelihoods, it is likely that only some of the farmers will be able to successfully engage in the suggested modernization of their practices and access to global markets. Rural societies encompass different groups of smallholders with similar characteristics. Only a small number of small landholders has access to capital, organization, information and infrastructure, and can approach formal markets to develop business opportunities. Most small landholders are reluctant to invest in the agricultural part of their livelihoods, are less organized, and are likely to trade with the informal sector (Vorley et al., 2012). For this majority,

modern agricultural techniques and global market opportunities are inaccessible. Policies should therefore address the diversity of small landholders' situations.

With the policy priorities highlighted above, NSDP 2014-18 pushes in favour of a context where stakeholders who have capital to engage into this modern transition, can afford the new technologies, can switch to cash crops, have the capacity to organize themselves and have access to market information and channels. Both concessionaires and the higher category of small landholders will be able to benefit from these initiatives, where most of the remaining small landholders will only be part of it, or excluded from it. Moreover, despite a recent increase, in real terms, of profitability for some crops like cassava and vegetables, offering potential revenues for farmers, it should be noted that – for instance, cassava's exceptional growth is based on a land expansion that is not sustainable as it is carried out through deforestation and exploitation of soils (ACI, 2014).

It is therefore possible to raise some questions:

- Who exactly can engage in such modernization put forward by RGC?
- How to adapt these policy priorities to the bulk of farmers in the agricultural sector?
- How to put into practice these initiatives considering the opportunities brought by the different markets? Local, regional, international?
- How to link large-scale agro-industry and household farming? Through contract farming? Other relationships?
- What is the exact role of agricultural cooperatives as services providers to farmers? And as a link to the markets? For which type of markets?

### **3.2. Potential tensions in supporting both the large-scale agriculture and small landholders**

#### **3.2.1. Policies supporting small landholders**

As aligned with the mandate of RGC's, the Ministry of Agriculture, Forestry, and Fishery (MAFF) developed its own agricultural policies and strategies to support the RGC's policy statement and agenda including policies on rice export policy, food security and safety, and poverty reduction (RGC MAFF, 2015).

After the promulgation of the Policy Paper on "The Promotion of Paddy Production and Rice Export", rice exportations have progressively increased to international markets, from a very small quantity in 2008, to 200,000 tons in 2012. Cambodian rice, namely Phkar Romduol, is now considered as a high quality rice (RGC MoP, 2014; RGC MAFF, 2015). Rubber production also experienced a significant increase at the national level: the area under rubber more than doubled, reaching 328,770 ha in 2013, and exported production increased around 135% from 2009 to 2013, reaching over 86,000 tons (RGC MAFF, 2015), which officials saw as a consequence of the Cambodia Natural Rubber Development Strategy 2011-2020. By looking at these previous figures, policies related to rice export, and rubber seemed to help secure good results.

To promote small landholders in agricultural development and farmer communities, MAFF developed a law on Agricultural Cooperative (AC) in 2013 to support and manage agriculture communities in the country (RGC MAFF, 2013). This law consists of a very detailed description about the mandate,

the structure, and the role and the responsibilities of each AC. In addition the role and responsibilities of the government and its agencies to support farmers is also detailed. After the law was approved by the National Assembly, a Department of Agricultural Cooperative (DAC) was established under the General Directorate of Agriculture (GDA) of MAFF.

In 2014, the GDA drafted a policy on rice seed and subsidiary crops. The objectives of this policy are to ensure that farmers are able to access good quality crop seeds and different varieties. This policy is aligned with the law on seed crop management and the rights of seed breeders in 2008, and the sub degree on contract farming, as well as the rice export policy (RGC, 2011; RGC MAFF, 2008). This policy will provide an opportunity to small farmers and seed breeders to register their new variety of crops, which they have tried in the field. At the same time, GDA also drafted a new policy on Cambodia Agricultural Organic Standards. This policy is currently in the process of consultation among a technical working group of concerned departments at the GDA. This draft policy focuses on all kinds of crops, and animal products in Cambodia. This policy, which aims to promote the organic products of farmers, will provide very strict criteria and ways to recognize agricultural organic products in Cambodia.

In conclusion, the RGC has approved many regulations and policies to support agricultural development in Cambodia. The Ministry of Agriculture, Forestry and Fishery (MAFF) plays an important role to lead, manage, support and ensure that policy statements and commitments on agricultural development are achieved, as well as to ensure food security and safety in Cambodia. Nevertheless, most of the questions raised above remain unaddressed and require further attention in order to support all groups of small landholders in their diverse contexts.

### **3.2.2. Policies supporting large-scale landholders**

The Royal Government of Cambodia has promoted large scale investment in agriculture and agro-industrial crops in Cambodia through the granting of Economic Land Concessions (ELCs), as part of its strategy focusing on economic growth in the agricultural sector. In 2001, a new land law was adopted, and the possibility to lease state private land for large scale investments up to 99 years was highlighted. A private company can lease land, up to 10,000 hectares, granted as an ELC. All granted companies are required to pay a fixed economic land concession fee between 0-10 USD a year per hectare, and according to production. ELCs should also start within 12 months after being granted otherwise they are at the risk of being cancelled (RGC, 2001). Nevertheless, the fee is considered too low to create economic pressure to use the land (Löhr, 2011) and the state revenues, through taxation and the lease fee of ELCs, were estimated to be quite low (Sperfeldt et al., 2012; SRSG, 2007). According to a recent report issued in April 2015 by the Ministry of Economy and Finance, the Royal Government of Cambodia earned about 80 million US dollars from leasing ELCs and forests to private companies over the last three years,<sup>2</sup> which is viewed as quite low considering the total area allocated. Some concessionaries are not paying their fee, and there is little evidence that this revenue has been reinvested by the Government in the development of concessions areas (Subedi, 2012). The regulations about the economic land concessions were then specified in the Sub-decree No. 146 on Economic Land Concessions in 2005, determining the procedures, mechanisms and other arrangements for granting state private land as ELC (RGC, 2005; Sperfeldt et al., 2012).

It is possible to distinguish three periods in the recent development of land concession policy in Cambodia (Sperfeldt et al., 2012). The first period extends from the first land law promulgated in

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<sup>2</sup>Phnom Penh Post, *ELCs earning underwhelm*, 21 April 2015

1992, and the 1993 Constitution, until the proclamation of the 2001 land law. This period was characterized by a series of policies aiming at encouraging private investment through, among other initiatives, the granting of state land, mostly for forest concessions, but also agricultural concessions at the end of this period. Nevertheless, the 1992 land law did not manage to frame and regulate the granting of land concessions (Sperfeldt et al., 2012), and outside the law land the granting of concessions took place (SRSG, 2004). During the second period that started with the 2001 land law, a new legal framework was put in place without all the regulations and mechanisms to enforce the law, and the management of land concessions. Finally, the third period spanned from the 2005 Sub-Decree on ELC's and the 2006 institutional mechanism, for the new land concessions policies until 2012. During this period, after the new policy framework related to land concessions was adopted, the granting of ELCs happened at a fast pace. On a very large scale, land was granted in Cambodia to both domestic and foreign investors for a very long term, especially during 2010 and 2011 (Messerli et al., 2015; Sperfeldt et al., 2012). The year 2012 saw a major change related to land concessions: the Directive 001 (Order 01BB) issued in May 2012 by the Prime Minister (RGC, 2012). It instituted a moratorium on the granting of new ELCs and called for a review of all existing land concessions to check their compliance with existing regulations (ADHOC, 2013). In June 2012, a National campaign was launched; it aimed at implementing Order 01 by legalizing unclear land occupation around ELCs and issuing land titles to existing land occupants who are using and cultivating land. Land targeted could be diverted into three categories: ELCs, forest concessions or confiscated land in the forest cover (Im Chhun Lim, 2012). It supported and enforced the “leopard-skin” policy of the government, which aims to exclude inhabited areas from the concessions and mitigate the encroachment on the land of farmers and communities (ADHOC, 2013).

Currently, it is very difficult to estimate the exact number of land concessions as the figures differ according the source considered (ADHOC, 2014; Sperfeldt et al., 2012). Information from the MAFF website<sup>3</sup> indicates that, until June 2012, 118 companies were granted ELCs for a total land area of 1,204,750 ha. Nevertheless, these figures are known not to have been updated and underestimate the reality (ADHOC, 2013; Subedi, 2012). Among other sources, Open Development Cambodia<sup>4</sup> mentioned at least 191 concessions and a total area of 1,483,026 ha for which they found official legal documentation from Government sources allowing them to identify four elements: the company name, the location, the location (GPS coordinates or map) and the purpose. LICADHO listed about 272 ELCs for a total land area of 2,141,146 ha,<sup>5</sup> and ADHOC reported about 225 companies were granted a total land area under ELCs of 2,657,470 ha (ADHOC, 2014; ADHOC, 2013). However, government officials reject these figures.

Despite this diversity of sources, it is possible to highlight that a large number of private companies have been granted private state land for agricultural and agro-industrial crops such as rubber plantation, and other tree plantations (trincornali, acacia), sugar cane and cassava. National investors account for a large proportion of land deals and among foreign investors; China and Vietnam are the most important, both in terms of number, and land area granted, mostly for rubber plantations (Messerli et al., 2015; Schönweger et al., 2014). It should be pointed out that even if the majority of ELCs are held by Cambodian individuals or companies, ownership structures are sometimes difficult to determine. It is therefore difficult to know if some of these national owners of concessions are in partnership with foreign investors as very little information is available on joint-ventures (Sperfeldt et al., 2012).

<sup>3</sup> <http://www.elc.maff.gov.kh/>, consulted in March 2015

<sup>4</sup> <http://www.opendevdevelopmentcambodia.net/maps/downloads/page/2/>, consulted in March 2015

<sup>5</sup> [http://www.licadho-cambodia.org/land\\_concessions/](http://www.licadho-cambodia.org/land_concessions/), consulted in April 2015

In spite of the existence of several databases on ELCs, and the obligation of the concessionaries to actually develop the foreseen agro-industrial project, the level of implementation remains a grey zone as no clear information is available. This raises the question of whether they only want to log the granted areas (SRSG, 2007). In this case, ELCs serve as pretext for logging. As mentioned earlier, the low lease fee is not enough to push the concessionaries to implement their project (Löhr, 2011). Moreover, the maximum legal size of a concession is 10,000 ha. However large concession can be achieved by granting several concessions of 10,000 ha to different companies with very similar names, which belong to the same group.

Finally, it is worth noting that even if social land concessions (RGC, 2003), which allows allocating land to landless people has been put forward in different policies, ELCs remain much more important in terms of area granted during the last ten years (ADHOC, 2014; Sperfeldt et al., 2012).

### **3.2.3. Consequences of ELCs Policy for small landholders**

The current impact of ELCs for small landholders are serious and numerous. These include human rights issues, environmental destruction, land dispossession, forced evictions, displacements, loss of access to natural resources and changes in livelihood.

In terms of human rights, several elements can be highlighted: the lack of consultation with local communities when the land is granted which contributes to their marginalization, and conflicts with both companies and local authorities; the difficulty of registering indigenous peoples as legal entities which would allow them to preserve their culture, language and traditional agricultural practices, and apply for collective land title; encroachments on areas of cultural and spiritual significance; forced eviction, displacement and relocation of communities; militarization of land concessions, contributing to intimidation and violence by armed security guards; and lack of effective remedy for affected communities (Subedi, 2012). When eviction happens and people are resettled from their homes and farm lands, relocation sites are often not well prepared for the people and lack clean water, sanitation facilities, health and education services, and offer few opportunities to find or sustain employment or income generation (Subedi, 2014; Subedi, 2012)

Despite existing policies, plans and recent Government's initiatives for a resolution of land disputes, there is a general lack of transparency, accountability, and the absence of an effective dispute resolution mechanism. Questions are raised about the independence and the effectiveness of the cadastral commission, and the National Authority for land disputes resolution. The lack of independent judicial system and ineffective dispute resolution mechanisms does not allow complainants to obtain legal redress for the violations of their rights or the settlement of disputes (Subedi, 2014).

In addition, ELCs projects are creating adverse environmental impacts. Such projects should normally be granted on degraded forest or non-used land, but are established in valuable forest areas and also protected areas such as national parks (Sperfeldt et al., 2012; Subedi, 2012). The main concerns are the destruction of the environment, the impact on biodiversity, the planting of non-native crops or trees, and illegal logging of forest land granted. Other problems generated by ELCs include soil erosion and water contamination (Subedi, 2012). Moreover, the low implementation of environmental regulations has affected the cultural rights of indigenous and non-indigenous people as their traditionally occupied lands faced encroachment and unregulated development (ADHOC, 2013; Subedi, 2012).

In terms of consequences on the livelihoods of small landholders, the situation and the range of effects can vary according to the region and the groups of population, but some recurring elements can be stressed. Encroachment on farm lands and substantial loss of assets are experienced by farmers, together with a loss of access to reduced natural resources and forest products, leading to drastic changes in their environment and the loss of their traditional livelihoods. It is estimated that about 420,000 people have been affected by land concessions and other land grabs since 2003 (LICADHO, 2014).

The losses of assets ranges from i) extreme – losing all land and including some compensation or/and displacement and relocation of people, ii) severe - no eviction, but not enough land to satisfy the basic needs, to iii) partial - enough land to maintain farming activities to satisfy basic needs. The magnitude depends also to the size of the land acquisitions, overall land availability among affected areas, the proximity of the land concessions to areas used by the population, and finally the pace of the implementation of the ELCs (Gironde et al., 2014). For people experiencing eviction, displacement and relocation their livelihoods will mainly depend on the opportunities offered at the new location. The different categories of people described are clearly prone to become landless or land poor, and face considerable difficulties securing their livelihoods.

Besides the immediate impact of ELCs, consequences on livelihoods should also be assessed in a mid-term perspective. Small landholders, especially ethnic minorities, who could face the loss of assets, are then confronted by an agrarian transition. Agrarian transition can be understood as a major transformation of agriculture, its role in the society, changing the relationships of the population with the environment (Castella, 2007). This process was taking place and initiated by public policies prior to the explosion of ELCs, such as the promotion of modern techniques and market-based development of cash crops. However the granting of ELCs, especially after 2005, dramatically increased the pace of the transformation of rural livelihoods, and changed the socio-economic environment, characterized by an increased need for cash. (Gironde et al., 2014). Farmers are now experiencing an uneven transformation of their rural livelihoods systems and also a process of social and economic differentiation as threats and opportunities arising from this new socio-economic environment do not affect the population in the same way (Gironde et al., 2014).

