



Connecting People's Capacities

Supporting the Vegetable Value Chain Approaches, Lessons and Innovations in Svay Rieng

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Edited by Rob Savage



Preface

This report was prepared by SNV Netherlands Development Organisation as part of our ongoing vegetables value chain programme. It gives an overview of how we have engaged with the Federation of Farmer Associations (CFAP) in an effort to give smallholder farmers opportunities, through the vegetable value chain, to connect to markets and improve their family income.

In this report, we look back at two and a half years' of interventions with the federation and some of its commune groups to gain a better understanding of the effectiveness of our interventions and what we have learned from them.

The report is prepared by a team of international and national SNV advisers working on the project and edited by Mr Rob Savage who has been indispensable in improving its readability.

We hope that by sharing some of our knowledge and lessons learned we can also contribute to increasing the understanding of how farmer organisations can improve the lives of their members through quality of service delivery.

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Agriculture Sector Leader

SNV Cambodia Supporting the Vegetable Value Chain: Approaches, Lessons and Innovations in Svay Rieng

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Introduction

In the course of 2009 SNV performed an analysis of the market situation for vegetables in Svay Rieng province. As has been observed across the rest of Cambodia there is a growing demand for fresh vegetables throughout the province. This is no doubt driven in large by the strong economic growth that Cambodia has seen over the last decade. Moreover, local markets (village, commune and district), provincial markets and the more recently established special economic zones (SEZ) are trading ever more vegetables year on year. However, smallholder farmers in Svay Rieng and other provinces experience difficulties in connecting to these increasing demands and traders often choose the easy option of importing from Vietnam or Thailand. Nonetheless, there are also positive market signals to be noted. The quality of Cambodian vegetables plays its part in this. With growing consumer awareness of the use of pesticides there is an increased retail demand for Cambodia's low external input crops. This is also evident in the cross border export market, with reports of traders coming to Svay Rieng from Vietnam to source vegetables for their better, pesticide free, reputation.

To create a response to this growing demand SNV has started to support Cambodian Farmers Federation of Agricultural Producers (CFAP), a local federation of farmer associations, to increase their capacity for a collective response in production and marketing, empowering smallholders to negotiate a better position in the Vegetables Value Chain.

SNV signed a 3 year memorandum of understanding with the CFAP in 2010 aimed at improving income for producer groups in Svay Rieng province from fresh, safe, vegetable cultivation for the domestic, and potentially export, markets. Over this period SNV conducted a baseline study of CFAP's activities and organisational capacity along with a study of farmer behaviour and household decision making in the target province.

The results of these studies resulted in the development of a number of activities and training programmes designed to strengthen CFAP's organisational and staff capacity. SNV provided coaching to CFAP and their member organisations in developing entrepreneurial and marketing skills, developed training packages in vegetable production and leadership and product advisory skills. With SNV's support, CFAP's improved capacity has seen them provide leadership training for their community farmer associations (CFAs) and community based organisations (CBOs) and introduce model farms, village study tours and other events for their members, all aimed at improving technical knowledge and peer to peer knowledge transfer.

Key triggers for change in 2012 and beyond will include the reduction of CFAP's dependency on donor support. If CFAP are to become increasingly dependent on membership and training fees paid, members must see clear benefits from the CFAP services that they receive if they are to be willing to pay for CFAP's support. To achieve this, the perception of farmers that membership of the programme will offer them the very real opportunity to increase their income by boosting domestic production and trade in vegetables will be essential. From 2012 CFAP will increasingly focus on marketing and successful negotiations with enterprises in the Special Economic Zone (SEZ) to purchase quality vegetables from their member associations. The creation of a logistics chain between member associations and the Bavet SEZ will be essential as the application of new techniques increases yield beyond what the village market can absorb. In parallel CFAP will work towards the successful introduction of farmer groups as it is unlikely that any single farmer can provide produce in the quantities required by businesses and hotels in the SEZ.



The Vegetable Sub Sector in Cambodia

In recent years there has been a reported shift from pure rice cultivation to vegetable production across Cambodia. The Ministry of Agriculture, Forestry and Fisheries (MAFF) reported in April 2009 that vegetable production in Cambodia increased by 14.6 percent between 2007 and 2009, roughly in line with the 12.8 percent increase in land used for cultivation over the same period. In terms of volume, the MAFF reported that Cambodia's vegetable harvest rose to 259,610 tonnes in 2008, up from 226,486 tonnes the previous year, with Kampong Chhnang, Kampong Cham, Takeo and Siem Reap provinces the largest producers.

This growth is no doubt driven largely by Cambodia's recent strong economic performance. However, the growth in demand for vegetables is hard to assess as a large proportion of vegetable cultivation takes place in home gardens. This, given that vegetables on garden plots are grown inconsistently on plots of often unknown size, makes accurate measurement difficult. Variation in cultivation rates is further aggravated by farmers' seasonal dependency on access to water. The unique seasonal variations in the volume of the Tonle Sap Lake, the primary source of fresh water for much of Cambodia, sees large differences in the distribution of wet and dry season vegetable production in Cambodia. In the wet season, major vegetable production (greater than 1,000 ha) takes place in Kompong Cham, Kandal, Kampot, Kompong Thom, Kampong Speu, Takeo, and Battambang. In the dry season the major production areas are Kampong Chhnang, Kandal, Kompong Cham, Siem Reap, Kompong Thom, and Battambang (ADB, 2009).

Key indicator of the potential for domestic cultivation comes from the level of vegetable imports. In 2005 the Cambodia Development Resource Institute (CDRI) reported that vegetables imported from Vietnam met almost 70 percent of the vegetable demand in Cambodia, with daily import volumes ranging from 40 to 160 tonnes depending on the season. Of these imports the vast majority are common varieties that are grown, albeit on a much smaller scale, within Cambodia's borders. Nonetheless, by 2009 this figure had risen to 170 tonnes with the Khanh Binh and Tinh Bien border crossings accounting for some 20 to 30 percent of all trade and Ho Chi Minh City markets the remaining 70 percent (Le Hoai Van, 2009).

The Vegetable Sub Sector in Svay Rieng Province

Svay Rieng is located in Southeast of Cambodia. It borders Kampong Cham to the North, Prey Veng to the West and has a long border with Vietnam from East to South. Svay Rieng is 122 km from Phnom Penh and is on the primary trade route between Ho Chi Minh City and Phnom Penh.

Figure 1: Map of Svay Rieng



In 2008, the total population was 478,252 with 465,731 of the population living in rural areas. The annual population growth rate was 9 percent, 10 percent for the rural population. The total number of household was 115,282, with an average household size of 4.2 persons (NIS 2008).

The topography of Svay Rieng is mostly lowland paddy fields, with lowland/upland mosaic and upland forested areas in the Northern district of Romeas Hek. Total land area is 274,049 hectares, including 168,721 hectares of cultivated land area and 469.57 hectares of crop land (NCDD 2009). The total land size for each household is 1.3 hectares on average, of which vegetables account for 0.2 hectares (CFAP 2010).

In 2010 total vegetable production in Svay Rieng was 14,892 tons, of which 10,392 tonnes was during the wet season and 4,500 tonnes during the dry season (MAFF 2010). This does not place Svay Rieng among the major vegetable producing provinces in the country and the majority of the province's farmers grow vegetables primarily to ensure food security for their families. The demand for the large scale imports that travel through the province are generated by markets in Phnom Penh, with these markets also acting as distribution hubs for produce travelling on to the rest of the nation. Although small scale provincial farming is unable to supply the volumes required by the national market, there is a growing local demand. Much of this comes from the Bavet Special Economic Zone (SEZ), local consumers (who desire pesticide free produce) and also, reportedly, from Vietnamese importers who consider the province's vegetables to be of superior quality.

Table 1: Vegetable production in Svay Rieng province in 2010

Description	Wet season	Dry season	Total
Cultivated area	1,142 ha	508 ha	1,650 ha
Average Yield	9.099 tones/ha	9.025 tones/ha	9.025 tones/ha
Production	10,392 tones	4,500 tones	14,892 tones

Source: Ministry of Agriculture Forestry and Fisheries (MAFF), 2010

Svay Rieng Vegetable Value Chain

Economic and Market Analysis

Despite the common perception of the low returns to investment in agricultural activities, especially among farmers, studies have shown that there are numerous opportunities for diversification out of rice production into multi-crop and multi-farm use systems. Gross margins for many crops have jumped significantly recently, making them a more attractive option for agrarian households. Gross margins of between US\$400 to US\$1,300 are now achievable for vegetables, making it the highest return for small holder farmers (ADB 2009). These findings are in line with SNV's 2008 internal study "Linking Smallholder Cash Crops to the Tourism Sector". The analysis of production upgrading scenarios calculated by SNV found that significant cash returns could be generated for small producers by adopting more intensive management practices, yielding additional crops in a given cycle. The highest gross margins and return on investment would be obtained in yard long bean production, with capsicum offering the second highest returns. Tomato could also yield significantly improved financial returns, though percentage returns on investment are much lower than the two most favourable options. Over a longer period, however, tomato production offers potentially higher returns due to the widespread demand for improved varieties.