Studies in the North-East of the country show that it is possible to distinguish different groups of people according to how they are affected and could respond to the land dispossession, and the main transformations of their economic activities (Gironde and Senties Portilla, 2015; Gironde et al., 2014). It is reported that about half of the population studied consists of part-time farmers whose farming activities are not sufficient, and have an increasing share of salaried work in their total income. They managed to keep some land as a basis for their livelihoods, but cannot engage in new commodities like rubber, for instance. Their future prospects will be effected by competition from other workers, and in-migrants, but may be enhanced by the development of improved social networks. Another group, around 30% of the affected population, which includes rural workers, for who salaried work is the main source of revenue, have no opportunity to get into the new commodities. These people have sometimes experienced severe to extreme land dispossession, and are land poor or landless, facing displacement and relocation from their homes. Given the limited job opportunities, out-migration of household members increases. This group are often forced to sell their remaining assets because of their dire financial situation. Finally, less than a quarter, (23%) of the population studied comprises people who could engage in the new commodities and benefit from them. Among them it is possible to distinguish local elites, representing a small percentage; people who live from non-farming activities developed in relation to the land acquisitions or the crop booms, like shop owners, middlemen, people providing services (transport, money lending, food sellers / restaurant, trades

people), only representing 7%; and lastly, 12% of households for who farming is the main activity and have an increasing share of their land dedicated to cash crops, The transition process for this last group is slow as they don't have enough capital to invest more in cash crops (Gironde and Senties Portilla, 2015; Gironde et al., 2014). This mid-term perspective shows that the vast majority of the population around ELCs is facing challenges during these changes in their economic activities and livelihoods as a result of the concessions. Only a very small share of the population can manage to respond to these changes by engaging in the new commodities like rubber, cassava or sugarcane. And for those who manage to use the new seeds or the inputs available to produce the cash crops, often they only have a few market channels - those developed by the large companies, to sell their products. This situation means limited bargaining power, and potentially low prices for their produce.

With an estimated employment rate of 20 ha per permanent job and 40 ha per temporary job for Asian land investments<sup>6</sup>, salaried jobs offered by large-scale investments are quite limited (Mirza et al., 2015). In addition there are more opportunities for men than women, and more for Khmer ethnic people than indigenous people. Usually, there are more low-qualified jobs at the beginning of the setting up of the concessions, but less qualified jobs when the crops of the plantation are in place. The first wave of jobs is generally accessible to local populations, but is limited to a certain period of time. The more permanent jobs are taken by skillful people and the local population is in competition with more experienced outsiders. This is particularly the case for rubber plantations. Although mostly limited for local people, these jobs could also provide some autonomy for local youth as they can decide the share of their income that they want to keep for their own (Gironde and Senties Portilla, 2015). Given the land scarcity of some regions, and the limited job opportunities for local people, emerging strategies of local population also include out-migration, for which they are mostly not prepared (Gironde, 2014).

### **3.3. Challenges and prospects in supporting small landholder farmers**

#### **3.3.1. Analytical framework of the study**

The findings from national key informants showed a complex system of support for small landholders, which include both challenges and prospects. Homestead food production is the starting point and the main priority for small landholder farmers as most of them are still subsistence farmers. So far, local production has fluctuated, and the fluctuations depend on the level of supply according to each commodity. However it is acknowledged that linking small landholder farmers to markets is a key driver of economic growth, but it may not be successful unless home consumption is fulfilled. Expanding production beyond home consumption requires a strong investment in time, financial resources, and effort which involves contributions from the government, private sector, and NGOs. Linking farmers to markets means regulating supply patterns in order to ensure that farmers get ongoing benefit from their agriculture production. The production planning, and organizational skills, of the producers are very important to help access markets. Sustainable economic development depends on support for commercial farming, rather than subsistence farming, and support to the commercialization of what is left over.

It is also believed that in order to increase production and maintain benefits, linking farmers to markets should be extended from local markets to urban markets, and then to export markets. In

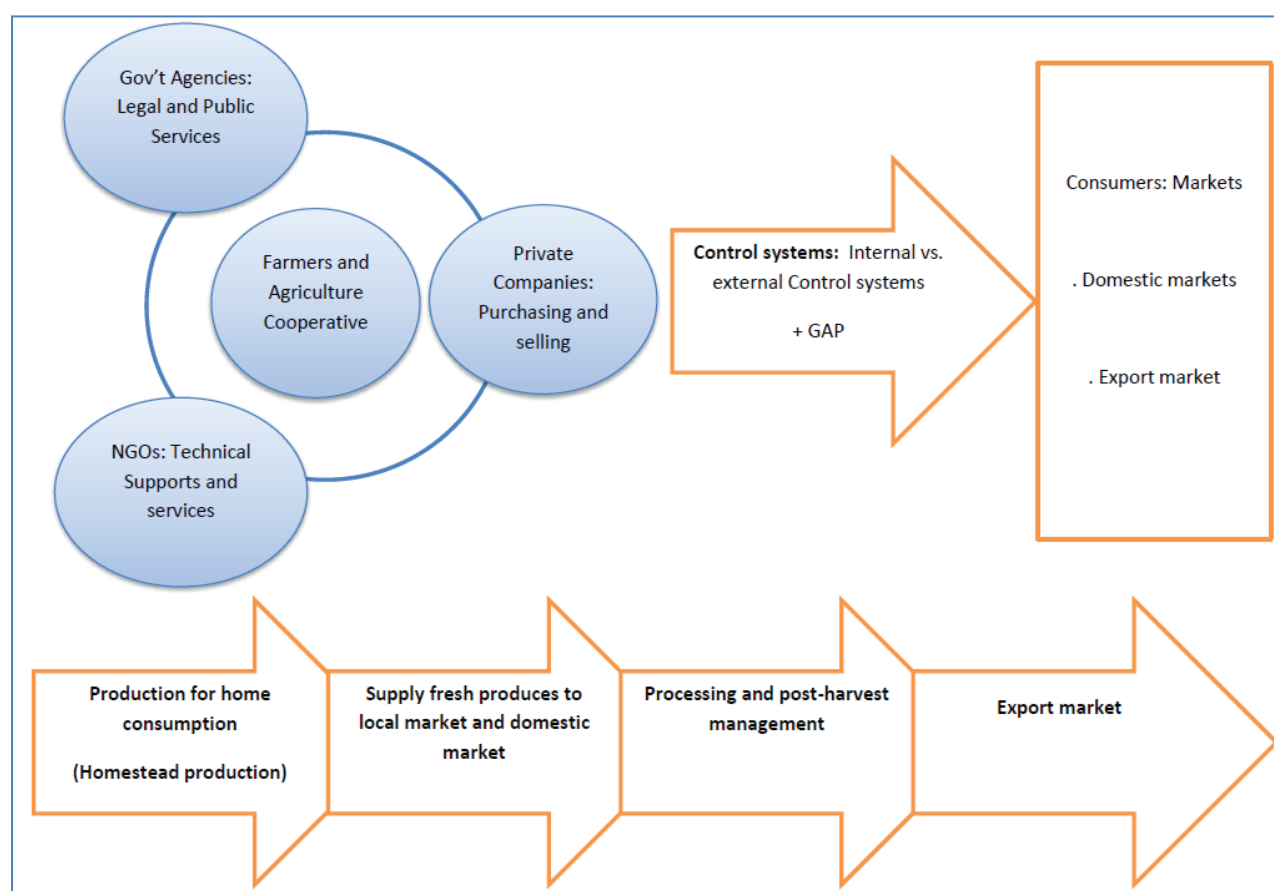
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<sup>6</sup>This means that it is estimated that, for example, a concession of 10,000 ha can potentially create about 500 permanent jobs and 250 temporary jobs.

doing so, not only the volume of sales needs to be increased, but the quality and specification of the products needs to be ensured. Producers have to respect business rules such as quantity, timing of supply, quality and specification requirements. If producers fail to comply with these requirements, the supplied products will be returned to them. This is especially true when food safety standards do not meet the requirements of export markets. Key informants believe that in that case, only local markets and local processing plants could consume the returned goods. Some key informants are pessimistic about the possibility to increase market exports, when the local markets and local processing are not yet developed in the country. In any case, linking small landholder farmers to both local and external markets may not produce good results if farmers are not organized as a group, FA, AC or as a federation. The mobilization of producers with common interests will enable government bodies, NGOs, and private sectors to work with them more efficiently. In addition, farmers must be well equipped with technical knowledge and entrepreneurial skills, so that they can increase their harvest, reduce production costs and meet market requirements.

In order to move from home consumption production to production for markets (niche markets or export markets), farmers must follow business rules as well as production rules (GAP: Good Agriculture Practice, Ecological Production or Organic Production). So far, government agencies, NGOs and private companies provide support to farmers in order to meet these market requirements. However, the responsibility to meet these requirements lies in the hands of farmers. Gradually, the government, NGOs and private companies are withdrawing their direct support and agriculture cooperatives are dealing with market actors, and buyers. After this, agriculture cooperatives become business partners (e.g. with CEDAC Enterprise). Besides being produced for niche markets, common produce from ordinary farmers are also supplied to local markets. However, it is observed that in such a value chain, there is a lack of NGO support, as well as a lack of direct intervention from the technical institutions of the government. Most often, farmers face low selling prices, or loss of profits when they sell their product. Moreover, the over-supply of common products cannot be diverted to another channel as processing plants are underdeveloped. Thus, to improve the markets of agro-industrial products, local processing plants must also be developed.

In sum, it is understood that when farmers enter the both local and export markets, they can make more profit from their agricultural activities. This will further motivate farmers to strengthen their agricultural activities. In addition, this change will contribute to the national economy as imports to the Cambodian markets will decline, while domestic and national products will increased.



**Figure 2: Analytical framework of the study**

### **3.3.2. Roles of key involved actors to support small farmers**

Three main groups of actors support and work with small landholder farmers: Government agencies, NGOs and private companies. How those actors work with or provide support to small landholder farmers depends on the different stages of performance of farmers.

- **First stage - Improvement of production for household food security:** Government agencies and NGOs mainly provide technical capacity building on agriculture production and facilitate farmers to access agriculture inputs such as quality seeds, fertilizers and other materials for production. Improvement of market access and linking farmers to markets are still limited. This is due to the fact that the price of Cambodian agricultural produce is not competitive with imported products, mainly vegetables from Vietnam and fruits from Thailand, meat products from both Vietnam and Thailand. Most often, Cambodian agricultural products enter the markets only when it is a specific product eg; it is natural, safe, or organic products. NGOs (CEDAC and SNV) work to support small farmers to improve their production through appropriate innovative technologies (CEDAC: Ecological farming and SNV: Climate smart agriculture practice) while government agencies facilitate public goods and services, as well as agricultural inputs and materials, (seeds, fertilizer, and recommended techniques).

Ecological Farming ensures healthy farming and healthy food for today and tomorrow, by protecting soil, water and climate, promotes biodiversity, and does not contaminate the environment with chemical inputs or genetic engineering (Tirado, 2009).

Climate-smart agriculture (CSA) is an integrative approach to address the interlinked challenges of food security and climate change, that explicitly aims for three objectives: (1) sustainably increasing agricultural productivity, to support equitable increases in farm incomes, food security and development; (2) adapting and building resilience of agricultural and food security systems to climate change at multiple levels; and (3) reducing greenhouse gas emissions from agriculture (including crops, livestock and - fisheries) (FAO, 2013).

- **Second stage - Improvement of production for local markets and local food security:** When farmers sell agriculture products and respect specific standards as mentioned above, they are often established as a group of producers, with support from NGOs or Government projects and work with the private sector, who acts as middlemen or intermediary. The private sector plays a role as distributor, or retailer to the end-consumers in provincial or urban centres. In addition, farmers can also sell their produce locally in their home villages to their neighbors, or to local markets (commune and district markets, and sometimes also to provincial markets). Government agencies and NGO have played an important role in promoting the advantages and image of local products as organic, safe and natural, through agricultural fairs. Individual producers as well as producer groups have gradually become known by urban consumers. Urban consumers can also buy such produce directly from producers.

The result of the study showed that farmers could produce more vegetables to supply to urban markets. However due to the facilitation channel, farmers' produce only certain volumes that are demanded by urban markets.

At this stage, Government agencies, particularly the GDA, provide legal frameworks, such as laws on agriculture cooperatives and on contract farming, to farmers to establish agriculture cooperatives and improve their agricultural business. Five hundred and fifty six agriculture cooperatives have been formed and are currently functioning (GDA, 2015)<sup>7</sup>. Currently, the GDA is in the process of developing two key training materials: 1) Training of Agriculture Cooperative Trainers and 2) Training materials to build the capacity of agriculture cooperatives. The GDA also plans to set up commune training centres in all communes in Cambodia and to equip them with two AC trainers/facilitators per commune to provide services related to agriculture cooperatives over the country.

CEDAC and SNV have worked to improve market access. It should pointed out that CEDAC has developed new market chains to purchase local produce from collaborating farmers and to sell their produce to urban consumers. SNV has worked to improve existing market chains through an inclusive business approach to link farmers to market actors and improve access to market information.

- **CEDAC's Intervention on market linkage:** In Kampong Chhnang province, groups of local farmers produce vegetables based on the agreed plan, and deliver their vegetables to CEDAC

<sup>7</sup> Workshop: Cambodia's Agricultural Sector: Readiness for ASEAN Economic Community 2015 and Beyond; Sokha Hotel, Phnom Penh, March 24,2015

markets in Phnom Penh every three days. The study found out that farmer producers have expanded vegetable production, from 550 to 850 square meters, and production has increased, from 475 kg to around 1,300kg per family, on average. This is due to the fact that farmers received training on improved production techniques, and are able to diversify their crops during the whole year. In addition, it was possible to obtain twice the selling price of vegetables, compared with vegetables produced with chemicals. In the rice value chain, farmers are able to increase their production thanks to improved techniques, and obtained a selling price about 50% higher than the rice produced with chemical inputs based on the selling price in early 2015. (Please refer to the case study for detailed information).