Growth within the Svay Rieng marketplace mirrors the nationwide surge in demand for fresh vegetables. The SEZ alone has a reported a demand from its 15,000 employees, and from the many guests who stay in the casinos' hotels, of an estimated 6 to 7 tonnes of vegetables a day. There is also the potential for exports with wholesalers' reporting that traders come to Svay Rieng from Vietnam to source vegetables for their better reputation as pesticide free vegetables.

Estimates of the local retail market reveal that on average, one household, with approximately 5 members, consumes 1.28kg of vegetables per day, 9kg per week. The preferred types of vegetable purchased were kang kong, petsai, cucumbers, wax gourd, pokchoy and tomato. That these consumers would purchase local produce was bolstered by consumer preference studies performed by International

Development Enterprises (IDE), the Provincial Department of Agriculture (PAD), International Volunteers of Yamagata (IVY) and SNV that confirm that Cambodian consumers prefer to eat domestically grown vegetables as they taste better. Furthermore, the majority of the buyers interviewed were willing to pay a higher price for domestic chemical-free produce. Blind tasting studies by IDE have confirmed this, and it is assumed that this is most likely a result of the low levels of external inputs used in the production process in Cambodia compared to Vietnam.

Calculations of demand from wholesalers in Phnom Penh revealed that they bulk purchase imports of six varieties of vegetables that are also grown Svay Rieng: Long bean (average 600Kg/day at 1300 Riels/Kg), cucumber (average 1200Kg/day at 875 Riels/Kg), leaf onion (average 200Kg/day at 1750 Riels/Kg), green mustard (average 3000Kg/day at 600 Riels/Kg), wax gourd (average 1600Kg/day at 867 Riels/Kg) and bitter melon (average 1250Kg/day at 2000 Riels/Kg). Customers for wholesalers comprised mainly of retailers in Phnom Penh, retailers in the other provinces and consumers in Phnom Penh. The majority of wholesalers interviewed in Phnom Penh did not care whether their supply is chemical-free or not as long as they get their daily supply on a regular basis and at existing wholesale prices.

Currently results of cost calculations performed by SNV for vegetable production in Svay Rieng revealed that it is not feasible to supply vegetables from Svay Rieng to wholesalers in Neak Meas or Doem Kor market in Phnom Penh as the costs of production per kilogramme of vegetables were nearly double the existing wholesale market price. Even if vegetables from Svay Rieng were sold on a retail basis, circumventing the need to meet wholesalers' prices in Phnom Penh's Neak Meas or Doem Kor markets, it is unlikely that demand could be met by current production levels.

Table 2: SWOT Analysis for Vegetable in Svay Rieng

STRENGTHS (internal)	WEAKNESSES (internal)
Government of Cambodia has higher priority to support agriculture sector	Unviability of vegetable research centre in the province and surrounding areas
Synergy among international aid agencies to assist development of rural farmers especially in agriculture sector	Limited availability of local expertise in vegetable production
Easy to sell locally, in the local markets and in the province	Poor technical knowledge, skills and experience in vegetable growing
Less use of external inputs such as chemical fertilisers and pesticides	Farmers rely on conventional techniques for vegetable production
Potential for the use of bio-slurry from biogas plants.	Irregular and inadequate supply of necessary inputs and technology
Thousands of bio digester plants in the provinces	Low productivity and loss of yield from insects, pests and disease
Short crop production cycle	Improper use of chemical fertilisers and pesticides on farms
High prices of vegetable in the province compared to other provinces	Unavailability of timely market information
Potential to create jobs and employment, especially for poor farmers	Lack of access to sufficient capital for investment in vegetable production
	Expensive imported agricultural inputs
	Small plot sizes for vegetable cultivation in the wet season and insufficient irrigation water in dry season
	Poor skills in land planning and management
	Inadequate/improper handling of crops and post-harvesting processes
	Lack of quality agricultural inputs
	Farmers have limited knowledge in farming techniques and skills
	Unavailability of reliable irrigation system
	Post-harvest losses in vegetable production due

	to inadequate harvesting, storage, packaging and transportation methods.
OPPORTUNITIES (external)	THREATS (external)
High demand for local vegetables in the province especially in SEZ and other nearby markets	Limited high land for vegetable production in the wet season
Good reputation and social acceptance for locally produced vegetables	Absence of collaborative effort among the vegetable value chain actors
Price of vegetables are high in the province compared to other provinces	Price fluctuations for vegetables
Good road connection from Svay Rieng to Phnom Penh and to other markets	Competition from cheap, quality imported vegetable
Existing inputs shops in the province such as Lors Thmey and SAC shop.	Regular and reliable imports of vegetables from Vietnam
Sufficient scope and demand for locally produced vegetables	Majority of MFIs have high interest rates on credit provisions
Availability of micro-finance institutions and agriculture development programmes	Migration of young labour to urban areas and neighbouring countries seeking better employment opportunities

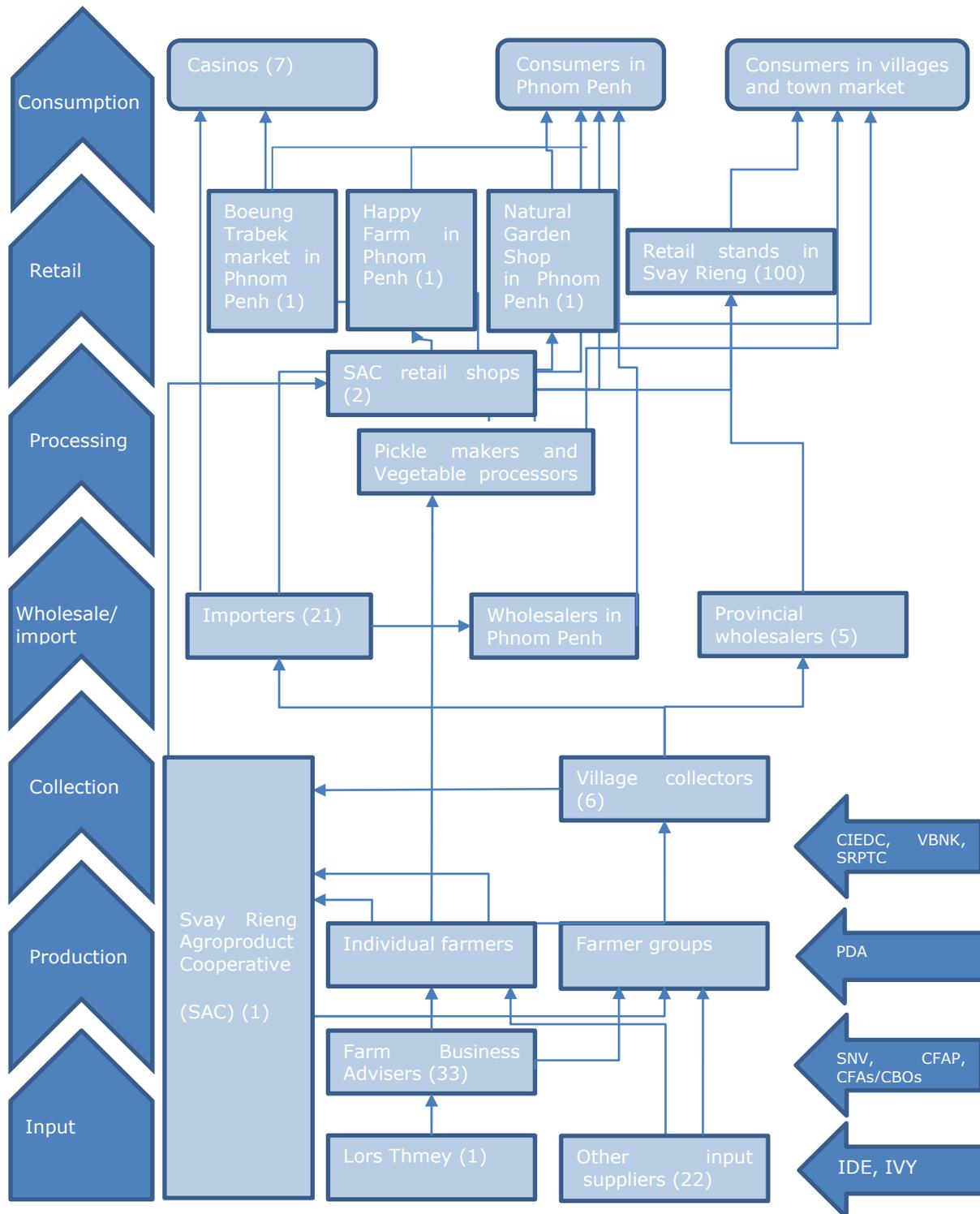
Svay Rieng Value Chain Analysis

The Svay Rieng vegetable industry operates in a complex market system of input suppliers, importers, wholesalers, farmer groups and thousands of small family businesses (figure 2). Independent farmers bear the brunt of the difficulties inherent in such a system, rarely making profits that are sufficient to support investment in business improvements. This situation is further exacerbated by local products that are often of low yield and quality flowing through a broken supply chain. This variable quality leads to unfair practices on both the producer and buyer sides and as a consequence relationships between producers and buyers are generally opportunistic and exploitative, resulting in mistrust along the value chain. Operating in such an environment naturally leads to higher overheads in terms of gathering marketing intelligence, quality control and in trying to maintain larger networks. All these factors, combined with Cambodia's geographic proximity to two highly developed and competitive fruit and vegetable markets, sees higher risks for local producers, leading to the current situation where approximately 70% of produce is imported.