- **SNV's Intervention on market linkage:** SNV has worked in partnership with IVY, a local NGO, to coordinate and connect vegetable produce to markets such as the Natural Garden, Casino/restaurants at the Cambodia-Vietnam border, and AEON Mall in Phnom Penh. Since local produce has become more popular among consumers than the imported vegetables, farmers' produce is mostly sold to local markets at village or commune level. SNV strengthened smallholder farmers to gain knowledge and technical capacity on Climate Smart Agriculture (CSA) practices. The purpose of CSA practices is mainly to increase smallholder farmers' adaptive capacity to cope with climate variation and change. In particular they supported farmers in the use of efficient water storage and supply systems for vegetable production. At the same time, SNV facilitated linkages between agricultural input suppliers or CSA technology suppliers and smallholder farmers. For instance, the improved water harvesting pond introduced by SNV enabled smallholder farmers to increase their vegetable production cycle from one, to three cycles per year; this means that more vegetables are produced to supply local markets.
- **Third stage- Improvement of production toward export markets:** At this stage, farmers enter into export markets. Government agencies can play an important role by providing legal support, while export companies work with local companies to purchase the required volume for export. NGOs often work with producer groups and form them as a group and/or register as agriculture cooperatives. Export companies rarely reach out and work directly with agriculture cooperatives, but do so through middlemen, or local companies known as intermediaries. The performance of agriculture cooperative is difficult to determine as many have only recently been formed. Both agriculture cooperatives and export companies have encountered difficulties in dealing with each other in terms of quantity, timely supply, demanded quality and some specifications.

The Royal Government of Cambodia in its policy paper on "The Promotion of Paddy Production and Rice Export", has set a target of reaching 1 million tons of milled rice exported in 2015. In order to achieve this objective, the RGC has undertaken several activities and strategies, such as improving rice varieties for exporting markets, organizing rice festivals to attract export companies, improve local milling capacity and the provision of credit to rice mill associations to purchase paddy rice from farmers.

At the program and institutional level, two approaches to support small landholder farmers have been identified. CEDAC, a local NGO, has worked to improve the self-reliance of small landholder farmers through the creation of a new market chain. SNV, an international organization, has worked toward the improvement of the existing system in which all involved stakeholders benefit from the development of an inclusive business.

CEDAC has played the role of an intermediary/middleman between export companies, and agriculture cooperatives in the promotion of organic products. Export companies contract with CEDAC to supply a certain amount of organic rice for export. Then, CEDAC worked with agriculture cooperatives to produce organic paddy. For the export markets, a quality control system is required. In this case, CEDAC acts as an internal control agency and worked closely with organic rice producers, while export companies introduced an external certification company to double check the quality when it is exported. Farmers have to learn step by step to respond to the requirements of export markets.

Here are the basic steps in linking rice produce to markets:

- Group mobilization and capacity building
- Provision of training on self-reliant development
- Financial resource mobilization
- Developing business plans

SNV has worked with stakeholders to improve the cassava value chain. This organization with its local NGO partner, has involved other key stakeholders, such as input suppliers and traders (cassava collectors) to support small landholder farmers in terms of technical information sharing, supplying good quality inputs, and played a role as a service provider. Officers from the provincial department of agriculture also coordinated technical capacity building, and facilitated the market linkages.

Here are the steps and processes in supporting cassava value chain:

- Identification and selection of the cassava processing enterprise (local enterprise)
- Consultation with local authorities to select project target areas
- Farmer group mobilization and planning for production to supply to the cassava enterprise
- Farmer group capacity building to produce cassava and link to stakeholders (local enterprise and collectors).

Local and Vietnamese processing plants check the quality of the product and then offer a price.

### **3.4. The support to small landholder farmers: Case studies from CEDAC and SNV**

#### **3.4.1. Supporting the production and marketing of organic rice by CEDAC**

With the support from CEDAC and Farmer and Nature Net (FNN), Sdok Sdam rice mill cooperative (with 479 members) was established in 2012 and registered with the Takeo Provincial Department of Agriculture. The cooperative is located at Trapaing Sdok village, Taing Yab commune, Prey Kabbas district, Takeo province. Supporting the production and marketing of organic rice has gone through the following steps:

**Step 1: Capacity building to farmers:** The training on System of Rice Intensification (SRI) has been conducted for rice farmers in the villages under CEDAC. Other technical and non-technical training as well as meetings, workshops, and exchange visits have also been organized for farmers and farmer leaders. Several improved techniques on SRI have been widely adopted among project participants. As a result, rice yield increased about 50% compared with the traditional methods.

**Step 2: Financial resource mobilization:** One year after the project began, 25 farmer families in the village have started working together as a group to mobilize financial resources through saving groups. From 2010 to 2011, another nine saving groups were established in nine villages of Prey

Kabbas district. A district saving cooperative was established in 2012. By early 2015, the total savings of the cooperative were about 2 billion KH Riel, approximately USD 50.000.

**Step 3: Experience with the small rice mill:** Based on the potential of paddy rice and with support from CEDAC and FNN, a rice mill cooperative was established in 2012 costing 20.85 million KHR, approximately USD 5.000. At this stage, the milled rice is sold at the local markets only.

**Step 4: Market link to CEDAC:** In 2013, the cooperative started linking organic rice to CEDAC's markets in Phnom Penh to get a higher selling price. To meet the standard for such a market, paddy rice was transported to CEDAC's rice mill for processing. With experience gained from the rice business, profit has increased from 3 million KH Riel from 100 tons of paddy rice in 2013, to 10 million KH Riel from 120 tons of paddy rice in 2014.

**Step 5: Capital mobilization for financing the large rice mill:** CEDAC, in working with FNN,<sup>8</sup> appealed to those farmer members to mobilize funds to invest in a rice mill that could process rice to the quality required for export. As a result, Sdok Sdom rice mill cooperative mobilized 167 million KH Riel of investment capital, approximately USD 42.000, from 247 members as shareholders, and 60 farmer associations across the country. The cooperative bought a hectare of land and built a rice warehouse.

**Note:** CEDAC facilitated meetings with FA and AC leaders from 60 districts of FNN to establish rice mill cooperatives. The set rule states that "number of rice mill plants will be established based on amount of the capital mobilized from each district member. Furthermore, any district cooperative that can mobilize the most funds from its members will be given priority to receive funds to install a rice mill plant in their district. As result, three district cooperatives out of the 60 districts were selected to receive the mobilized fund. Those district cooperatives are: Prey Kabbas district, Takeo province, Kamchay Mear and Sithor Kandal districts, and Prey Veng province. Profits obtained from the rice mill business will be shared with the 60 district cooperative members according to their shares. It is noted that the fund mobilization will be done every year, and the next rice mill cooperatives are expected to be established through the same rules.

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<sup>8</sup> Farmer Nature Net (FNN) is umbrella of the farmer associations and cooperatives supported by CEDAC across the country.

**Table 1: Key stages in the establishment of rice mill cooperative**

| Attributes                  | Pre-condition stage                                                                                                   | Current stage:<br>Characteristics of<br>strengths and weakness                                                                                    | Future<br>prospects/sustainability                                                                                             |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| <b>Institution</b>          | - CEDAC used external funds from donors to build the capacity of farmers to improve their crop production.            | - CEDAC continues building the capacity of committee members of the cooperative toward self-reliant development.                                  | - CEDAC is going to build the capacity of committee members of the cooperative toward self-reliant development and management. |
| <b>Function</b>             | - Technical and non-technical training and saving activities were supported by CEDAC.                                 | - Saving groups and saving cooperative, technical and non-technical capacity building, as well as rice mill cooperative are backstopped by CEDAC. | - CEDAC is going to play a role as a development partner with the rice mill cooperative in the future.                         |
| <b>Network and partners</b> | - CEDAC had linked the cooperatives to Farmer and Nature Net (FNN).                                                   | - CEDAC has linked the cooperative to National Rice Mill Cooperatives in 60 districts in the country.                                             | - All rice mill cooperatives are going to be members of the National Rice Mill Federation and partners with CEDAC.             |
| <b>Supporting agents</b>    | - The Provincial Department of agriculture (PDA) issued the registration of the farmer groups as farmer associations. | - PDA has issued the registration of the farmer associations to agriculture cooperatives.                                                         | - A National Rice Mill Federation will be established.                                                                         |

Source: The interview with CEDAC's staff on Jan 19 and 21, 2015 and rice mill cooperative leaders on Feb 11, 2015.

**Table 2: Impacts on livelihood through rice mill cooperative**

| Production                                               | Before AC                                                                                                                                                                               | Current                                                                                                                                                                                                 |
|----------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Individual level</b>                                  | - Small land holders owned a hectare of rice land on average. They produced rice mainly for home consumption.                                                                           | - Small land holders produce rice and other diversified crops for home consumption and sale.                                                                                                            |
| <b>HH members employed in income generation activity</b> | - Small land holders depended on rice production while some of the cooperative members have one household member working on non-agriculture activity, for example at a garment factory. | - Some of the members have one household member who is involved in cooperative activities in both saving groups and the rice mill.                                                                      |
| <b>Group level</b>                                       | - Rice farmers harvested around two tons of paddy rice per hectare and sold it for 1.6 million KH Riel (700-900KH Riel/kg).                                                             | - With SRI techniques, rice farmers harvest three tons of paddy rice per hectare and sold it for 4.65 million KH Riel (1,550KH Riel/kg).                                                                |
| <b>Community level</b>                                   | - Rice farmers sold their paddy rice to middlemen.                                                                                                                                      | - Rice farmers as cooperative members sell organic paddy rice to their cooperative.<br><br>- The rice mill cooperative sells the milled rice to CEDAC market <sup>9</sup> in Phnom Penh and for export. |

Source: The interview with CEDAC's staff on Jan 19 and 21, 2015 and rice mill cooperative members and leaders on Feb 11, 2015.

#### **Facing challenges, solutions and outcomes:**

- Limited resources for making compost or organic fertilizer, is a challenge for organic rice farmers who want to expand organic rice production. In response, training on compost making and green manure was provided. As result, only 100 tons of organic paddy rice was produced and sold in 2013, and 120 tons of organic paddy rice were produced and sold in 2014. It must be acknowledged that to meet international organic standards for export takes a long time to build the capacity of farmers to understand the requirement set by the quality control systems.
- Both cooperatives and CEDAC have limited financial resources to buy organic paddy rice from their members during the harvesting season. The cooperative leaders estimate that this year, around 300 tons of organic paddy rice will be produced by members of cooperatives both in the

<sup>9</sup> CEDAC Market is an independent registered company run. CEDAC as an NGO also has a share in this company.

district, and the nearby districts. The cooperative has accessed additional funds from saving cooperatives in the commune. One hundred and twenty tons of organic paddy rice has been purchased so far by Sdok Sdom rice mill cooperative. To solve the financial shortage, CEDAC market and the cooperative purchased organic paddy from farmers by installment with the condition that if farmers allow CEDAC market, and cooperative to pay by installments, farmers will receive an additional 20 KH Riel/kg as interest.

### **3.4.2. Supporting the production and marketing of organic vegetable by CEDAC**

With the support of CEDAC and GIZ, an Organic Vegetable Producer Group was initially set up in 2007 with seven members at Thmor Reap village, Pong Ror commune, Rolear B'ier district, Kampong Chhnang province. The group members used to produce vegetables and use chemicals during wet season and sell the produce at a low price. After receiving support from CEDAC, they have transformed themselves into an organic vegetable producer group. The organic vegetables are sold directly to CEDAC market in Phnom Penh. In Kampong Chhnang, the group that consisted of only seven members in 2007, has expanded its production and increased its members to other two communes in the district. By 2014, there were 40 organic vegetable producer members. The processes in group formation are below :

**Step 1: Organizing village meetings and group mobilization:** The meeting was organized by CEDAC project in the selected target villages to present the objectives of the organic vegetable group. The meetings identified a few farmers who were interested in working together in a group. It was observed that those who were interested in participating in the group had better access to water from a pump or open well, and the availability of labour, at least two people in a family. These resources may have shaped their decision to participate in the group.

**Step 2: Capacity building to the interested group members:** The interested farmers were trained in a series of organic production methods. Trainings, meetings, as well as exposure visits were organized for the farmers and farmer leaders. To produce organic vegetables, production methods need to be changed. An internal control system (ICS) coordinated by an internal control committee was set up. The committee was comprised of five representatives from the group. Group members learnt that if vegetable produce is found with pesticide residue, then those members will be expelled from the group and fined.

**Step 3: Production and market linkage:** Three organic producer groups with 40 members were established in the three communes of Rolear B'ier district, Kampong Chhnang province. A production plan was developed between producers as group members with the buyer, CEDAC. More than 10 types of organic vegetables were collected at different points, and sold directly to CEDAC in Phnom Penh every two to three times per week, with the total volume about 250kg per time on average. The process was carried out with facilitation from CEDAC staff. Recently the project was phased out and the committees at each respective producer group began to manage the process on their own.

**Table 3: Key stages in the establishment of organic vegetable producer groups**

| Attributes         | Pre-condition stage                                                                                                                                                                                       | Current stage: Characteristics of strengths and weakness                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Future prospects / sustainability                                                                                                                                                                                                                                                       |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Institution</b> | <ul style="list-style-type: none"> <li>- No producer group was formed.</li> <li>- CEDAC used external funds from donors to build the capacity of farmers and to improve their crop production.</li> </ul> | <ul style="list-style-type: none"> <li>- Organic producer groups are formed with 40 members in total. CEDAC is building the capacity of the committee members to meet their needs.</li> <li>- The management structure and internal control system has become strong. Almost all group leaders could independently facilitate the process from the production to the markets.</li> </ul>                                                                                                                                                                                                                                                             | <ul style="list-style-type: none"> <li>- The producer groups could expand and produce more vegetables if there is more demand from the markets.</li> <li>- The capacity of AC committee members should be strengthened to encourage self-reliant development and management.</li> </ul> |
| <b>Function</b>    | <ul style="list-style-type: none"> <li>- Farmers sold their produce individually to local people or at local markets.</li> </ul>                                                                          | <ul style="list-style-type: none"> <li>- The groups have produced vegetables to serve the demands of the organic-vegetable markets.</li> <li>- Saving activity is also performed by group members to meet a range of financial needs, especially for production purposes.</li> <li>- The saving group has served the financial needs of group members. For example, the group fund from seven groups in Thnong Kambot village, Svay Chrum commune, Rolear B'ier district has around 30 million KH Riel (around USD 7,500).</li> <li>- CEDAC continues giving backstopping support by organizing quarterly meetings for the group leaders.</li> </ul> | <ul style="list-style-type: none"> <li>- As long as there is more market demand for farmers' produce, the group will remain active and may expand its production and members.</li> </ul>                                                                                                |

|                             |                                                    |                                                                                                                               |                                                                                                                                                                                         |
|-----------------------------|----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Network and partners</b> | - Linking the group to Farmer and Nature Net (FNN) | - An organic vegetable producer federation has been formed in other provinces: Kampot, Kampong Speu, Takeo, and Tbaung Khmum. | - Building networks and a vegetable storage centre.                                                                                                                                     |
| <b>Supporting agents</b>    | - Forming the producer group.                      | - From 2011-2014, CEDAC and GIZ has supported training on post-harvest management.                                            | - CEDAC will collaborate with GDA to set up a Participatory Guarantee System in which producers as individuals and as a group are also involved in ensuring the quality of the produce. |

Source: The interview with CEDAC's staff on Jan 19 and 21, 2015 and organic vegetable producer group leaders on Feb 8 and 14, 2015.