There are two distinct types of vegetable producers in Svay Rieng province; individual farmers and farmer groups or cooperatives. Each producer sells their products through multiple channels including, directly to consumers in village and town markets, by bulk directly to provincial wholesalers, to small businesses such as pickle producers or to a single village collector, who then sells produce on to wholesalers or to larger scale purchasers such as the SEZ casinos in Bavet or the shops in Svay Rieng town and Phnom Penh. A final group is those farmers who are members of the Svay Rieng Agroproduct Cooperative (SAC) who sell their vegetables directly to SAC for distribution.

SNV have identified 22 privately owned retailers supplying farmers with inputs including, vegetable seed, mulching film, nets, chemical fertilisers and pesticides. Operating alongside these suppliers are two donor funded organisations that sell high quality inputs purchased in Thailand and Vietnam; Lors Thmey, founded by IDE and the SAC established by the International Volunteers of Yamagata (IVY).

Figure 2: Vegetable value chain map for Svay Rieng



Vegetables from Vietnam are imported by 21 established importers. These imports are then sold onto larger purchasers. Goods are ordered on a daily basis by Cambodian traders who contact their counterparts in Vietnam to place an order. The counterpart will then purchase the goods at the wet markets in Ho Chi Minh City and arrange transport to the border crossings. These imports also find their way into the country through a number of unregulated border crossings, the largest of which are the crossings at Highway 1 (Bavet) and National Road 6A (Kampong Cham province). Additionally, there are smaller crossings in Svay Rieng, Prey Veng, Kandal and Takeo province. Imports are transported by 20 ton trucks from Vietnam before being reloaded onto smaller trucks and minivans that are dispatched to their final destinations. Some 170 tons of produce is imported into Cambodia through these routes each

day and SNV internal research and the figures supplied by the market owners in the Ho Chi Minh city's wet market suggest that the impact from increased production within Cambodia would have little effect on the daily trade figure of these wholesale markets of 3500 tons per day.

Vegetable Value Chain Actors in Svay Rieng

Input suppliers: There are no clear statistics regarding the number of input suppliers in Svay Rieng province. Various vegetable market studies conducted in Svay Rieng conclude that there are 22 input suppliers selling agriculture inputs at different markets throughout the province. The Lors Thmey Company supported by International Development Enterprise (IDE) supplies inputs to Farm Business Advisers (FBA) and the SAC owned shop in Svay Rieng. Currently there are 33 FBAs in working Svay Rieng communes selling inputs along with technical advice to farmers.

Besides supplying inputs in the district and town markets of Svay Rieng, Lors Thmey also function as inputs wholesalers, selling to village inputs suppliers. As retailers, they sell inputs to farmers who come to buy directly from the Lors Thmey shops.

Private input suppliers exist and sell limited inputs, mainly seeds, fertilisers, pesticides and agricultural tools to farmers. Only a few of them sell a combination of the above four items, while most of them are specialised single product suppliers. All types of inputs are primarily imported from Vietnam, with some suppliers purchasing seeds and pesticide inputs from Phnom Penh. Lors Thmey sources its inputs from the Trang Nong Company of Vietnam, the East-West Seeds Co. Ltd. and the Chia Tai Co. Ltd.

Farmers: According to a study on farmer behaviour change and household decision making conducted by SNV in 2011, farmers usually adopt and learn vegetable farming from their peers, NGOs and FBAs. In a few cases, farmers also learn vegetable growing techniques from their input suppliers or from media broadcasts. Farmers mainly sell their vegetables to neighbours, local collectors or directly to markets and wholesalers.

The number of farmers producing vegetables for sale in Svay Rieng province is unknown for the simple fact that most households, whilst growing some form of produce, do so for self-consumption and not necessarily for commercial purposes. As of 2010, CFAP had 7,905 individual members in Svay Rieng, Prey Veng and Kampong Speu and Kandal Provinces. The total individual targeted through these households was 39,525.

From Traditional to Technical Practices

Chakriya, lives in Svay village with her son and her daughter while her husband, a cyclo driver, is away working in Phnom Penh.

During three months training at a farmer field school Chakriya learned the technical steps needed for cucumber production and how to calculate cost benefit through record keeping. She experimented with plastic mulch on a 150 square metre trial plot and compared her new cucumber yield to a 150 square metre control plot.

The results were plain to see and Chakriya

immediately set about expanding her vegetable production to 1400 square meters. She invested her own money in improved seeds and mulching film and took on new varieties of cash crops, growing bitter gourds, ridge gourds, eggplants and tomatoes alongside her trusted cucumber crop.

She quickly increased her income to \$10 a day and her husband, not being able to earn anywhere near that as a cyclo driver in the capital, returned home to work alongside her.

A passionate convert, Chakriya has taken on the role of model farmer and is passing her knowledge on to friends, neighbours and visiting farmers so that they too can improve their quality of life.

Collectors: There are 9 vegetables collectors regularly operating at the village level. These collectors are a combination of farmers supplementing their income, specialised village collectors, wholesalers and retailers. Farmers usually sell their vegetables to collectors who pick up their produce several times a month from the farm gate. The collectors then go on to sell to wholesalers, retailers at markets and to the hotels in Bavet. In general, demand for vegetables by the village collectors is high in dry season as

farmers produce higher yields compared to the rainy season; there is also additional demand for vegetables during the dry season's festival season. Svay Rieng Agroproducts Cooperative (SAC) are distinct in that they provide a vegetable collection service to its members. Currently, SAC supplies the vegetables grown by their members to its own shop and to one of the casinos in Bavet.

Importers: There are an estimated 30 local importers importing vegetables from Vietnam. These importers play overlapping roles as importers, wholesalers and retailers; selling imported vegetable to market wholesalers, retailers and household consumers throughout Svay Rieng province. The importer buys vegetables in Vietnam, and imports on a small scale with a maximum of one ton per import. Motor carts are used to transport the produce from Vietnam to Svay Rieng.

Wholesalers: There are an estimated 5 wholesalers in Svay Rieng. Their main source of supply is the importers, but they also purchase from village collectors and occasionally directly from village producers. Retailers are their primary customers but they can also act as retailers themselves, selling directly to household consumers.

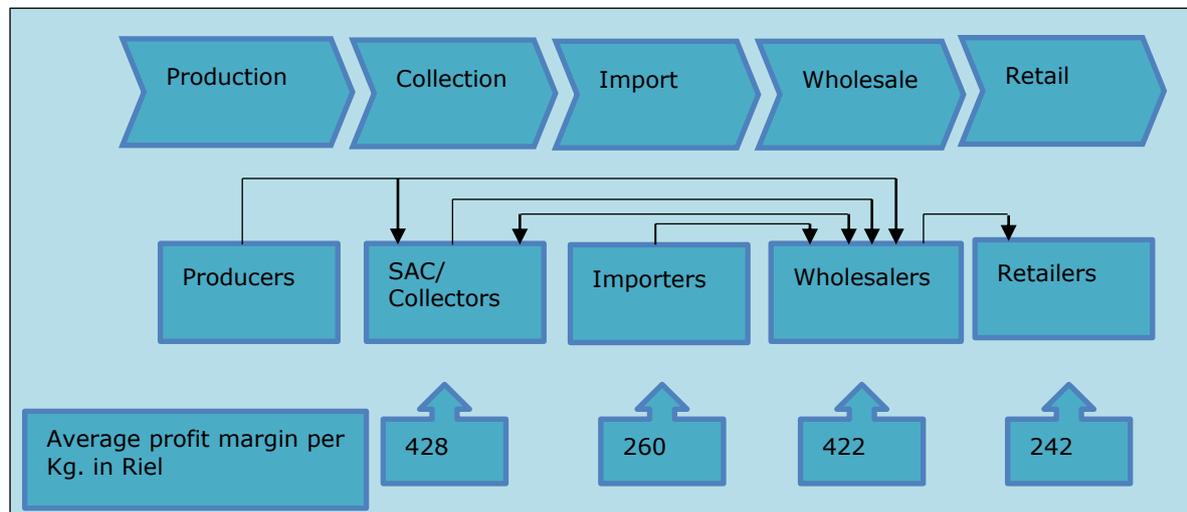
Retailers: Based on an internal vegetable market study of trade along National Road 1 it is estimated that there are around 125 market retailers in the province (SNV & IDE 2009). These retailers buy vegetables from farmers, village collectors, importers as well as from the wholesalers. Their customers are, for the main part, household consumers but many also sell to restaurants.

Processors: Village processors process smaller quantities of vegetables, generally in the form of pickles. It is believed that they play only a minor role in the supply chain, selling processed vegetables to retailers, household consumers and local markets.

Profit Margins of Value Chain Actors

Very few farmers prior to CFAP and SNV's intervention kept records of their input, production and labour costs, making calculations of average profit margins from collector to retailer difficult to establish (Figure 3). Processors have not been included in the calculation, as they are largely informal operators.

Figure 3: Average profit margins for vegetable value chain actors



The profit margins of each actor as presented in figure 3 do not necessarily follow the logical 'up to downstream' flow along the chain. Weak linkages between value chain actors see, for example, wholesalers who usually purchase from collectors also purchasing from other sources including independent producers. Similarly Svay Rieng Agroproduct Cooperative (SAC) collectors, who would normally purchase from member producers may also purchase from market wholesalers when they need to supplement their supply.

SNV's 2011 Baseline Survey Conclusions

In general vegetable groups in Svay Rieng are small hold farmers producing low volumes of vegetables. Average land used for vegetable gardens in Svay Rieng is 0.17 hectares in the dry season and 0.13

hectares in the rainy season. Minimum sizes used for vegetable cultivation can be less than 0.01 hectares.

On average farmers achieve vegetable crops 2.5 times per year, to a maximum of 4 crops a year. With less flooding in the dry season, 1.5 crops are achievable compared to an average 1 in the rainy season.

The average yield of vegetable production in Svay Rieng is one tonne per annum per household. The annual production cost is USD \$100 and the net profit is USD \$280. On average, farmers can produce up to 1000 kg of vegetables per year per household. The minimum production level is 90 kilograms and the maximum production level is 4000 kg.

The average annual household income of vegetable farmers in Svay Chrum district, Svay Rieng province is Riels 2,000,000 (USD \$500), 33% of which comes from vegetable production. However, if this income is divided by the average family size of 4.2, the per capita income per family member is Riels 476,200 (USD \$199). This places their income below the national per capita average of USD \$650 (ADB 2010).

The preferred vegetables grown by farmers in Svay Rieng are the cucumber followed by ridge gourd, yard long bean, wax gourd, eggplant and kang kong. Fewer farmers diversify further by growing choy sum, tomato and herbs.

Depending on the type of vegetables, farmers prefer to retain seeds for next season use. This is true for sponge gourd, wax gourd, bottle gourd, eggplant, spring onion and cucumber. For other vegetables, producers buy seeds either from markets or from Farm Business Advisers (FBAs) or IDE. Some seeds are sourced as far away as Koh Dach in Kandal province because they are a trusted source of quality seeds.

While 33% buy inputs from Svay Rieng suppliers and a further 17% buy from FBAs, due to the lack of agricultural input suppliers in Svay Rieng, the majority farmers interviewed by SNV, especially for those living in proximity to the border, travel to Vietnam to buy seed, fertiliser, mulching film, string nets.

Green manure is commonly used and farmers only use small amounts of pesticides and chemical fertilisers. Some farmers surveyed use no pesticides having heard of health problems that their neighbours suffered as a result of their use.

There is generally little trust between farmers and vegetable traders or collectors. As a result, only negligible volumes of total vegetable production are sold through traders or collectors. Most producers prefer to sell their vegetables retail in Svay Rieng market.

Supporting Institutions and SNV Partners

SNV implements its interventions through joining forces with partner organisations. In Svay Rieng these include: Agriterra, Japanese International Volunteer of Yamagata (IVY), International Development Enterprise (IDE) and the Provincial Department of Agriculture (PDA). SNV also collaborates with various local capacity builders (LCBs). LCBs are locally oriented and have the expertise and experience in providing capacity development services to agriculture sub-sectors. SNV's role is to support the LCBs in their service delivery mechanism, thereby upgrading and strengthening the vegetable value chain and creating a sustainable service market system.

Provincial Department of Agriculture (PDA): The PDA is a government institution involved in overcoming the issues of food security and improving the livelihood of rural farmers, especially the most vulnerable families, by improving productivity. The PDA Svay Rieng has eight district offices of agriculture across the province whose operations include, providing effective technical services and sustainable natural resource management, alongside training for farmers in Integrated Pest Management (IPM), the organising of farmer groups and an annual trade fair.

Cambodia Farmer Association Federation of Agricultural Producers (CFAP): CFAP is a national farmer organisation, representing commune and village level farmers associations. Based in Svay Rieng, it also operates in Prey Veng, Kandal and Kampong Speu Provinces. CFAP's mission is to assist all people in rural areas, particularly the most vulnerable. To encourage them to achieve food security and better land use, CFAP have implemented programmes addressing, income generation, agricultural production, savings, education and training, advocacy and the creation of small scale businesses and agro-enterprises, and the creation of a rural cooperative market.

International Volunteers of Yamagata (IVY): Established in 1996 IVY extended its programme activities from Kandal province to Svay Rieng in 1999. IVY supports women in two villages in Chhoeu

Teal Commune and a number of projects related to agriculture have been developed and implemented in the province. Currently, IVY is implementing its "Development of a Supply and Distribution System for Vegetables in Svay Rieng" project.

To date, IVY has established 58 vegetable farmer groups, with a total of 907 individual members. These members work under the umbrella of the Svay Rieng Agroproducts Cooperative (SAC), which acts as a linkage between farmers and markets through collecting vegetables from its members to resell to markets and to a casino in Bavet.

International Development Enterprises (IDE): Since opening its office in Cambodia in 1994, IDE has been helping to build profitable enterprises and value chains to deliver sustainable social and economic benefits to the rural poor. IDE helps create market conditions that enable the rural poor to become successful market participants through:

- Identifying market opportunities that can be exploited by low income families
- Developing products and services that help them to generate income
- Establishing supply chains to deliver pro-poor products and services at affordable prices
- Conducting social marketing campaigns to raise awareness and generate demand for pro-poor products and services
- Linking producers with Farm Business Advisers (FBA) to improve their market access

IDE promotes locally owned enterprises, one of which is Lors Thmey an enterprise selling inputs to farmers. IDE also promotes Farm Business Advisors (FBAs) as independent micro-entrepreneurs who travel within a six to ten village circuit assisting farmers in improving, intensifying or expanding their market-oriented agricultural production. FBAs sell inputs as well as services, which includes a range of products, such as irrigation equipment, seeds, fertilisers, pest control, plastic mulch, fencing and trellising – to reduce risk, improve productivity, and increase income.

VBNK: VBANK provides training and consultancy services that meet a wide range of needs for both individuals and organisations. It also plays a unique role as an innovator, monitoring needs and trends in order to find appropriate and effective ways to respond to capacity building needs in the Cambodian social development sector.

VBANK's core approaches to leadership:

- Leading from within
- Creating the future - leading through vision and values
- Managing complexity - seeking adaptive solutions to complex problems
- Enabling others to learn and grow through participatory and empowering strategies

Cambodia India Entrepreneurship Development Centre (CIEDC): CIEDC is a joint cooperation programme of the Royal Government of Cambodia and the Government of India. CIEDC is one of the four Entrepreneurship Development Centres (EDC) established as part of India's technical assistance under the Initiative for ASEAN Integration in Cambodia, Laos, Myanmar and Vietnam.

CIEDC was formally inaugurated on February 2006 and was accorded the status of national training centre by sub degree of the Royal Government of Cambodia. It receives technical guidance from the Entrepreneurship Development Institute of India (EDII) for development and updating of training modules tailored to the Cambodian situation.

CIEDC's mission recognises the role of small businesses in providing large-scale employment for the equitable distribution and effective mobilisation of capital resources and skills in Cambodia. It aims to contribute to the demand for investment capital and utilisation thereof by micro and small enterprises as a potential key engine of a dispersed economic development in Cambodia.

To help create an entrepreneurial environment in Cambodia, CIEDC focuses on the following areas:

- Entrepreneurship Development Programmes for new enterprise creation
- Performance Improvement and Growth Programme for existing entrepreneurs
- Training of Entrepreneurship Development Trainers/ Teachers
- Management Development programme for Industry Associations /NGOs
- Computer application in small business

- Research and consultancy on Small Business development

Provincial Training Centre of Svay Rieng (SRPTC): SRPTC, inaugurated in June 2001, is an educational institution under the supervision of the Department of Labour and Vocational Training. SRPTC's vision is to reduce poverty by improving standards of living through providing vocational training services. Through its role in developing human resources through providing technical training and the skills essential for people to find jobs or to establish their own businesses.

SRPTC is currently implementing a voucher skills training programme focusing on the three main areas of community development, enterprise training and provincial technical training.