**Table 4: Impacts on livelihoods through the organic producer groups**

| <b>Productions</b>      | <b>Before</b>                                                                                                                                                                                                                                                                                                                                              | <b>Current</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Individual level</b> | <ul style="list-style-type: none"> <li>- Small land holders produced vegetables with harmful pesticide and chemical fertilizer and sold only a little surplus to local markets.</li> <li>- Vegetables were grown during the wet season and only few types were planted.</li> <li>- The family members were mainly dependent on rice production.</li> </ul> | <ul style="list-style-type: none"> <li>- The small landholders can produce a variety of organic vegetables during the whole year.</li> <li>- The vegetable products are sold to CEDAC and receive a higher price than at the local market price. The surplus is easily sold to the local markets.</li> <li>- Organic vegetable production has become the main source of income, while rice production and livestock raising only earns a small amount of income.</li> </ul> |
| <b>Group level</b>      | - Farmers could only grow vegetable during rainy season mainly for home consumption. Each member of the group could generate about USD 25 to USD 70 per month since production was small scale,                                                                                                                                                            | - Small land holders produce organic vegetable for the whole year, and sell to CEDAC market at a higher price, around 100% over the local market price. Each family of the group now earns about 150 to USD 200 per month.                                                                                                                                                                                                                                                  |

|                        |                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                        | and generated a small surplus which was later sold at a cheap price.                                                                           | <ul style="list-style-type: none"> <li>- The land size for vegetable production has increased from 550 to 850 square meters and from 6 months to the whole year.</li> <li>- Vegetable production has increased almost 3 times from 475kg to 1,336kg per family per year.</li> <li>- Their incomes have increased about 10 times when compared with the previous process (Baseline: USD 139 and 2014: USD 1,321). The high increase is due to the fact that organic vegetables are sold at CEDAC markets at a higher price than the normal vegetable sold at local markets, the increased production area, and that the duration of production has changed from 6 months, to the whole year. Furthermore, other incomes from livestock raising, rice crop production and non-farm activity have also increased.</li> </ul> |
| <b>Community level</b> | <ul style="list-style-type: none"> <li>- A few household farmers grew vegetables for the local markets, but production was limited.</li> </ul> | <ul style="list-style-type: none"> <li>- Some farmers are able to produce some specific seeds on their own and use it for the next crop, or sell to others.</li> <li>- Production during the rainy season is 50 per cent more than group members that decide to sell produce at local markets. However when producers get a similar price to normal vegetables, they confirm that they can sell their organic vegetable more easily than the normal vegetable because more buyers know they are organic group members.</li> </ul>                                                                                                                                                                                                                                                                                         |

*Source: The interview with CEDAC's staff on Jan 19 and 21, 2015 and organic vegetable producer groups on Feb 8 and 14, 2015.*

### **Facing challenges:**

- Some group members face water shortages during dry season from March to May which allows them to produce only a small amount of vegetables.
- Labour shortage is also a constraint for vegetable farmers if they want to expand their production. Small landholders have around 0.5 hectare of productive land. People who are employed in vegetable production are around 50 years old. A household that employed two

family members on average would be able to cultivate around 500 square meters of farm land. However, access to electricity has contributed to production expansion, since watering the vegetables is done by the pump.

- Some vegetables cannot produce seed for the next crop. Farmers usually access seeds at local or provincial markets. Often, the seed germination rate is low, which contributes to the high cost of vegetable production.

**Comments:**

- A minimum requirement for the organic vegetable group members is access to water through a pond or a well. Raising cattle is also integrated into the production system among all vegetable producers.
- Expanding the members in the group is not difficult since other people in the community recognize the positive benefits from organic vegetable production. However, the development of the groups does depend on the capacity of markets to absorb the produce from the community.
- It is found that the vegetable production is mainly done by old people while young people are likely to work in the industrial sector as garment workers. The investment cost on the 500 square meters production site is about USD 500. The money is spent on building the shelter, garden bed, wood frame, pumping machine, and jars for water storage.
- Organic methods cost more labour and effort than the normal produce. It requires more organic input and technical knowledge. But CEDAC's setting of a constant price, which is normally higher than the local market price, is important because this attracts farmers and encourages them to adopt organic vegetable farming.

**3.4.3. Supporting the production and marketing of safe vegetable by SNV's partner**

Cambodian Farmers Association Federation of Agricultural Producers (CFAP) is a local NGO working in Svay Rieng province. From 2012 up to now, under the Climate Smart Agriculture Programme, SNV Netherlands Development Organization has cooperated and supported CFAP to implement the Climate Smart Agriculture project in nine villages, of six communes of Svay Chrum district, Svay Rieng province. Before the support from SNV, CFAP already had six local farmer associations (FAs) at commune level. Among the six FAs, four FAs were set up by CFAP, and another two FAs were set up by CIDSE followed by support from CFAP. It is noted that there are three types of producer groups under the umbrella of the FA. Those are vegetable producer groups, rice producer groups, and chicken producer groups. In vegetable production, there are 319 vegetable producer members, including 115 women, representing 31% of the total members.

The FAs were established by CFAP through the following steps:

**Step 1: Promote understanding/awareness raising:** One meeting was organized to raise awareness about safe vegetable production among the vegetable producer group. Forty participants, on average, participated in each meeting.

**Step 2: Farmer group formation:** At the beginning, seven farmers/members joined to form a farmer group. Each group consisted of 3 leaders (chief, vice chief and cashier), who were elected by group members.

**Step 3: Organize FA general assembly:** FA regulations, which were drafted by CFAP were discussed, finalized, and approved, by all members of each respective FA in a general assembly. The FA management committee was also formed during the general assembly. Each FA management committee consists of 5 members, including chief, vice chief, cashier and two members. It is noted that three leaders of each farmer group were invited to become candidates for the FA management committee. Village chiefs and commune chiefs were also invited to participate in the general assembly.

**Step 4: Organize general assembly to select advisory board for the FA:** Four advisory board members were selected by the members of each respective FA.

In general, five to six months was needed to form one FA. This does not include the strengthening support that was provided by CFAP after the FA was established.

Function: The FA/FCs carry out the 3 major services

- 1) **Saving and credit services:** it is noted that FA members carry out collective saving to provide credit services to members and other villagers. The interest rate is about 2-3% per month with a loan duration of six months.
- 2) **Agricultural input supply** (e.g. vegetable seed, plastic mulched, and other agricultural materials): this enables farmers to access agricultural inputs for production.
- 3) **Agricultural extension:** The agricultural extension mainly focuses on the vegetable, rice, and chicken production.

SNV provided capacity building to the FA on Climate Smart Agricultural, especially to support farmers to improve their adaptive capacity to climate variation and change. Some climate smart agricultural practices provided to the farmers were:

- 1) Training on water storage and supply system: Pond lining with tarpaulin was introduced to participating farmers. SNV also cooperated with local authorities to install Rovai hand pumps for farmers and also provide training on how to use and maintain Rovai hand pumps.
- 2) Training on climate change vulnerability and impact assessment. The result from this assessment helped farmers to assess the impact of climate change on their agricultural production and livelihood, and made them understand their current climate adaptive measures. At the same time, it provided ideas for them to design adaptation measures to deal with the climate variation and change in the future. Additionally, the result from the assessment may encourage commune councils to integrate CSA activities into the Commune Investment Programme.
- 3) Organizing a farmers' field day to transfer and disseminate good agricultural practices from farmers-to-farmers.

- 4) Training farmers on how to carry out field research on water use efficiency in vegetable production, at the same time encouraging them to record income and expenses from vegetables.

**Table 5: Key development stage in establishment of vegetable producer group and FA**

| Attributes                  | Pre-condition stage                                                                                                                                                                          | Current stage:<br>Characteristics of strengths and weakness                                                                                                                                                                                                                                                                                                                                                                                 | Future prospects / sustainability                                                                                                                                                                           |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Institution</b>          | <ul style="list-style-type: none"> <li>- Six FAs were established by CFAP/CIDSE before the intervention of the SNV –CSA project.</li> </ul>                                                  | <ul style="list-style-type: none"> <li>- FA management committees have the capacity to facilitate overall management and daily operation of the FAs.</li> <li>- General assembly with total members was organized at least once a year.</li> <li>- Monthly meeting among FA management committee is regularly organized.</li> <li>- Meetings or trainings for FA members were only conducted when CFAP or other NGOs intervened.</li> </ul> | <ul style="list-style-type: none"> <li>- With support from CFAP, those FAs will function sustainably.</li> </ul>                                                                                            |
| <b>Function</b>             | <ul style="list-style-type: none"> <li>- After the establishment, FAs provided agricultural extension and saving &amp; credit services to its members.</li> </ul>                            | <ul style="list-style-type: none"> <li>- Working as a group, farmers need to facilitate the collective sale of their vegetables in the future.</li> <li>- Currently, FAs receive more money as loan from CFAP to provide credit services to FA members and villagers.</li> </ul>                                                                                                                                                            | <ul style="list-style-type: none"> <li>- This strengthened role of credit services and the capacity of the FA to generate income will lead to the financial sustainability of FAs in the future.</li> </ul> |
| <b>Network and partners</b> | <ul style="list-style-type: none"> <li>- As above mentioned, the FAs were established and supported by CFAP. So, these FAs also work as partners with CFAP to provide services on</li> </ul> | <ul style="list-style-type: none"> <li>- SNV-CSA project plans to improve market linkage for target farmers. An NGO, called IVY, has been working on the supply chain of vegetables to markets (such as Natural Garden,</li> </ul>                                                                                                                                                                                                          | <ul style="list-style-type: none"> <li>- CFAP expects that these FAs are strategic partners to provide loans/credit services for the future sustainability of the organization.</li> </ul>                  |

|                          |                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                     |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                          | agricultural extension and credit.                                                                                                                           | <p>Casino/restaurants in Bavet/Cambodia-Vietnam border, and AEON Mall).</p> <ul style="list-style-type: none"> <li>- Consultation meetings between SNV and Natural Garden have been organized. SNV is now working more on the supply side to ensure quality and quantity for such markets.</li> <li>- CFAP has put more focus on the FAs. They are supporting these FAs to register as Farmer Cooperatives.</li> </ul> |                                                                                                                                                                     |
| <b>Supporting agents</b> | <ul style="list-style-type: none"> <li>- Provincial Department of Agriculture of Svay Rieng was involved in strengthening and supports these FAs.</li> </ul> | <ul style="list-style-type: none"> <li>- The SNV-CSA project has linked PDA-Svay Rieng to the project. This would enable the CSA project to impact PDA strategies on climate smart agriculture.</li> </ul>                                                                                                                                                                                                             | <ul style="list-style-type: none"> <li>- It is expected that PDA will integrate CSA into its plans that will result in improving and sustaining the FAs.</li> </ul> |

Source: The interview with SNV's staff on Dec 31, 2014 and Jan 30, 2015 and SNV's partner on Feb 12-13, 2015

**Table 6: Impacts on livelihood through vegetable producer group and FA**

| Productions             | Before                                                                                                                                                                                                                                                          | Current                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Individual level</b> | <ul style="list-style-type: none"> <li>- Farmers relied on rainwater as the main water source. Only a few farmers could plant vegetables and sell to markets.</li> <li>- The land for vegetable cultivation was about 70m<sup>2</sup> per household.</li> </ul> | <ul style="list-style-type: none"> <li>- The majority of the farmers in the project target areas have water ponds for storing rainwater, but water from the pond is not enough to plant vegetables year round.</li> <li>- According to the data collection by the SNV-CSA project, 20 sample farmers have applied CSA technologies. Farmers selected crops that mature in a short time and are drought tolerant. Almost all collaborating farmers increased the area devoted to vegetable production, from 70m<sup>2</sup> to 320m<sup>2</sup> on average. The quantity of vegetables produced increased from 60kg/HH to 340kg/HH on average. Productivity</li> </ul> |

|                        |                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                        |                                                                                                                                                                                                                                                                                                                                                             | <p>increased from 0.86kg/m<sup>2</sup> to 1.06kg/m<sup>2</sup>. Income has increased, from 174,900KH Riel/HH to 632,600KH Riel/HH (262 %) on average.</p> <ul style="list-style-type: none"> <li>- Household food security has improved. More importantly, the farmers consume vegetables from their own farm that are good for their health. They also have fish from the tarpaulin ponds for family consumption. The income from vegetable sales, together with income from off-farm activities has improved the household's income and livelihood.</li> </ul>                                                                                                       |
| <b>Group level</b>     |                                                                                                                                                                                                                                                                                                                                                             | <ul style="list-style-type: none"> <li>- Solidarity and cooperation among the smallholder farmers improved when they were formed into farmer groups or FAs. This is also helpful for the agricultural extension activities.</li> <li>- SNV also plans to support women farmers with vegetable processing. This would help those women farmers to add value to their vegetable products.</li> <li>- The vegetable producer group members do not collectively sell their vegetables, but sell it individually; 40% of vegetables are brought from the villages to sell at markets in Svay Rieng town, 20 % to neighboring families, and 40% to local markets.</li> </ul> |
| <b>Community level</b> | <ul style="list-style-type: none"> <li>- According to the climate change vulnerability and impact assessment report conducted by SNV in 2014, about 70% of the total families in the studied commune took loans from banks. The average loan size was USD 500; the maximum was up to USD 2,500, and monthly interest rates range from 1.9 to 3%.</li> </ul> | <ul style="list-style-type: none"> <li>- Regarding water shortage, farmers need to further improve their water harvesting capacity, at the same time improve their technical skills in applying agricultural practices that use less water i.e. climate smart agriculture practices .</li> </ul>                                                                                                                                                                                                                                                                                                                                                                       |

Source: The interview with SNV's staff on Dec 31, 2014 and Jan 30, 2015, SNV's partner and vegetable producer groups on Feb 12-13, 2015

### **Facing challenges, solutions and outcomes:**

- There is limited understanding among farmers, local authorities (village chief, commune chiefs, and other commune councilors), on the concept of climate change (CC), and climate smart agriculture (CSA). In response, the project conducted climate change awareness raising, and about 300 people, including farmers and local authorities have improved their knowledge of this subject and how to adapt.
- Some agricultural materials are not available in the community. For instance, farmers could not find tarpaulin or substitute materials in their respective area. The cost of tarpaulin is high; about USD 100 to line a water pond. This constrains their application of the recommended technique. In response, SNV has consulted with FA leaders to improve the input supply chain of the agricultural materials, including the tarpaulin. FA leaders are interested in taking up the role as agriculture input supplier; however an in-depth study on demand for those materials needs to be conducted.
- Due to a shortage of water, farmers could not produce larger quantity of vegetables to ensure regular supply to the markets. In response, SNV has supported farmers to improve water storage and supply systems for vegetable production. As a pilot project, ten vegetable farmers were selected to test tarpaulin ponds and Rovai pumps. Based on the farmers' experience, the tarpaulin pond shows the results 1) increased vegetable production cycle from one to three cycles per year 2) increased incomes by an additional USD 210/year through vegetable production, not including consumption and income from fish and 3) eight percent of the improved ponds were used for fish-raising, for both home consumption and sale.