SNV Involvement and Interventions

Implementing its interventions through joining forces with partner organisations in Svay Rieng sees SNV collaborating with various local capacity builders (LCBs). The LCBs have the local expertise and experience in providing capacity development services to agriculture sub-sectors. SNV's role is to support the LCBs in their service delivery mechanism, thereby upgrading and strengthening the vegetable value chain and creating a sustainable service market system. Currently, SNV is working with three LCBs, CIEDC for capacity building entrepreneurial and marketing skills, VBANK for leadership strengthening and IDE for improved vegetable production techniques.

SNV brings these development actors together to address common constraints that occur in the value chain, to work to optimise performance and to create better conditions for smallholder farmers in selected areas across the province.

General Manager of Lors Thmey, Mr Uy Chantha says...

"I appreciate SNV's work on bringing updated technologies, knowhow and improved exchanges to the stakeholders. Since the start of SNV's programme, they have taken the leading role from production to the market place. In introducing the 'Svay Rieng Vegetable Standard' I also think that this will surely help farmers in better positioning and leverage in the market in the future."

"Since SNV's active involvement in the agriculture sector, particularly in Svay Rieng, began,, farmers are earning more profits from their vegetable production. Now they average 2 to 3kg per square metre compared to their

traditional average production of 1 to 1.5kg per square metre. Moreover, farmers are joining independent farmers' organisations and have started working collectively. Farmers are now better linked with other actors in the vegetable value chain and are able to access better quality inputs. Not only has yield increased, but farmers are also enjoying additional market benefits."

"And the SNV programme has not just benefited the farmer, it's also benefited other value chain actors. All stakeholders including the PDA are far more effective."

"Even when SNV exits the vegetable programme, farmers are more optimistic and more confident in carrying on production and in being able to connect to the market."

As main entry point the Cambodian Federation of Farmer Associations (CFAP) has been identified as a key service provider. They have an existing network of around 8,000 members, providing a pathway to reach many farming households in a short period of time.

To this end SNV in Cambodia has signed a three year Memorandum of Understanding (MoU) of cooperation with CFAP Cambodia, aiming to improve income from fresh, safe, vegetable cultivation for domestic (and potential export) market supply for producer groups in Svay Rieng province.

Supporting Farmer Households with CFAP

CFAP began working in Svay Rieng province in 2007 and introduced their initiative to organise farmers' cooperatives with the express aim of reducing rural poverty through improved access to markets in December 2008. With 16 Commune Farmers' Associations (CFAs) and Community Based Organisations (CBOs), number approximately 8,000 individual member farmer households, of which over 4,500 are female headed households, CFAP have established themselves as a key service provider in the province.

CFAP's mission is to assist all those living in rural areas, particularly the poorest and most vulnerable people, through encouraging them to achieve food security. This is implemented through an income generation programme, an agricultural production programme, education, training and advocacy, and through the creation of small agro enterprises, a savings scheme and the creation of a rural cooperative market at the provincial level.

CFAP's Strategic Plan 2009-2013

By the end of the strategic planning period the number of Commune Farmer Associations will be doubled to 32 and the number of member households will be increased by 50%. CFAP is looking to achieve sustainability and plans to reduce its donor dependency by 50% over this period.

The services they provide to farmers in Svay Rieng province include, training in improved agricultural production and technologies, facilitating improved access to markets while providing credit and advisory support to their member producers.

- Mobilising training services to members
- Facilitate access of members to savings and credits
- Develop marketing services to members
- Organisational development and strengthening through exchanges and study tours

SNV's Baseline Survey Findings

SNV undertook a CFAP baseline performance assessment in 2010. SNV interviewed 33 member farmers and 20 non-member farmers in 18 villages over 8 communes in the districts of Svay Chrum and Svay Rieng in Svay Rieng Province; a sample rate of 20% of the total village populations. 3 CFAP staff and 8 Commune Farmer Association (CFA) leaders were also interviewed. Results indicated that whilst facing organisational challenges, CFAP were already scoring successes in farmer to farmer knowledge sharing and that there were 175 farmers, 88 of whom are female, who were applying what they had learned in Farmer Field Schools. Yet more member and non-member farmers were also starting to change their behaviour and farming practices and, encouragingly, a number of these farmers were also taking up improved techniques inspired by the improvements they saw in yield and crop diversity of their more successful neighbours. CFAP were also found to be skilled in the areas of integrated pest management (IPM), good agricultural practices (GAP) and were able to deliver training on fruit planting, vegetable cultivation and business management. However, the baseline study also concluded that while CFAP, as an established service in Svay Rieng, would make a valuable local capacity building partner, SNV could make important contributions to addressing the organisational challenges that they faced.

Community Farmer Association Interviews

Despite progress made, CFAP and their members faced a number of challenges. Having built strong relationships with farmer groups, CFAP still received complaints for its service delivery. Only half of CFAP's CFAs had been able to provide training to their village farmers in vegetable production, leadership, compost and EM (efficient microbes, probiotics) making or planning. Survey results revealed that the majority of CFAs and their respective group leaders (87.5%) did not have the requisite knowledge and skills in agronomy, plant protection, good agricultural practices (GAP), business management, marketing, mentoring and coaching, vegetable growing, market research, networking or negotiation. Only 12.5 percent of the interviewees indicated that CFAs and their respective group leaders had these skills sets.

In-depth interviews with CFAs did reveal them to have knowledge of management and leadership, and advisory and planning skills. 50 percent of CFA leaders interviewed reported that they had management and leadership knowledge and skills and 75 percent that they had planning knowledge and skills. Some CFA leaders also reported having knowledge of other areas including, health, health and gender issues and veterinary sciences (37.5%).

Although a large proportion of farmer members received no training over 2009/2010, four of CFAP's CFAs played an important role in providing valuable training to their association members and had supported their producer groups by providing advice on vegetable cultivation, the application of modern techniques and on the selection of high value vegetables. They also reported that their model farmer members had transferred knowledge to peer members on vegetable growing techniques and had given advice on seed and fertiliser choices, water management, land preparation and pesticide application on both vegetables and rice crops. On average 56 farmer members (30% of group members) had received knowledge from each of the model farmers trained by the CFAs.

Member Farmer Interviews

18.2 percent of member farmers interviewed reported having received services from CFAP. 54.5 percent reported having received training in fruit and vegetable cultivation, 27.3 percent in animal raising and

only 3 percent in business management and marketing. Surprisingly 6.1 percent reported to have received training in good agricultural practices, however further investigation revealed that this was not actually received from CFAP but from CFAs, the Family Economic Development Association (FEDA) and Samakum Akpiwat Chamros Khum Svay Ang (SACKS).

Indications were found between service provision by CFAs and sales performance, with 68.4 percent of farmers interviewed reporting that they had seen sales increase as a result of services they had received. This seems to be inconsistent with answers given concerning knowledge and skills provided to CFAP members. However, increases in vegetable sales had been made largely by the switching from rice to vegetable cultivation, changes in the type of vegetables produced, decreases in the number of members migrating for work and increases in vegetable production at members' homes as they expanded the land available for vegetable cultivation. Increases were also a result of members' use of improved seeds with all interviewees responding that their members had purchased improved seeds.

Saving time, increasing income

Mr Meas Yan lives in Tey Yea village, Thlork commune. His six children, three sons and three daughters, are all away working in Phnom Penh for lack of opportunities in Svay Rieng, leaving only him and his wife at home to tend to the vegetables.

For 14 hours a day, for the last twenty years, Mr Meas and his wife have been working their plot of 600 square metres. Each day they tend

their crop and package their vegetables ready to be sold in the market.

In the months following his attending a Farmer Field School, Mr Meas Yan earns 10 000 Riel per day more from selling vegetables than he ever did before.

What's more this takes him less time too. Now he and his wife have four hours a day to themselves; all from simply making the switch from leafy to fruity vegetables and introducing a few new techniques to their daily routine.

The reasons given for purchasing improved seeds were that they did not previously have good seeds and that they wanted to increase both yield and quality. Seeds were sourced from IDE FBAs and at village and town markets. A further 87.5 percent of interviewees also invested in irrigation equipment, such as water pumps and watering cans.

Despite these efforts, none of these farmers applied quality standards to their vegetable production. Furthermore, only 15.2 percent of interviewees kept financial records, making it difficult to ascertain to what extent sales may have increased. This was also at odds with reports made by CFAP staff indicating poor communications between CFAP and its CFAs.

Non Member Farmer Interviews

All of the non-member farmers interviewed reported vegetable production along with animal raising (60%) to be among their income sources. 50% of all non-members interviewed generated income from other sources; this was equal to the number of farmers who generated income solely from rice production. Income generating activities of non-member farmers included, fruit production, rice production and animal production, as well as alternative incomes from remittances from children working in garment factories, the production of palm sugar and rice wine, small-scale trading activities and working as construction workers. Non-farming activities provided the main source of income for non-member farmers (40%) with vegetable production (33%), rice production (32.5%) and animal raising (27%) generating similar levels of incomes. Fruit production accounted for only 10% of farmers' income.