### **Comments:**

- Cooperating farmers and FA leaders and some non-cooperating farmers<sup>10</sup> have applied agricultural innovations and this has resulted in improved food production and incomes.
- The local authorities/commune councils appreciate the contribution and commitment of the FAs in community development. SNV-CSA project will promote the integration of CSA successful experience and best practices into the local development plan. The integration of CSA into commune development plans would also benefit more farmers in the future.

#### **3.4.4. Supporting production and marketing of cassava by SNV's partner**

The inclusive business project for promoting sustainable smallholders cassava has been implemented since 2013 by a local NGO, namely Vigilance Cambodia with funding from SNV. By 2014, there were 20 cassava producer groups in 18 villages of Krouch Chmar, Kampong Cham province and Tbaung Khmum districts, Tbaung Khmum province. Five hundred and seventy six smallholders, 136 women, were registered with cassava producer groups. All of the producer groups that developed their statutes and internal regulations were officially recognized by the commune council.

As a result, cassava producer groups have done business, and dealt with the processing enterprise. By the end of 2014, 12 cassava producer groups out of 20 groups had signed a sales agreement with the

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<sup>10</sup> Non-cooperating farmers: Farmers who did not join the group and not trained by the project.

selected enterprises and obtained an identification card. Based on the sales agreement and plans of producer groups, 157 households plan to produce 3,755 tons of cassava to supply to the processing enterprises.

The process to establish the cassava producer group is as follows :

**Step 1: Identify and select the cassava processing enterprise:** The project made an agreement with the processing enterprise. One cassava processor, namely Song Heng Enterprise, and three cassava collecting centres (Traders) were selected as clients of the project.

**Step 2: Select project target area:** Based on the consultation with relevant local authorities such as commune council and village chief and suggestions from the processing enterprise, four potential communes were identified as the target areas of the project. The project gave the village two weeks to organize consultation with villagers about whether to participate in the project. As a result, 18 potential villages were selected as target villages of the project over a four-week period.

**Step 3: Farmer group mobilization and developing group statute:** The project team organized a village general meeting in every potential village to present the concept of the project, and mobilize farmers to setup the cassava producer group. There are three types of meeting in each village: 1) meet with farmers in general and then select interested farmers and interim leaders to develop draft statutes 2) meet with farmer representatives to review the draft statute and 3) finally meet with interested farmers for registration, election of leaders and to approve the statute. As a result, 20 cassava producer groups were organized over a three-month period.

**Step 4: Developing production plan:** After the pre-formation of cassava producer group, the statute was approved by the group members with further consultation with commune council. Then, they start to develop a production plan with their members. This takes about one month.

**Step 5: Farmer group capacity building:** There are three trainings on cassava production technique per group, and four trainings for group leaders on leadership, management and business dialogue. Three types of consultation on market linkage were conducted and especially, making a sale agreement with a processing enterprise via business dialogue.

**Table 7: Key developing stage in establishment of cassava producer groups**

| Attributes         | Pre-condition stage                                     | Current stage: Characteristics of strengths and weakness                                                                                      | Future prospects / sustainability                                                  |
|--------------------|---------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| <b>Institution</b> | - No statute and structure of the group.                | - Cassava producer groups are still weak; 8 months after formation.<br><br>- Saving activity was introduced into the cassava producer groups. | - The group will not continue without further investment to strengthen the groups. |
| <b>Function</b>    | - Input supplier and trader did not provide any service | - Provincial Department of Agriculture (PDA) has agreed to provide training                                                                   | - The group will continue if the government has a                                  |

|                             |                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                             |
|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                             | <p>to smallholders.</p> <ul style="list-style-type: none"> <li>- The groups were already set up but they could not provide better service to their members because of a lack of commitment.</li> </ul> | <p>to smallholders.</p> <ul style="list-style-type: none"> <li>- Farmer group leaders are weak and lack commitment as they do not see the advantage of the group and long-term profit.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <p>policy support to cassava production.</p>                                                                                                                                                                                                                                                                                                                                |
| <b>Network and partners</b> | <ul style="list-style-type: none"> <li>- No networking is identified.</li> </ul>                                                                                                                       | <ul style="list-style-type: none"> <li>- SNV has built a partnership with CIAT to implement the project and partnership with PDA, but this engagement is limited because of a lack of budget support.</li> <li>- SNV has selected a local organization, -Vigilance, to work on group mobilization and strengthening the producer groups.</li> <li>- SNV has tried to involve other key stakeholders in the value chain such as input suppliers and local traders known as Cassava collecting points in the community. The local traders will provide the smallholder farmers in terms of technical information sharing and supplying good quality input or play a role as service providers. Currently, six service providers have been selected to provide information on cassava production and supply good inputs or materials to farmers.</li> </ul> | <ul style="list-style-type: none"> <li>- Network would get further support from other development partners since now many development agencies are interested in working in the cassava sector.</li> <li>- There is a limited budget, but if saving groups function well, they might continue to be supported because they want to have shares with the farmers.</li> </ul> |

Source: Interview with SNV's staff on Dec 27, 2014 and Jan 30, 2015, SNV's partner and producer groups on Feb 9-10, 2015

**Table 8: Impacts on livelihood improvement through cassava producer group**

| Productions                                               | Before AC                                                                                                                                                                                                                                                       | Current                                                                                                                                                                                                                                                                                     |
|-----------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Individual Level</b>                                   | <ul style="list-style-type: none"> <li>- Small holder farmers adopted mono crop on a lot of land, but the yield declined from year to year.</li> </ul>                                                                                                          | <ul style="list-style-type: none"> <li>- Mono cropping still occurs, but some farmers have tried inter-cropping.</li> <li>- The cassava yield seems to have increased after the producers applied techniques which were introduced by the project.</li> </ul>                               |
| <b>HH members employed in income generation activity.</b> | <ul style="list-style-type: none"> <li>- Household members employed in cassava production and other agriculture activities.</li> </ul>                                                                                                                          | <ul style="list-style-type: none"> <li>- Agriculture machinery was introduced and labour employed in agriculture was reduced. The workers moved into other non-farm activities to earn a living.</li> </ul>                                                                                 |
| <b>Group Level</b>                                        | <ul style="list-style-type: none"> <li>- Baseline income: USD 4,680 per household in which USD 3,536 or equaled to 71% is from cassava production.</li> <li>- Production cost of cassava: USD525/ha.</li> <li>- Income of cassava per ha: USD 1,189.</li> </ul> | <ul style="list-style-type: none"> <li>- Another survey will be conducted by June 2015 to assess impact</li> <li>- Production cost: USD 517</li> <li>- Income: USD 1,200 depended on price of cassava. This needs to be updated because the harvest season will finish in April.</li> </ul> |
| <b>Community Level</b>                                    | <ul style="list-style-type: none"> <li>- Processed dry chips and sold the produce to local traders and Vietnam and fresh root to processors.</li> </ul>                                                                                                         | <ul style="list-style-type: none"> <li>- Mostly sold fresh root of cassava to traders, processors and Vietnam traders.</li> </ul>                                                                                                                                                           |

Interviews with SNV's staff on Dec 27, 2014 and Jan 30, 2015, SNV's partner and producer groups on Feb 9-10, 2015

#### **Facing challenges, solutions and outcomes:**

- **Pest and disease:** There is no solution to the new disease on cassava, Witch's Broom. The project has introduced cassava producers to a system of inter-cropping and to select only the healthy stem or change to disease free seed. However, the proposed solution does not work well since the materials are not available. There is also a lack of knowledge on how to apply fertilizer and pest control. CIAT as partners with SNV on the IBC project, have replanted the healthy plants provided to farmers, but it is still not enough.
- **Price fluctuation:** The price of cassava is dominated and controlled by Vietnamese traders and frequently fluctuates over time. Most farmers get loans for cassava production and fixed loan payment at the harvest season. Therefore, they are often forced to sell their produce even at low price, to pay back loans. However some producer groups have also adopted the saving activity, although they do not have enough funds to meet their needs.

## Comments:

Generally the project has helped farmers to improve their productivity and income via improving technology. However, market access is still a challenge for farmers and processor due to the weakness of value chain governance and price fluctuation. Some processing enterprises stopped their cassava processing business because they cannot compete with the neighboring countries in terms of the price of the final product, and the cost of processing and export. Cassava processing enterprises also have limited financial capacity to purchase cassava produced during the harvest period for year-round processing.

- Policy support for the cassava sector is necessary because it will encourage the private sectors to invest in cassava processing which will help stabilize the selling price. The policy must include strategies to reduce costs in processing and exporting to ensure a competitive selling price. The cassava sector is still an option for small farmers to generate income because the crop is resistant to drought, require slow investment costs, and is also flexible to harvest within 10 – 18 months. Currently, the United Nations Development Program (UNDP) has a project on cassava export promotion that is aligned with ministry of commerce (MoC) that promotes the cassava sector. This project will also continue to support small farmers and investors to maintain cassava production.

## 3.5. Analysis and lessons learnt from case studies

### 3.5.1. Global commodity chain approach vs. Filière approach

Two market approaches or commodity chain approaches are observed: Global chain and Filière approaches.

**Filière approach:** The *Filière* approach was developed by researchers from the *Institut National de la Recherche Agronomique* (INRA) and the *Centre de Coopération Internationale en Recherche Agronomique pour le Développement* (CIRAD). The *Filière* approach has its origin in technocratic agricultural research. When France was a colonial power, agricultural policy focused on developing selected export commodities like rubber, cotton, coffee and cocoa. This required a commodity focused analysis for which the *Filière* approach was well-suited.

This approach focused on local production systems and how these are affected by public institutions (Raikes et al., 2000). For example, when government signed a deal to export a large amount of a specified agricultural commodity, it needed to ensure the delivery of the products. Therefore, most large producers will sub-contract or engage to produce such exported commodities and volumes, while small producers rarely have a chance to supply such a large amount of product. Moreover, the *Filière* analysis integrates social network theory for a comprehensive approach of social relations and transactions. This market approach also attempts to build strong social relations within a group of producers for cross-checking, and also with consumers to build trust around the producers, in order to get a higher market price than the ordinary produces.

The vegetable market chain approach which was implemented by SNV and CEDAC, are similar to the *Filière* approach through which small holder producers are formed into groups, FA or AC, and the specification of the local products, quantity, time of supply, and quality are defined. Products are collected from a group of local producers and concentrated at another level, commune or district,

and supplied to provincial or urban markets. So far, CEDAC has successfully promoted organic vegetable production because they set a guaranteed price, and agree to buy a specific volume of product.

In addition, the Cambodian institute for Research and Rural Development (CIRD) has also worked with pepper producers and organized a producer group following the Filière approach. They managed to get a Protection of Geographical Indication (PGI) for Kampot Pepper. Kampot Pepper has a good reputation in both local and export markets, particularly in Europe. From this reputation, the exporter has approached the producer groups of Kampot Pepper, and established a contract for export markets. However, in the study framework, we did not have sufficient resources and time to cover the case study of Kampot Pepper. This finding is based on the interview with experts in CIRD who are the project implementers of the PGIs project.

**Global chain approach:** The Global chain approach was developed by Gary Gereffi and others within a political economy of development perspective (Gereffi, 1999). Global chain analysis has been developed primarily for industrial commodity chains (Raikes et al., 2000). They focus on the emergence of a new global manufacturing system in which economic integration goes beyond international trade in raw materials and final products (Gereffi, 2000).

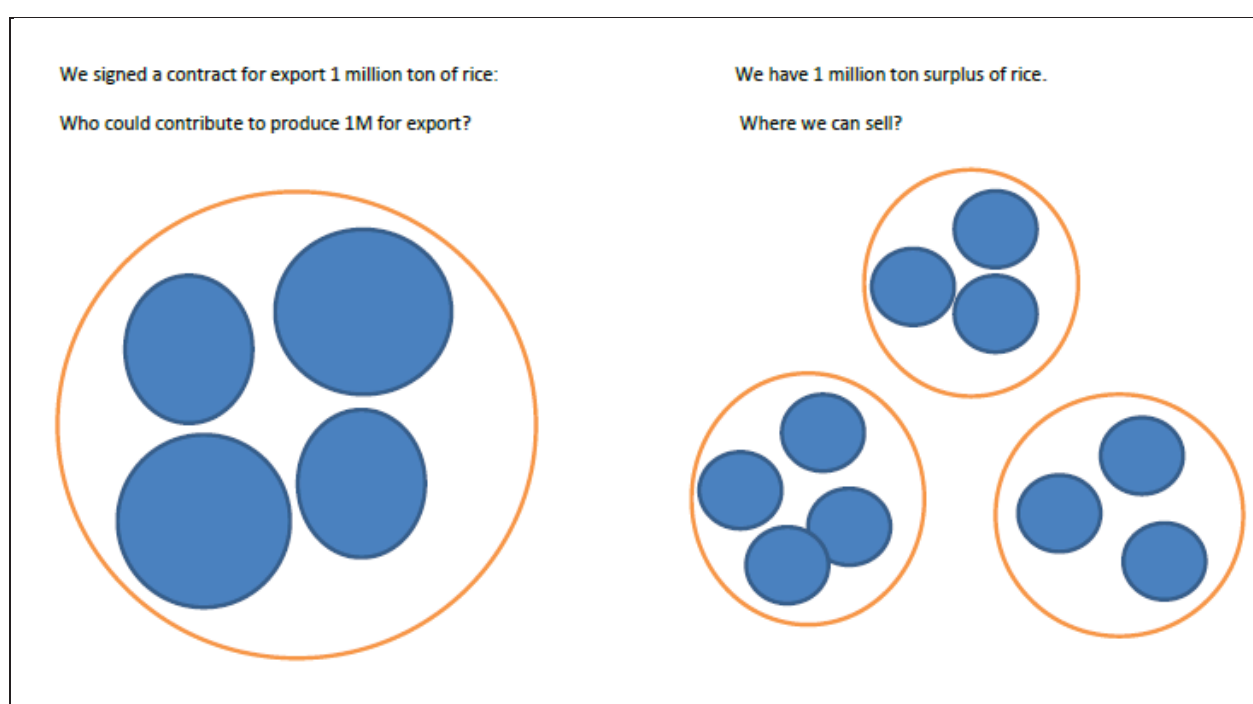
The means of promoting the Cassava market chain by SNV, is similar to the Global chain approach. Cassava produce was supplied to foreign countries like Vietnam or China from developing countries, e.g. Cambodia. To meet the demand-driven nature of cassava industry, producers in Cambodia grow cassava to supply to the markets. However, due to the lack of coordination and application of state regulation among relevant bodies, producers often lack negotiating power and fail in their business due to an over-supply and a low selling price. This is also due to the fact that cassava cannot be returned to local markets for domestic consumption if it is not exported. SNV has worked to improve the cassava chain through an inclusive business development approach in which they aim to bring involved stakeholders to work together, and bring benefits to all.

As a result, cassava producers are now connected with local collectors and local manufacturers. However, due to the business scale of local manufacture, cassava still largely depends on export markets with sales of the raw product driven by the global chain. To take advantage of over production of cassava in the developing country, Cambodia, buyers in developed countries are not interested in organizing production systems to ensure their supply, (no contract farming for export), but at the same time, buyers could lower the price to maximize their benefits from the non-regulated system of the global chain. Contract farming is a tool for promoting the Global chain approach where producers and buyers agreed on the specification of the products, setting-prices and delivering schedule.

**Combination of the Filière and Global chain approaches:** CEDAC has also worked by combining the two market approaches in its interventions on rice commodity known as organic rice market. In the beginning organic rice producer groups are organized at village level, and then combined at commune level, district level, provincial level and national level. Organic rice has several market destinations, either the local urban markets or the export markets. CEDAC Enterprise buys organic paddy from rice producers, and mills it to sell to urban consumers. This is known as the Filière approach. In addition, CEDAC also plays a role as middleman and collaborated with export companies to export organic rice to foreign markets e.g. EU and the US. In this case, organic rice exporters make a contract with CEDAC for a certain amount of organic rice. CEDAC coordinates with farmers to produce organic rice to meet export needs. A set demand for organic rice is agreed by

the export markets or buyer, who then work with a local company, (CEDAC Enterprise), and this is known as the Global chain approach.

In sum, the two approaches (Global chain and Filière) or the combination of two approaches are appropriate to support small farmers. However, at the beginning stage of linking farmers to markets and to help farmers to prepare themselves to face market challenges, the Filière approach is much more promising. The Filière approach will help farmers to get organized, to produce for local markets and then gradually learn to meet the requirements of urban and export markets. Knowledge and experience in organizing farmer groups or agriculture cooperatives are already in place. The adoption of the markets approach depends on the nature of selected commodities and the readiness of involved stakeholders of the commodities. The Filière approach has “pushing power”, which helps producers to get organized and empower them, while the Global chain approach has “pulling power”, to motivate and encourage farmers to get into the market systems.



**Figure 3: Illustration of two market approaches: Global chain (left) and Filière (right)**

### **3.5.2. Advantages and disadvantages of the Filière and Global chain approaches**

The two market approaches are adapted to link farmers 'produces to markets. They contain both advantages and disadvantages which should be taken into consideration when replicating to other commodities in the country.

**Global chain approach:** The approach involves a large amount of a target commodity which is normally driven by global market demand. It is more favorable for large landholders or intermediaries through contract framings, rather than the existing local producers. The Global chain approach encourages the macro-economic growth of the country, rather than small landholder producers.

**Filière approach:** The Filière approach focuses on local production systems. It integrates social network theory for a comprehensive approach to understanding social relations and transactions through the mobilization of local farmers, and their produce for markets. It also attempts to build strong social relations within a group of producers for cross-checking, and also with consumers to build trust around the producers in order to get a higher market price than the ordinary produce. Groups of the communities gradually learn business ethics, and business rules to come up with export markets. . This approach takes more time and financial resources to mobilize the community to work together, and strengthen their production system to meet f niches or ecological markets. Furthermore, the approach will not work well if communities lack trust or solidarity.

### **3.5.3. Safe products (SNV's partner) vs. niche market product (CEDAC)**

Linking farmers to the markets became a “fashionable” topic of interest in development after the release of the World Development Report in 2008. The report highlighted that in order to reduce poverty in developing countries; it was needed to link farmers to markets. Since that time, many development projects try to explicitly include the, “linking farmers to the markets”, in their proposed projects. However, to be successful in linking farmers to markets, requires a strategic design. The selection of the commodity to introduce into the markets is a key aspect of any strategy for entering into the markets.

When markets were flooded with agricultural product, CEDAC selected ecological produce as a niche market, while SNV works with its partners to select the safe local produces<sup>11</sup> as their entry strategy. The organic produce of CEDAC Enterprise is well-known by urban consumers. In addition, at community, district and provincial level, organic producers who supply organic commodities to CEDAC Enterprise are also well-known by local consumers. As a result, local consumers can also approach local producers to purchase organic produce. Similarly, vegetable producers of SNV's partners can sell their produces at local markets easily.

### **3.5.4. Advantages and disadvantages of the self-reliance and inclusive business philosophies**

The study has found two development philosophies being adopted by the two selected NGOs; self-reliance philosophy by CEDAC and inclusive business by SNV. The two philosophies are appropriate for different stages of development. Self-reliant development could help farmers to control their business chain, and ensure the marketing of their produce. Furthermore, it empowers the community strengthens ownership which leads to resource control and development based on shared decisions. However, the Self-reliant philosophy takes time to build local structure and trust among the producer group as well as an understanding of business and leadership in the group.

The inclusive business approach helps farmers improve the existing business structure in a short time period and consume fewer resources such as time, finance and effort. However, the producers need

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<sup>11</sup> Safe agricultural produces is defined by the agriculture production that follow the standard of good agriculture practices (GAP). So far, GAP is recognized by ASEAN countries known as ASEAN GAP. In principle, each ASEAN county has to follow this standard if they have to export their agriculture produces to other ASEAN countries. However, in Cambodia, GAP inspection is not yet implemented.

to deal with multiple stakeholders throughout the periods of their business life. This is due to the fact that small producers were organized just for supply, but not to control the system. When supply is over the demand, buyers do not care about the producer group since they still have other alternative ways to get the supplies.

**Table 9: Challenges and successes in linking farmers to markets in the selected commodities**

| Commodity | Market destination                              | Key success and challenge                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-----------|-------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Vegetable | Local markets and urban markets                 | <p><b>Key success:</b></p> <p>There is unity among farmer producers in the local community. Vegetable producers are able to produce vegetables, not only for home consumption, but also to supply to the markets.</p> <p>Vegetable production was introduced for home consumption and a subsistence income, but gradually it has become the main income source and contributes to their family economy.</p> <p>Farmer can expand their production volume and also received double the selling price if compared with the normal produce.</p>                                                                                                         |
|           |                                                 | <p><b>Key Challenge:</b></p> <p>Production decreases in the months March and April when water is limited.</p> <p>Market demand is limited, which is a constraint for farmers that want to expand their vegetable production.</p> <p>There is limited access to good quality seeds, and CSA technologies at community level.</p>                                                                                                                                                                                                                                                                                                                      |
| Rice      | Local markets, urban markets and export markets | <p><b>Key success:</b></p> <p>Local farmers learnt better production techniques, particularly the System of Rice Intensification, which helped increase productivity, as well as allowing them to obtain a better selling price.</p> <p>Local people have worked together in groups, FA, AC, and federations, and mobilized resources for business development and expansion which leads to self-reliance.</p> <p>The strategy to finance rice mill cooperatives is attracting support from other development actors, donors, as well as the government.</p> <p>Organic rice produce has been linked to both national and international markets.</p> |

|                |                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|----------------|---------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                |                                             | <p><b>Key Challenge:</b></p> <p>Bridging farmers to both national and export markets does require time and financial investment, as well as policy enforcement, especially the GAP.</p> <p>Financial capacity to collectively purchase rice from members during harvest season, and the facility to process paddy, rice are still limited by both CEDAC and the rice mill cooperatives.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Cassava</b> | Export markets and local processing factory | <p><b>Key success:</b></p> <p>As a result of technical training provided by the project, local producers in the groups learnt better production techniques. Although the cassava has not yet been harvested, it seems that it is growing better than previous years.</p> <p>Through project interventions, some key constraints in linking farmers to markets have been reduced. For instance, farmer producers have better access to information about the sale price from different sources. This helps them to make better decisions to sell their produce to market outlets.</p> <p><b>Key Challenge:</b></p> <p>Since production exceeds local capacity for processing, the selling price has changed over time as a consequence. The price is usually dependent on the processing enterprises and foreign traders, namely Vietnam.</p> <p>High production costs and non-direct market costs affect smallholders since collectors, or processors will offer local producers a low selling price to compensate for these costs.</p> |

In sum, while many farmers spoke about constraints and difficulties in growing vegetable; for example a lack of water, low soil fertility, and lack of markets, collaborating farmers working with CEDAC and SNV's partners are able to produce vegetables not only for home consumption, but also for supplying to both local, and urban markets. Those vegetable producers are confident with the knowledge they have, and continue to develop other innovations. Presently, some farmers working with CEDAC are able to produce seed for next planting season, while farmers working with SNV are also able to produce high-value vegetables and off-season vegetable.

Therefore, it could be said that innovations or technical know-how are available in the local area and have been successfully adopted. Scaling up and scaling out these successful experiences to other farmers in other areas is needed.

## **IV. Conclusion and recommendations**

### **4.1 Conclusion**

From the above analysis, it is possible to draw the following conclusions:

- NSDP 2014-18 does not explicitly prioritize large-scale or small-scale agriculture, but rather provides a set of initiatives for the improvement of the agricultural sector which could benefit both small and large-scale landholders. These initiatives are driven by a focus on modernization, moving away from traditional agriculture to modern techniques, on diversified crops of high added value, and mainly oriented to export markets. Major initiatives are aimed at the improvement of productivity through mechanization, irrigation improvement, introduction of new technologies, the promotion of trade and export of agricultural products, the diversification towards high-value and market-oriented products, or the improvement the quality of agricultural products.
- Farmers are mainly considered in the NSDP as a whole homogeneous group which could all enter the modernization process and benefit. There is little consideration about adapting strategies tailored to the different categories of smallholders. Moreover, there are few details about how to match the opportunities from the different market types, local, medium, export/global markets to smallholders. Collaboration and partnerships between large and small producers is possible, but is mainly seen through contract farming, or a better access to improved inputs and technologies. Without adapting strategies, those who will mostly benefit from the priority policies enounced in the NSDP are mainly large-scale producers, and the higher category of small landholders.
- The findings from key informant interviews have shown the complexity of the strategies and ideologies to support small landholders. However, there are both challenges and prospects in these strategies. Different actors in this study have a strong belief and commitment towards their ideologies: raising the status of small landholders through the improvement of their livelihood to contribute to macro-economic development (government agencies); improvement of the existing systems towards improving the benefits of all involved actors (SNV); and raising the status of small landholders by strengthening producers' capacities and self-reliance (CEDAC). Both organizations have proved their successes in supporting small landholders from their unique approaches: market approaches and selected commodities. However, strategic documents of the government (NSDP and ASSDP) on the agricultural sector do not provide details and clear direction on these approaches.
- The findings from the case studies have shown that ideologies from institutions and at the program level have had a positive impact on the communities. It is also found that the three lessons learnt that should be included into policy documents: 1). Self-reliant development through the Filière approach, 2). Inclusive business through the Global chain and 3). Innovative technologies for agriculture development in unfavorable conditions. These lessons could be replicated to other commodities as well as to other target areas.

However, it must be recalled that the conclusions presented here are drawn from only four case studies of two organizations. More case studies should be selected, documented, analysed and further elaborated in order to strengthen the results of the present study.

## **4.2 Recommendations**

### **To government:**

- So far, the Government has established the Agriculture Cooperative Department under the GDA. However, manuals for the implementation of agriculture cooperative are not yet ready. Therefore, Government should speed up the legal framework and technical services for the setting up of agriculture cooperative, such as training/learning materials (a. Implementation and management of agriculture cooperative manual and b. Training of trainer manual).
- RGC should focus its support on smallholders since the evidence showed that appropriate technical agriculture knowledge and market facilitation as well as increased access to finance leads to a sustainable and self-reliant development, particularly as it relates to national food security and nutrition strategies. The Filière approach should be adopted to organize farmer producer groups in the early stage in linking farmers to the markets. Particularly, in the context of ASEAN Economic Community, Agriculture Cooperatives should be established on the main agriculture commodities and strengthened.
- So far, federations of agriculture cooperatives have been established and are functioning. Under the federation framework, agriculture cooperatives have mobilized financial resources and encouraged their agriculture cooperative members to invest in district rice mill cooperatives. Therefore, the Government should also establish a legal framework to facilitate the promotion of the federations.
- Government should make funds available to support agriculture cooperatives or federations. The funds should also be directly accessible to agriculture cooperatives in order to strengthen and expand their business scales.