Surprisingly, 11.8% of respondents reported having received services related to income generating activities from CFAP, with SACKS delivering the services to respondents. Many of the services they received were from IYV or the Rural Poverty Reduction Project (RPRP) of Provincial Department of Agriculture and were generally in the form of fruit and vegetable production training, animal raising, and mushroom cultivation training. Non-member farmers (41.7%) also reported increases in vegetable sales over the previous 12 months as a result of the services they had received.

Members Access to Savings and Credit

The majority of CFA respondents reported that they had members that had borrowed loans from microfinance institutions, but that this was only a fraction of the total 3000 members for the eight CFAs. Interviewed member farmers reported that only 6.3% had taken out loans. For the most part, members used their own money to buy seeds. The same was reported for investments made in irrigation equipment for both rice and vegetable cultivation, with members using their own surplus income to invest in irrigation equipment as they saw the opportunity to transform their dry season irrigated rice fields into vegetable plots.

Good Services for Our Members

"I have never grown any vegetables before and none of my neighbour did either, but I was interested to learn because of the training organised by the CFA. CFAP were in my village so this made it easy for me to participate in the training. The demo plot prepared for the training looked very attractive and it encouraged me to buy materials for vegetable farming. I bought vegetable seed and other supplies for cucumber production from the CFA Basac shop, this cost 43,000 Riels (USD10) but I got it on credit. The other advantages of buying from the CFA shop is that they provide advice on how to use what I buy, which is different from buying in the market shop"

Mrs Yan Pha, a farmer living in Salarien village, Basac commune

"We do not care much about earning profit from the shop; its only purpose is providing regular services to our member farmers so that they can access quality and reliable inputs for vegetable production. This can inspire farmers to practice new techniques and increase vegetable production; motivating members to pay a regular membership fee in exchange for more training and advice"

Mr Kong Savoeun, chief of CFA Basac

There was an indication that among non-member farmers, some had borrowed loans for purchasing seeds (21.1%) or for investing in irrigation equipment (15%) such as water pumps and bore wells. Only 18.2% of respondents had seen an opportunity to transfer their dry season irrigated rice fields to vegetable plots.

Membership Fees

Achieving sustainability by reducing their dependency on donor contributions is central to CFAP's five year plan. To achieve this CFAP will need to rely on the fees paid by member farmers for their services. The study revealed however, that over the 2009/2010 period CFAP's income was only six million Riels (\$1,500) and that this came from its savings interests and basic membership fees.

Each member was required to pay the annual membership fee of 2,000 Riels (\$0.5) but, as CFAP had delivered little if any training to its members over 2009/2010, they was no additional income from the payment of training fees. 12.5 percent of members reported having paid the membership fee, indicating that their main motivation for doing so was to have access to loans with lower interest rates and wanting to receive more training, especially in new vegetable production techniques.

Despite many members not having paid membership fees, they still received considerable support from their group leaders. This took the form of providing advice on vegetable cultivation and discussing problems, particularly insect infestations, in both informal and formal settings. Only two CFAs made income from services to members, this amounted to about 1.7 million Riels (about US\$400) each. CFAP staff did provide some technical advice on the growing of specific vegetable crops, such as kang kong, wax gourd and cucumber and on disease prevention in these crops. CFAP also provided encouragement to members to produce vegetables, explaining to them that they could generate greater income for their families.

There were no reports of non-member farmers paying for participating in training or for receiving assistance from group leaders. Interestingly, 25 percent of CFA respondents reported that non-members had approached them for training in vegetable production. CFAs did not take fees from these non-members as the services they provided took the form of advice rather than formal training. Still other non-members had expressed an interest in becoming members if they could receive services or training

from CFAP, particularly training in new techniques of vegetable production and pest control, while others requested free seeds, water pumps and wells.

Developing Marketing Services

The majority of farmers interviewed wanted to see CFAP provide links to the main provincial markets or buyers rather than to local or village markets and buyers. Amongst the complaints levelled by farmers was that this was not happening as few CFAs had developed group action plans and that there was an overall lack of market opportunities. Interviewed members reported that they had received no training from CFAP in business management, resulting in only 20 percent of farmers keeping financial records. 10 percent of members did report that they had received some market information from CFAP staff and that this information centred on the volumes of vegetables to be supplied in a week and information about collectors. Usually, CFAP staff would provide monthly updates to their members; however, respondents indicated that they had only received occasional information.

The Federation of Farmer Associations (CFAP)

I think it is extremely important to continue strengthening the vegetable programme in Svay Rieng. Farmers face many problems but the great potential of Bavet and other nearby markets can offer real benefits.

SNV's fostering of cooperation has not only provided technical knowledge on production but has been instrumental in improving marketing and entrepreneurial skills. Furthermore, leadership training ensures that committee members of farmers' organisations can lead their groups effectively. SNV and CFAP should work together to enhance the marketing system for small producers and to link vegetable farmers to a proper and reliable information system on market demand and build better relationship with traders.

Trade can replace the provision of free inputs from different development agencies, which should be discouraged. This can take place

alongside building the capacity of CFAs and CBOs in preparing and implementing business and strategic plans to help farmers respond to market demands collectively. Promotion of joint collection and marketing systems is needed. Additionally, more interaction with traders and buyers should be organised to established regular selling arrangements.

SNV and CFAP should work on further enhancing CFA's and CBO's capacity to manage their organisation and improve services; this can be done by the efficient utilisation of member resources through joint planning. In 2012 CFAP will work to introduce joint collection centres, so that farmers have a single point to sell their produce and access inputs for vegetable farming. Additionally, CFAP will establish a training centre so that as needs arise specific training can be provided to CFA and CBO members. CFAP will also explore additional links with financial institutions so that farmers can get access to credit.

Mr SOK Sotha
Managing Director, CFAP Cambodia

Over the study period no CFAs had been in contact with buyers to discuss the quality and quantity of vegetables demanded by the markets. A small number (5%) of non-member farmers had received market information from other organisation, especially IVY. This information was on the volume of vegetables to supply per week, methods, delivery dates and place of payments and the cropping calendar. No information was available on the frequency that this information was made available.

Baseline Conclusion

The baseline study concluded that there were positive signs in both member and non-member farmers' attitudes towards CFAP's overall vision. Member farmers had shown a willingness to learn improved agricultural practices, improve their business knowledge by keeping records of their daily business activities and to borrow loans from MFIs in order to invest in improved inputs. Members also reported relatively high incomes from their diversification into vegetable cultivation, despite having received little support from CFAP. Non-member farmers, encouraged by their observations of member farmers, had

also shown a willingness to become involved in the CFAP programme; a potential revenue stream for CFAP.

The performance of CFAs was encouraging. They had shown a strong relationship with their member farmers and had even made themselves available to provide advice to non-member farmers. Perhaps the clearest success was the impact of the peer to peer transfer of knowledge. This was especially true for those CFAs who had adopted the approach of using model farmers to showcase improved cultivation techniques and good agricultural practices.

More negative findings were found in the complaints by farmers of a lack of, or intermittent, service delivery. This arose both as a result of CFAP's organisational weaknesses and the fact that training from CFAs had not been consistent across villages. This lack of training is evident in the relatively low vegetable yields amongst member farmers, with only an average household yield of 5.25kg per day (minimum 0.5kg, maximum 50kg) over the 2009/2010 period.

CFAP's is made up of many young professionals whose skills need to be improved. Communication between staff members was poor and CFAP were not active enough in sharing field experiences of even their routine operations. This also inhibited the transfer of knowledge between those in CFAP who had the requisite skills and knowledge to less experienced staff. Despite being shown to have business skills, CFAP were failing to pass this knowledge onto CFAs and member farmers with group leaders receiving nothing in the way of action planning training. Lack of CFAP's support in facilitating access to markets was another common complaint from farmers and CFAP were clearly not proactive in approaching buyers and developing markets or in providing farmer group representatives with basic information. It was found that it was other LBO's that, when information had been given, were providing CFAs with market information regarding the quantity and quality of vegetables demanded by buyers.

CFAP were found to be slow to capitalise on the willingness of non-member farmers to become part of CFAs and on the desire of member farmers to receive more training. Without meeting these demands CFAP will find it difficult to achieve its goal of 50 percent financial dependence on its donor(s) by 2013.