### **To NGOs and NGO Forum:**

- Large-scale landholding agriculture is led by large companies; the promotion of the Global chain approach is a priority of the government at the moment. Large-scale agriculture could become dominant Cambodian agriculture in the near future. Therefore, NGOs and NGO Forum should organize, without delay, public events to share these research findings toward promote smallholder agriculture in Cambodia.
- NGOs should also promote and implement the Filière approach to support farmers for other commodities, like poultry and fruit. This will promote further learning about the relationship between small farmers and market development, and will challenge the global chain approach.
- At the same, NGOs should document and disseminate good agriculture practices to other farmers and to other regions.
- NGOs should also support agriculture cooperatives to access funds for the implementation, and expansion of the community business.
- Last but not least, in order to generate more insights and to give due weight to the different options in the replication of the lessons learnt, an inclusive debate should be organized to validate the findings. The debate should be organized around the following questions:

- Are there other market approaches to support small landholders which have been already successfully implemented in Cambodia? Can other case studies confirm the two approaches? Which one is the most appropriate and under which conditions?
- Should we promote self-development philosophy or inclusive business philosophy? Which philosophy is well suited to which commodity, or geographical zone, or to which development stage?
- Should we disseminate technical know-how on the production of market commodities or not? Why?

**To farmers and agriculture cooperatives:**

- Farmers should organize themselves as a group or AC in different respective commodities for markets. However, the producers first need to fulfill household needs, then supply to local markets. Farmers also need to learn about market requirements related to the specifications of the product. So that they can gradually supply not only local markets, but also urban and export markets.
- In order to access external funds, agriculture cooperatives need to learn standard financial management practices, prepare a business strategic plan, and an operational plan. Communication and leadership are also very important for agriculture cooperatives.

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## **Annex 1: List of Key informants**

| N0 | Discussion date | Name of interviewee                                           | Institution                 | Position                                                                      |
|----|-----------------|---------------------------------------------------------------|-----------------------------|-------------------------------------------------------------------------------|
| 1  | 27/12/2014      | Mr. Lim Sokundarun                                            | SNV                         | Project consultant on cassava                                                 |
| 2  | 31/12/2014      | Mr. Yim Soksophors                                            | SNV                         | Project consultant-CSA project                                                |
| 3  | 2/01/2015       | Mr. Sar Sanphirom                                             | Natural Garden              | Project manager                                                               |
| 4  | 5/01/2015       | Mr. Yi Bunhak                                                 | Department of Agro-Industry | Deputy director-legal contract farming facilitator                            |
| 5  | 5/01/2015       | Mr. Ung Soeun                                                 | GDA                         | Agricultural land department officer                                          |
| 6  | 7/01/2015       | Mr. Ngin Chhay                                                | GDA                         | Director of rice department                                                   |
| 7  | 9/01/2015       | Mr. Heng Chhun Ly                                             | GDA                         | Deputy director of crop protection department                                 |
| 8  | 9/01/2015       | Dr. Mak Soeun                                                 | GDA                         | Director of farmer cooperative                                                |
| 9  | 11/01/2015      | Mr. Ung Mony                                                  | UNDP/IFAD                   | Advisor                                                                       |
| 10 | 19/01/2015      | Mr. Prak Sereyvath                                            | CIRD                        | Director                                                                      |
| 11 | 19/01/2015      | Mr. Sam Vitou<br>Mr. Keam Makarady                            | CEDAC                       | Executive director<br>Program director                                        |
| 12 | 20/01/2015      | Mr. Mao Sopheareth<br>Mr. Yi Bunhak                           | Department of Agro-Industry | Director<br>Deputy director                                                   |
| 13 | 21/01/2015      | Dr. Yang Saing Koma                                           | CEDAC                       | President                                                                     |
| 14 | 30/01/2015      | Ms. Marieke van Schie<br><br>Mr. Ly Sereyrith<br>Mr. Sun Heng | SNV                         | Program Advisor<br>Senior advisor of SNV advisor, agriculture                 |
| 15 | 9/02/2015       | Mr. Sophal<br>Mr. Tum<br>Ms. Chak Panha                       | SNV's partner-Vigilance     | Executive director<br>Project field staff<br>Project field staff              |
| 16 | 10/02/2015      | 7 members of cassava producer group                           | SNV/Vigilance               | Thbong Khmom district, Thbong Khmom province                                  |
| 17 | 10/02/2015      | Mr. Thy                                                       | Cassava collector           | Thbong Khmom district, Thbong Khmom province                                  |
| 18 | 11/02/2015      | Mr. Soeur Rany<br>Mr. Cheab Mony                              | CEDAC                       | Rice mill cooperative leader<br>Rice mill controlling leader                  |
| 19 | 12/02/2015      | Mr. Nguon Oeun<br>Mr. Pov Lina                                | SNV's partner CFAP          | Credit officer<br>Agriculture assistant                                       |
| 20 | 13/02/2015      | Mr. Yab Thoeun                                                | SNV's partner-CFAP          | Agriculture and advisory officer                                              |
| 21 | 14/02/2015      | Ms. Kuy Sivantha                                              | CEDAC-Kampong Chnang        | Project field staff (vegetable)                                               |
| 22 | 14/02/2015      | 5 members of organic vegetable group                          | CEDAC                       | Pong Ro commune, Rolear B'ier district, Kampong Chnang province               |
| 23 | 15/02/2015      | Mr. Ker Munthivuth                                            | GDA                         | Director of department of planning, accounting, and international cooperation |

## Annex 2: Questionnaire for key informant interviews

|                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>1) Literature and desk reviews</b>    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Objectives</b>                        | <ul style="list-style-type: none"> <li>- To review how large concessions and how small land holders commitment is incorporated into existing Cambodian policy documents</li> <li>- To compare the benefits and drawbacks of both approaches for the agricultural development in Cambodia</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Key questions and checklists</b>      | <ul style="list-style-type: none"> <li>- To what extent does the policy priority in agriculture mentioned in Cambodian policy documents favor small-land holders or large-scale land concessionaires?</li> <li>- What are the types of support offered by the Royal Government of Cambodia to improve agricultural productivity?</li> <li>- What are the advantages and the disadvantages of the two approaches to support the development of agriculture</li> <li>- What are the challenges small landholders farmers are facing in Cambodia?</li> <li>- What are the consequences of the large-scale land acquisitions on Cambodian farmers?</li> </ul>                                                                                                                                                        |
| <b>Methodology</b>                       | <ul style="list-style-type: none"> <li>- Review of official legal documents from the Royal Government of Cambodia (NSDP, sub-decrees, other legal docs) related to the support of agricultural development</li> <li>- Review of existing research papers on LSLAs in Cambodia related to the opportunities and the consequences on farmers and on the role and the challenges of small landholders farmers in Cambodia</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                |
| <b>2) Relevant Government Staff-MAFF</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Objectives</b>                        | <ul style="list-style-type: none"> <li>- To understand view points of the government officials toward small landholder and large landholder development</li> <li>- To understand how the government take responsible to ensure the inclusive economic development in small landholder and landholder initiatives</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Key questions and checklists</b>      | <ul style="list-style-type: none"> <li>- What are the expectations from large scale landholding development contributing to Cambodia economy and the development of the nation?</li> <li>- To what extend do the small scale holders and large scale landholder contribute to the country economy, mainly the agricultural development?</li> <li>- How the government provides technical and non-technical supports to the small scale landholders and large-scale landholders?</li> <li>- What are the existing policies to prosper the economy of small landholders?</li> <li>- What the government has done so far to ensure the inclusive economic development of small landholders?</li> <li>- Is the inclusive development ensured through small scale and large scale landholding development?</li> </ul> |
| <b>Methodology</b>                       | <ul style="list-style-type: none"> <li>- Interview government officials in General Department of Agriculture, Agro-Industrial Department and Livestock Department</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

| <b>3) CEDAC and SNV staff in Phnom Penh</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Objectives</b>                           | <ul style="list-style-type: none"> <li>- To understand view points of the NGO officials toward small landholder and large landholder</li> <li>- To understand how the NGOs take responsible in ensuring the inclusive economic development of small landholder and land concessionaires</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Key questions and checklists</b>         | <p><b>General discussion about small landholders and large landholders:</b></p> <ul style="list-style-type: none"> <li>- What are the expectations from large scale landholding development contributing to Cambodia economy and the development of the nation?</li> <li>- To what extent do the small scale holders and large scale landholder contribute to the country economy?</li> <li>- How the government provides technical and non-technical supports to the small scale landholders and large-scale landholders?</li> <li>- What are the existing policies to prosper the economy of small landholders?</li> <li>- What the government has done so far to ensure the inclusive economic development of small landholders?</li> <li>- Is the inclusive development ensured through small scale and large scale landholding development?</li> </ul> <p><b>Specific discussion:</b></p> <ul style="list-style-type: none"> <li>- Key status of the project: Project title and objectives, project timeframe (start and end year) and project coverage area.</li> <li>- Strategy of the project and which target group does the project primarily aim at supporting?</li> <li>- To what extent does the project supports the small landholders? Core activities and inputs provided by the project.</li> <li>- Key achievement in relation with livelihood of small landholders</li> <li>- Key factors contributed to the project success. The success of the project in supporting the small landholders in term of agricultural development and their household economic growth</li> <li>- Major challenges and solutions. Any suggestion for project improvement or how to support the small landholders</li> <li>- Case studies highlighted the successful small landholders or in the form of group activities</li> <li>- How could the project be scaled up in order to lift up the livelihood of small landholders?</li> <li>- Do you think we could apply the same project elsewhere in Cambodia? If yes, explain how is it possible? If no, why not? What should be adapted?</li> <li>- Are project reports, project mid-term or end line project evaluations, case studies of successful small landholders available?</li> </ul> |
| <b>Methodology</b>                          | <ul style="list-style-type: none"> <li>- Interview head of the organization (or management team) and program directors</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>4) CEDAC and SNV staff at the field:</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Objectives</b>                           | <ul style="list-style-type: none"> <li>- To get more information related to project implementation, the level of efforts made by project field staff</li> <li>- To identified small landholders successfully adopt the project activities into their livelihood improvement</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

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|-------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Key questions and checklists</b>                         | <p><b>Specific discussion:</b></p> <ul style="list-style-type: none"> <li>- Key status of the project: Project title and objectives, project timeframe (start and end year) and project coverage area.</li> <li>- Strategy of the project and which target group does the project primarily aim at supporting?</li> <li>- To what extent does the project supports the small landholders? Core activities and inputs provided by the project.</li> <li>- Key achievement in relation with livelihood of small landholders</li> <li>- Key factors contributed to the project success. The success of the project in supporting the small landholders in term of their economic growth</li> <li>- Major challenges and solutions. Any suggestion for project improvement or how to support the small landholders</li> <li>- Case studies highlighted the successful small landholders or in the form of group activities</li> <li>- Should the project be scaled out in order to lift up the livelihood of small landholders</li> <li>- Are project reports, project mid-term or end line project evaluations, case studies of successful small landholders available?</li> </ul> |
| <b>Methodology</b>                                          | <ul style="list-style-type: none"> <li>- Interview the project team and project directors</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>5) Relevant local authority and social group leaders</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Objective</b>                                            | <ul style="list-style-type: none"> <li>- To see how relevant local authorities see the success of project implementation</li> <li>- To seek for understanding their level of participation in helping the project to achieve its objectives</li> <li>- To seek for their view points toward support small landholders and large landholder policy</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Key questions and checklists</b>                         | <ul style="list-style-type: none"> <li>- What do you observe the positive and negative changes in your communities? What are the factors contributing to these changes?</li> <li>- How do you observe the small landholders in your communities engage in the household economy development and local economy development?</li> <li>- What are the key factors contributing to the project success or key positive changes?</li> <li>- What good lessons should be replicated more broadly for household economy development and local economy development through small scale landholding approach?</li> <li>- What do you think about land concessions in Cambodia: policy and practices so far?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Methodology</b>                                          | <ul style="list-style-type: none"> <li>- Commune councils and agricultural officers at the provincial levels or district levels, farmer association or cooperative leaders...etc.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>6) Focus group discussion (Farmer Beneficiaries)</b>     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Objectives</b>                                           | <ul style="list-style-type: none"> <li>- To learn how the community think about the project implementation and its contribution to the economy of small landholders</li> <li>- To document the successful experiences in improvement rural household economy through adopting small scale farming.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Key questions and</b>                                    | <ul style="list-style-type: none"> <li>- What do you observe the positive and negative changes in your</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

|                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|----------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>checklists</b>                                              | <p>household economy and livelihoods?</p> <ul style="list-style-type: none"> <li>- How do you feel on the changes related to your household economy and livelihood development (happy or not happy), why?</li> <li>- What are the key economy activities in your community or group? How do you think about the success or satisfaction resulted from those activities?</li> <li>- So far to what extend you or your family participate in development projects?</li> <li>- What do you engage in or learn from the project to improve your household economy?</li> <li>- From your engagement in the project as well as in the community initiative, how does it important to you or to the community?</li> <li>- Should the project intervention be scaled out to help lift up livelihood of small landholders?</li> <li>- How do you think about land concession in Cambodia: policy and practices so far?</li> </ul>                                                                                                                                                                   |
| <b>Methodology</b>                                             | <ul style="list-style-type: none"> <li>- Facilitate group discussion with farmer beneficiaries of the NGO Projects.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>7) The individual farmer participating with the project</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Objectives</b>                                              | <ul style="list-style-type: none"> <li>- To learn how they involve with the project</li> <li>- To see how their economy grow with project intervention</li> <li>- To document the success stories related to the improvement of local economy and effectiveness of land management and productivities</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Key questions and checklists</b>                            | <ul style="list-style-type: none"> <li>- Family background, household assets and uses, participation and engagement in the project</li> <li>- What do you observe the positive and negative changes in your household economy and livelihoods?</li> <li>- How do you feel on the changes related to your household economy and livelihood development (happy or not happy), why?</li> <li>- What are the key economy activities in your household? How do you think about the success or satisfaction resulted from those activities?</li> <li>- So far to what extend you or your family participate in development projects?</li> <li>- What do you engage in or learn from the project to improve your household economy?</li> <li>- From your engagement in the project as well as in the community initiative, how does it important to you or to the community? What are the benefits you have received from the engagement in project or community activities?</li> <li>- Should the project intervention be scaled out to help lift up livelihood of small landholders?</li> </ul> |
| <b>Methodology</b>                                             | <ul style="list-style-type: none"> <li>- Interview individual farmer who are the beneficiaries of the projects and non-beneficiaries of the projects</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

## Annex 3: Questionnaire for household interview

### Household Questionnaire

Interviewed by:.....