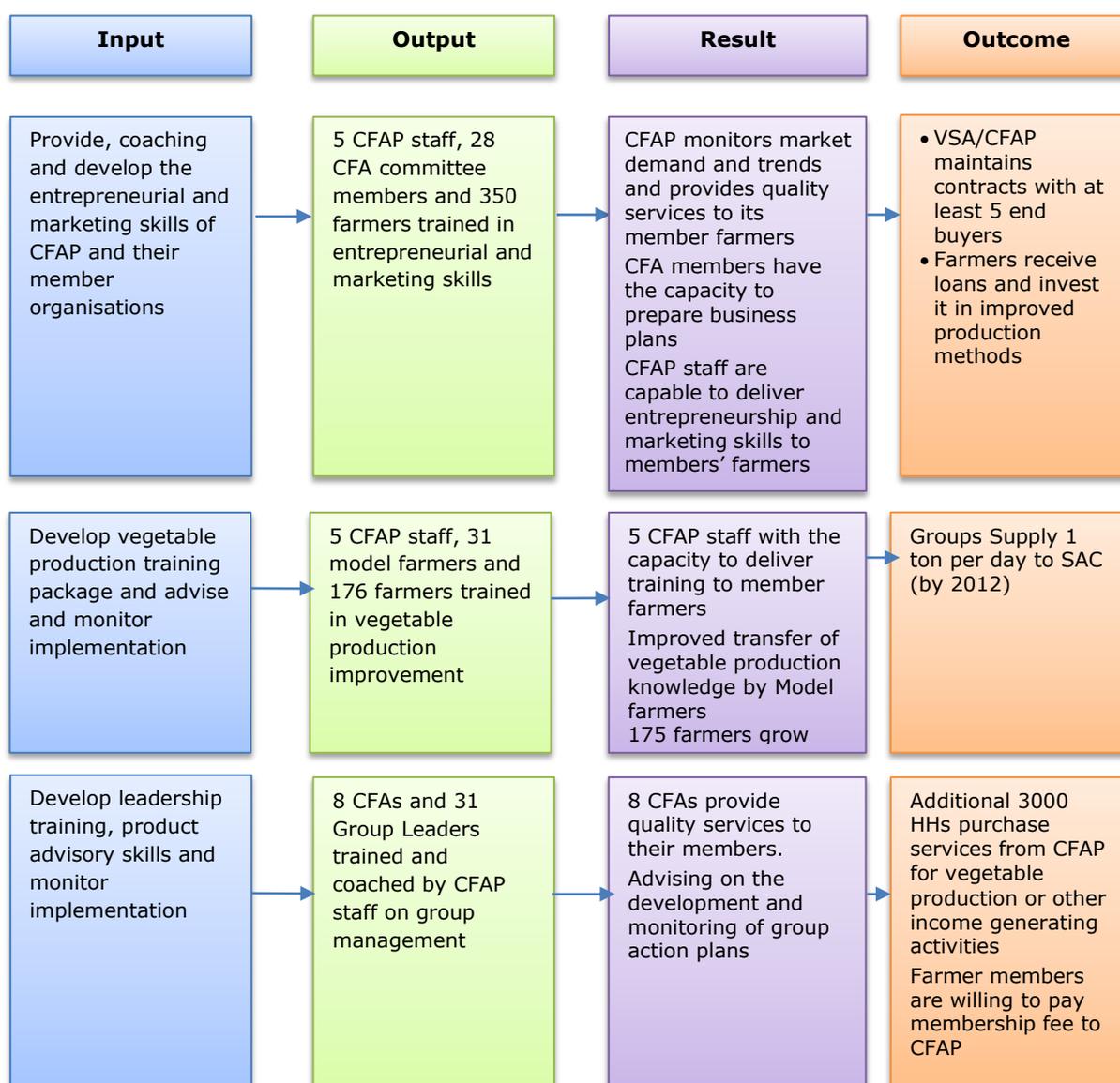
SNV Involvement & the CFAP Action

The main logic around the role and position of CFAP is that they can support their member associations to become more pro-active in identifying market opportunities. For this an improved understanding on how markets function is needed as well as improved leadership within the member associations.

To achieve the objectives of SNV's and CFAP's joint vision of offering producers, women and men, an opportunity to increase their incoming by boosting domestic vegetable production, a programme focusing on three main strategies along the value chain was developed.

- Organisational development
- Productivity improvement
- Market intelligence

Figure 4: SNV Intervention Result Logic



The pilot programme developed serves the main purposes of:

1. A capacity improvement programme for the staff of CFAP who will, after the pilot programme ends, be capable of continuing the services to their member associations, women's groups and individual

members - For this to succeed a longer term business plan will need to be developed with CFAP in order to make them more financially independent of donors and to see them become a true farmer organisation, performing according to the needs of their members.

2. The logic around the introduction of new technologies and the build-up of increased knowledge of producer households, especially women, is built around the flow of knowledge from model farmers to other villagers. Model farmers are directly facilitated by vegetable experts for one to three production cycles, depending on their commitment and motivation.

Detailed result logic was developed and indicators for change were designed accordingly for programme intervention and monitoring and evaluation (figure 4).

Enhancing CFAP's Capacity

Entrepreneurial and Marketing Skills

SNV developed a four day package of three training of trainers modules (TOT), including modules on entrepreneurialism, marketing and production and business planning. These were delivered by SNV for CFAP staff and CFAs and CBOs, along with the partnering organisations IDE, IVY, PDA, and the Svay Rieng Agroproduct Cooperative (SAC). In addition to this, SNV organised three curriculum development sessions and six coaching sessions that were delivered to CFAP staff.

Table 3: TOT Entrepreneur Skills and Marketing Enhancement Intervention

Activities (2010)	Outputs / outcomes
Entrepreneurial	<ul style="list-style-type: none"> • Five CFAP staff, two IDE staff, two IVY staff and two VSA staff trained • As an output of this intervention, four different half day training sessions were organised and delivered to 56 CFA and CBO staff and model farmers by CFAP staff. As a result some of these farmers were observed to have overcome their risk aversion and began selling to the local market.
Marketing Planning	<ul style="list-style-type: none"> • Five CFAP staff, two IDE staff, two IVY staff and two VSA, later renamed SAC, staff were trained • As an output, four half day training sessions were organised and delivered to 38 CFA and CBO staff and model farmers by CFAP staff. • With this activity in place, farmers are able to collect market information on price and quality demanded and location of established or potential markets.
Business Planning	<ul style="list-style-type: none"> • Five CFAP staff (1 female), two IDE staff, Two IVY staff (1 female) and two VSA staff (1 female) trained • As an output, four half day training sessions were organised and delivered to 13 CFA, CBO staff and model farmers by CFAP staff. These participants are gaining knowledge in cost and profit analysis of their business and can produce vegetables accordingly.
Curriculum Development and Coaching Support	<ul style="list-style-type: none"> • Six curriculum development sessions were organised for five CFAP staff • Six coaching sessions were provided to five CFAP staff in how to improve their training facilitation and how to be good trainers • As a result the five CFAP staff have jointly

	developed twelve half day training sessions and delivered them to 56 CFA and CBO staff and model farmers. Out of the total trained model farmers, nine farmers applied the knowledge acquired to their daily business practice.
Activities (2011)	
Training on loan management, costs and profit and business/action plan	<ul style="list-style-type: none"> • 118 famers (51 female) trained • As a result, 60% of them were capable of preparing their own business plan • As a result of training and coaching from CIEDC, one CFAP staff was capable of delivering seven training sessions to CBO and CFAs members. • It was observed that some CFAs and CBOs provided services such as advising on preparing business plans, production schedules and other entrepreneurial skills to their members. • With these skills model farmers are able to calculate their costs and profit and improve planning and marketing.
Curriculum development and coaching support	<ul style="list-style-type: none"> • Three training curriculums on loan management, costs and profit and business action planning were produced. • One CFAP staff member was capable of designing a training curriculum that provides training on entrepreneurial skills to the members of CBOs and CFAs in 4 communes.
Vegetable Farmer Contest	<ul style="list-style-type: none"> • A one day farmer contest was organised in four communes (Svay Ang, Check, Svay Chrum and Thlok). Farmers brought their vegetables and interacted with traders, collectors and retailers. Approximately 240 farmers participated in the contest.

Improved Vegetable Production Techniques

To improve CFAP's technical knowledge SNV developed and delivered a seven week package of half day farmer field school training sessions for CFAP staff, CFAs, CBO staff and selected model farmers. The package consisted of both theory and real in-the-field practice. The topics covered in the training package included, production cost calculation, soil preparation, seed sowing, disease and pest control, fertiliser application, pesticide application, use of records books, trellising, water control, post-harvest and profit calculation. In addition to training, home-based follow-up coaching was provided to farmers.

Table 4: Improved vegetable production techniques intervention

Activities (2010)	Outputs & Outcomes
Farmer field school training on bitter gourd and Chinese kale cultivation during the rainy season	<ul style="list-style-type: none"> • Five CFAP staff (1 female) and 31 model farmers (4 females) were trained • As a result, 31 demonstration plots were established and 19 farmers applied knowledge gained. 3 expanded their vegetable production areas.