#### I. General information:

Name of interviewee: .....Age: ..... Sex: ☐ Female ☐ Male Role in family:.....  
 Village:.....Commune:.....District:.....  
 Province:.....  
 Number of family member: ..... Male:..... Female: .....  
 Number of reproductive labor holder:.....Farm:.....Non-farm:.....  
 Contact phone number: .....

#### II. Household asset:

##### 2.1. Land asset:

| No | Types of land    | Total land size (m2) | Land used for income (m2) |
|----|------------------|----------------------|---------------------------|
| 1  | Residential land |                      |                           |
| 2  | Chamkar land     |                      |                           |
| 3  | Rice land        |                      |                           |
| 4  | Others.....      |                      |                           |

##### 2.2. Animal Asset:

| No | Types of animal    | Amount | Size of animal |         |      | Any remark on change over time? |
|----|--------------------|--------|----------------|---------|------|---------------------------------|
|    |                    |        | #small         | #medium | #big |                                 |
| 1  | Cattle and buffalo |        |                |         |      |                                 |
| 2  | Pig                |        |                |         |      |                                 |
| 3  | Poultry            |        |                |         |      |                                 |

##### 2.3. Other productive assets:

| No | Items                | Amount | Estimated cost (USD) | Year obtained | What are the main purposes of using it? |
|----|----------------------|--------|----------------------|---------------|-----------------------------------------|
| 1  | Well                 |        |                      |               |                                         |
| 2  | Pond                 |        |                      |               |                                         |
| 3  | Pumping machine      |        |                      |               |                                         |
| 4  | Bio-digester         |        |                      |               |                                         |
| 5  | Motor-trailer        |        |                      |               |                                         |
| 6  | Motor bike           |        |                      |               |                                         |
| 7  | Tractor/mini-tractor |        |                      |               |                                         |

#### III. Group/AC participation:

3.1. Date of group/AC participation: ...../...../.....

### 3.2. Decision to join the group/AC: cause and reason

| Cause of participation | Reason to join group/AC |
|------------------------|-------------------------|
|                        |                         |

#### IV. Steps and process in group/AC participation:

| Step | Activities | Minimum requirement | Time/duration |
|------|------------|---------------------|---------------|
| 1    |            |                     |               |
| 2    |            |                     |               |
| 3    |            |                     |               |
| 4    |            |                     |               |

Comments: Should the activities and steps above be changed and improved? How?

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Comments: Should such step produce better outputs that the progressive achievement has been mentioned above?

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#### V. Inputs Provided:

##### 5.1. Physical inputs:

| No | Types of input | Amount | Estimated cost | Year obtained |
|----|----------------|--------|----------------|---------------|
|    |                |        |                |               |
|    |                |        |                |               |
|    |                |        |                |               |

##### 5.2. Non-physical inputs: History of participation in training course and other capacity building since having participated in the group/AC

| No | Year | Training title | How the trainings have helped you? | Comment |
|----|------|----------------|------------------------------------|---------|
| 1  |      |                |                                    |         |
| 2  |      |                |                                    |         |
| 3  |      |                |                                    |         |
| 4  |      |                |                                    |         |
| 5  |      |                |                                    |         |
| 6  |      |                |                                    |         |

## VI. Impact change:

### 6.1. Production related:

| Productions                                      | Before group/AC | Current status | Verification (cause of change) |
|--------------------------------------------------|-----------------|----------------|--------------------------------|
| Land size for the production                     |                 |                |                                |
| Production diversification                       |                 |                |                                |
| Input used for the production/service            |                 |                |                                |
| Production period per year                       |                 |                |                                |
| Production volume in Kg                          |                 |                |                                |
| Market oriented production                       |                 |                |                                |
| Popularity of the production at market           |                 |                |                                |
| Selling price per unit                           |                 |                |                                |
| Man labor employed in income generation activity |                 |                |                                |

### 6.2. Estimation of income per season or year:

| Nº | Sources of income | Before group/AC (USD) | Current status (USD) | Remarks |
|----|-------------------|-----------------------|----------------------|---------|
| 1  |                   |                       |                      |         |
| 2  |                   |                       |                      |         |
| 3  |                   |                       |                      |         |
| 4  |                   |                       |                      |         |

### 6.3. How can you say about your satisfaction to be part of the group/AC members?

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## VII. Economic Sustainability:

### 7.1. How your family standing in term of economy sustained compared with others who are not the group/AC members?

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7.2. Do you finally recommend others to join the group/AC? Why?

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7.3. What are your future perspectives to your family and community as the whole from your participation with AC or group?

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7.4. Do you have any challenges in participating with group/AC?

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7.5. Do you have any challenges in term of your production to the group/AC?

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7.6. What are your contributions to the success of group/AC in term of family economy?

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7.7. Should other groups of farmers want to replicate the activity, how would you advise them, something to be done and not to be done?

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7.8. Side effects: What happen for those who are not members?

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## Annex 4: Questionnaire for focus group discussion on vegetable commodity

### Questionnaire for Focus Group Discussion

(Vegetable Commodity)

1. Group setting up: Name, Date, Members, other supporters if available ...

2. Steps and process in group setting up or AC

| Step | Activities: Supporter and Group | Outputs : Progressive achievement | Time / duration |
|------|---------------------------------|-----------------------------------|-----------------|
| 1    |                                 |                                   |                 |
| 2    |                                 |                                   |                 |
| 3    |                                 |                                   |                 |
| 4    |                                 |                                   |                 |

Comments: Should the activities and steps above be changed and improved? How?

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Comments: Should such step produce better outputs that the progressive achievement has been mentioned above?

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3. Function: Activities, production and services

Actual:

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Comments:

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4. Challenges, solutions and outcomes: Supporter and Group

| Attributes                                | Challenges | Solutions: Done or planned | Outputs |
|-------------------------------------------|------------|----------------------------|---------|
| Technical (including responding to CC...) |            |                            |         |
| Inputs (Seed...)                          |            |                            |         |
| Market (Products): Volume and             |            |                            |         |

|                                                                  |  |  |  |
|------------------------------------------------------------------|--|--|--|
| quality                                                          |  |  |  |
| Financial                                                        |  |  |  |
| Mobilization, institution and management                         |  |  |  |
| Other competitors that may limit the function of the group or AC |  |  |  |

Comments:

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Should other groups of farmers want to replicate the activity, how would you advise them, something to be done and not to be done?

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#### 5. Developing stage

| Attributes                                                         | Pre-condition stage | Current stage: Characteristics of strengths and weakness | Future prospects / sustainability |
|--------------------------------------------------------------------|---------------------|----------------------------------------------------------|-----------------------------------|
| Institution (By-law and finance [self or external finance]...etc.) |                     |                                                          |                                   |
| Function: Services and commodity                                   |                     |                                                          |                                   |
| Network and partners                                               |                     |                                                          |                                   |
| Supporting agents (Ex: DoA?....)                                   |                     |                                                          |                                   |
| Favorability (road access, market, irrigation, soil fertility...)  |                     |                                                          |                                   |
| Other attributes (suggested by the interviewee)                    |                     |                                                          |                                   |

Comments:

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#### 6. Impacts on the improvement of the livelihoods of the members

| Productions                                                                                                                | Before AC | Current |
|----------------------------------------------------------------------------------------------------------------------------|-----------|---------|
| <b>Individual Level:</b><br>Home consumption,<br>production, land, diversity, etc.                                         |           |         |
| HH members employed in<br>income generation activity                                                                       |           |         |
| <b>Group Level:</b> More incomes<br>(per HH or per ha or m <sup>2</sup> , profit<br>and low expenses,<br>price/unit...etc. |           |         |
| <b>Community Level:</b> Commodity<br>for sale to local market (local<br>food security)                                     |           |         |
| <b>More than Level:</b> Substitute to<br>the importation                                                                   |           |         |

Comments:

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7. Side effects: What happen for those who are not members?

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## Annex 5: Questionnaire for focus group discussion on rice commodity

### Questionnaire for Focus Group Discussion

(CEDAC-Rice Commodity)

1. Group setting up: Name, Date, Members, other supporters if available ...: (CEDAC + AC)

2. Steps and process in group setting up or AC: CEDAC

| Step | Activities: Supporter and Group | Outputs : Progressive achievement | Time / duration |
|------|---------------------------------|-----------------------------------|-----------------|
| 1    |                                 |                                   |                 |
| 2    |                                 |                                   |                 |
| 3    |                                 |                                   |                 |
| 4    |                                 |                                   |                 |

Comments: Should the activities and steps above be changed and improved? How?

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Comments: Should such step produce better outputs that the progressive achievement has been mentioned above?

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3. Function: Activities, production and services (CEDAC + AC)

Actual:

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Comments:

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4. Challenges, solutions and outcomes: Supporter and Group (CEDAC)

| Attributes                                | Challenges | Solutions: Done or planned | Outputs |
|-------------------------------------------|------------|----------------------------|---------|
| Technical (including responding to CC...) |            |                            |         |
| Inputs (Seed...)                          |            |                            |         |
| Market (Products):<br>Volume and quality  |            |                            |         |
| Financial                                 |            |                            |         |
| Mobilization, institution                 |            |                            |         |

|                                                                  |  |  |  |
|------------------------------------------------------------------|--|--|--|
| and management                                                   |  |  |  |
| Other competitors that may limit the function of the group or AC |  |  |  |

Comments:

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5. Should other groups of farmers want to replicate the activity, how would you advise them, something to be done and not to be done?

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6. Developing stage (CEDAC)

| Attributes                                                        | Pre-condition stage | Current stage:<br>Characteristics of<br>strengths and<br>weakness | Future prospects /<br>sustainability |
|-------------------------------------------------------------------|---------------------|-------------------------------------------------------------------|--------------------------------------|
| Institution (By-law and finance [self or external finance]...etc) |                     |                                                                   |                                      |
| Function: Services and commodity                                  |                     |                                                                   |                                      |
| Network and partners                                              |                     |                                                                   |                                      |
| Supporting agents (Ex: DoA?....)                                  |                     |                                                                   |                                      |
| Favorability (road access, market, irrigation, soil fertility...) |                     |                                                                   |                                      |
| Other attributes (suggested by the interviewee)                   |                     |                                                                   |                                      |

Comments:

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7. Impacts on the improvement of the livelihoods of the members

| Productions                                                                                                         | Before AC | Current |
|---------------------------------------------------------------------------------------------------------------------|-----------|---------|
| Individual Level:<br>Home consumption,<br>production, land, diversity, etc.                                         |           |         |
| HH members employed in<br>income generation activity                                                                |           |         |
| Group Level: More incomes<br>(per HH or per ha or m <sup>2</sup> , profit<br>and low expenses,<br>price/unit...etc. |           |         |
| Community Level: Commodity<br>for sale to local market (local<br>food security)                                     |           |         |
| More than Level: Substitute to<br>the importation                                                                   |           |         |

Comments:

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8. Side effects: What happen for those who are not members?

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## Annex 6: Questionnaire for focus group discussion on cassava commodity

### Questionnaire for focus group discussion

(SNV-Cassava Commodity)

1. Group setting up: Name, Date, Members, other supporters if available ...: (SNV + AC)

2. Steps and process in group setting up or AC: SNV

| Step | Activities: Supporter and Group | Outputs : Progressive achievement | Time / duration |
|------|---------------------------------|-----------------------------------|-----------------|
| 1    |                                 |                                   |                 |
| 2    |                                 |                                   |                 |
| 3    |                                 |                                   |                 |
| 4    |                                 |                                   |                 |

Comments: Should the activities and steps above be changed and improved? How?

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Comments: Should such step produce better outputs that the progressive achievement has been mentioned above?

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3. Function: Activities, production and services (SNV + AC)

Actual:

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Comments:

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4. Challenges, solutions and outcomes: Supporter and Group (SNV)

| Attributes                                | Challenges | Solutions: Done or planned | Outputs |
|-------------------------------------------|------------|----------------------------|---------|
| Technical (including responding to CC...) |            |                            |         |
| Inputs (Seed...)                          |            |                            |         |
| Market (Products): Volume and quality     |            |                            |         |
| Financial                                 |            |                            |         |
| Mobilization, institution and management  |            |                            |         |

|                                                                  |  |  |  |
|------------------------------------------------------------------|--|--|--|
| Other competitors that may limit the function of the group or AC |  |  |  |
|------------------------------------------------------------------|--|--|--|

Comments:

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5. Should other groups of farmers want to replicate the activity, how would you advise them, something to be done and not to be done?

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6. Developing stage (SNV)

| Attributes                                                        | Pre-condition stage | Current stage:<br>Characteristics of strengths and weakness | Future prospects / sustainability |
|-------------------------------------------------------------------|---------------------|-------------------------------------------------------------|-----------------------------------|
| Institution (By-law and finance [self or external finance]...etc) |                     |                                                             |                                   |
| Function: Services and commodity                                  |                     |                                                             |                                   |
| Network and partners                                              |                     |                                                             |                                   |
| Supporting agents (Ex: DoA?....)                                  |                     |                                                             |                                   |
| Favorability (road access, market, irrigation, soil fertility...) |                     |                                                             |                                   |
| Other attributes (suggested by the interviewee)                   |                     |                                                             |                                   |

Comments:

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7. Impacts on the improvement of the livelihoods of the members

| Productions                                                                                                                | Before AC | Current |
|----------------------------------------------------------------------------------------------------------------------------|-----------|---------|
| <b>Individual Level:</b><br>Home consumption,<br>production, land, diversity, etc.                                         |           |         |
| <b>HH members employed in<br/>income generation activity</b>                                                               |           |         |
| <b>Group Level:</b> More incomes<br>(per HH or per ha or m <sup>2</sup> , profit<br>and low expenses,<br>price/unit...etc. |           |         |
| <b>Community Level:</b> Commodity<br>for sale to local market (local<br>food security)                                     |           |         |
| <b>More than Level:</b> Substitute to<br>the importation                                                                   |           |         |

Comments:

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8. Side effects: What happen for those who are not members?

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