Farmer field school training on yard long bean and wax gourd cultivation during the dry season	<ul style="list-style-type: none"> • Five CFAP staff (1 female) and 32 model farmers (5 females) trained • As a result, 32 demonstration plots were established • Based on knowledge and experience from IDE, four difference types' of technical training manuals on vegetables and rice were developed by CFAP staff. CFAP staff are utilising these documents for training their members farmers.
CFAP staff organised village learning events (Visits to a model vegetable farming plot)	<ul style="list-style-type: none"> • Five CFAP staff (1 female) organised one village learning event with the participation of 58 farmers (28 females). • Some farmers have been observed applying techniques and information observed and gathered during the visit.
Activities (2011)	
Support CFAP staff in scaling up farmer field school training delivery on bitter gourd, cucumber, eggplant and wax gourd	<ul style="list-style-type: none"> • Five CFAP staff (1 female) have developed a training curriculum and delivered FFS training to 164 farmers (66 females). • 16 Model famers were capable of sharing their knowledge and experiences to farmers during the FFS training which was conducted by CFAP staff. • As a result of capacity building in technical agriculture to five CFAP staff, 75 FFS training sessions were delivered to group members by CFO and CBO committees with support from CFAP staff as part of their regular service provision to their member farmers.
CFAP staff organise village learning events (Visit to a model vegetable farming plot)	<ul style="list-style-type: none"> • 14 village learning events were organised by CFAP staff with the participation of 288 farmers (112 females) • As a result, some CFOs and CBOs are capable of organising village learning events with support from CFAP staff. It was observed that the number of farmers cultivating vegetables was increasing. However the actual number of farmers has not yet been assessed.
Mini Study tours to other villages	<ul style="list-style-type: none"> • Two mini study tours to other villages were organised by CFAP staff with the participation of 36 farmers (13 female). It is expected that all the participating farmers will grow vegetables as they expressed interest during the visit. However, the actual number of farmers cultivating vegetables has not yet been assessed.
Farmer contests	<ul style="list-style-type: none"> • Four farmer contests were organised at commune level by CFAP staff with participation of 150 farmers. • It is believed that the number of farmers cultivating vegetable will increase in 2012 as they expressed their interest during the farmer contest. However, the actual number is yet to be established.

Leadership for Change

SNV developed and delivered a TOT training package of two modules on leadership for change, which included leading yourself and leading your team, to CFAP staff and partnering NGO staff. Follow up coaching was provided to CFAP staff after each TOT session.

Table 6: Leadership for change intervention

Activities (2010)	Outputs & Outcomes
Conduct training needs assessment (TNA)	<ul style="list-style-type: none"> Needs of targeted CFAs and CBOs, including some vegetable groups and CFAP staff, were assessed. Based on this assessment a training curriculum was customised and a TOT delivered to CFAP and partner staff.
Deliver TOT training on leading yourself and your team	<ul style="list-style-type: none"> Seven CFAP staff, one IDE staff, two IVY staff and one PDA staff received TOT training Five CFAP staff received support to design and deliver training to 3 CFA committee members and 20 vegetable group leaders.
Activities (2011)	
Training for CFAs and CBOs on "leading yourself and your team"	<ul style="list-style-type: none"> Three CFAP staff received support to customise a training curriculum to address the needs of CFA and CBO committee members with attention given to women in the committee and female producers. CFAP trained staff provided this training to the targeted 21 CFA and CBO committee attendants (female 7). As an outcome of the intervention CFAP staffs have been following up with regular coaching and monitoring activities.
Conducting field practice for scaling up vegetable production with two selected CFAs	<ul style="list-style-type: none"> A field practice event was organised in Thlork commune (4 male and 4 female participants) and in Svay Chrum, (16 male and 7 female participants) for CFA committee members and because of this intervention the committee members were aware of their role and responsibility in how to organise village meetings to maximize farmer participation.

Encouraging Partnerships

Along with building the capacity of CFAP, SNV brought together five development actors (IVY, SAC, IDE, Lors Thmey and the PDA) with CFAP in organised monthly meetings. Now established as the 'Advisory Meeting', actors share information and update each other on the progress of each organisation's activities, fostering cooperation and collaboration where necessary. These organisations also act as an advisory committee for SAC; negotiating with markets and passing their findings to SAC.

SNV's 'Study of farmer behaviour change and household decision making in Svay Rieng' (SNV 2011) has also provided a deeper understanding of why farmers grow vegetables and the behavioural factors influencing their farming practices and decision making process. This has allowed partners to design and refine their programme interventions with more than the technical obstacles farmers face in mind.

As a result of building partnerships, the first conference focusing on vegetable value chains was held in Svay Rieng province on the 26th May 2011. This one day conference was jointly organised by SNV, the Svay Rieng Provincial Department of Agriculture, IDE, IVY and CFAP. The purpose of the event was to generate common interests in "Vegetable Value Chains" among government departments and other stakeholders. The conference also addressed the constraints farmers face in cultivating their crops sustainably and to find a way that stakeholders can work together to address this problem. There were

around 100 participants including, farmers, traders, input companies, casinos, universities, MFIs, and local and international NGOs.

CFAs, Farmers and Knowledge Transfer

The training of trainer (TOTs) programme equipped CFAP staff with the skills to organise six farmer field school (FFS) training sessions without the direct involvement of SNV staff. These were attended by 164 vegetable farmers in seven communes from across Svay Rieng province. This was then complimented by a three day leadership training course for 34 leaders of 21 commune farmer associations from across Cambodia. This self-practice along with the FFS training sessions has seen CFAP staff and their CBOs and CFAs increases their knowledge and, just as importantly, their confidence in technical agriculture application. Subsequently CFA and CBO leaders have been delivering training to their members without the need for CFAP's support. To date 75 such FFS trainings sessions have been conducted by CFAs and CBOs without the need for support from CFAP.

Already evident in the 2010 baseline study, peer to peer knowledge transfer amongst farmers has also been enhanced. Although there is no comprehensive documentation on its successes to date, all actors report that vegetable farmers across all of Svay Rieng's communes are acquiring knowledge from one another. Interventions have had a considerable impact on farmers, who are now applying never before used technologies such as the application plastic mulch and trellis and the use of improved seeds.

Other non-member famers, although having received no formal training, have also been seen to start copying from neighbour farmers who have applied their new knowledge to successfully increase yields and quality. This phenomenon was observed in communes already receiving CFA support such as Chek, Svay Chrum, Kampong Chamlang, Basac and Svay Ang. Many other individual cases have been observed where, coming as consumers to buy vegetables from their neighbours, villagers have been impressed by the new techniques and applied them to their own home gardens.



During two years of intervention the SNV vegetable programme learned some valuable lessons. Perhaps the most significant for future projects is the finding that a large proportion of farmers do not want to switch from rice cultivation to commercial vegetable farming. Given that the majority of farmers currently grow vegetables on a small scale at home and are increasingly aware of the health and nutritional benefits, this cannot simply be ascribed to a lack of confidence in vegetable farming. Rather, many farmers do not see the potential economic benefits of growing vegetables on a larger scale believing that higher risks are associated with it in comparison to large scale rice cultivation. This means that the selection of the right farmers is all the more important to the success of this programme. Selecting participants on the basis of their willingness to grow vegetables on a commercial scale will help ensure the programmes sustainability as these willing and committed farmers adopt the new techniques and technologies recommended by the project. The role of the Cambodian Farmers Federation of Agricultural Producers (CFAP) and its member CFAs and CBOs importance cannot be understated. It is these organisations working on the ground which can put in the additional effort needed to raise awareness among their members and showcase the benefits of diversifying from just rice production into additional cash crop production.

Copying one another is an important aspect of farming life in rural Cambodia. Farmers do not want to 'be different' to their neighbours and to avoid stigma are likely to try to imitate those around them. This is as evident with vegetable cultivation as it is in other cultural aspects of their lives; and it is when a critical number of farmers start growing vegetables that others follow. Creating role models in the village is useful in building towards this 'critical mass' and the current practice of working through model farmers should be scaled up so that successful role models will attract other farmers who copy their example (SNV 2011).

Commercial skills and access to markets will become a crucial factor. The majority of farmers have limited awareness of the issues that could impede their ability to grow vegetables at scale, such as a lack of knowledge on how to access information about markets, how to negotiate with collectors and buyers, how to grow vegetables on a commercial scale, and how to keep records of their income and investment. This limited pre and post production knowledge make farmers hesitant to adopt new technologies unless they see clear evidence that it works and improves yields. This risk aversion makes them, understandably, wary of investing their time and money in improved agricultural inputs amid changing market demands unless they are confident that they will be able to sell their surplus product. Increased support in the shape of the frequent visits from the project staff to beneficiaries can help to motivate farmers, build confidence and encourage them to get involved in project activities.

The part that poverty and subsistence farming play in decision making is not to be underestimated. The most impoverished of people are not interested in capacity development; they are interested only in meeting their basic needs. In delivering capacity development, interventions they must directly address fulfilling these basic needs and create quick benefits. Capacity building alone cannot be effective in newly established and resource poor farmer organisations because they lack the internal resources to successfully implement interventions and successful capacity building needs to be tied to access to resources and hardware provisions that can result in quick benefits for farmers. For example, daylong classroom training sessions away from their farming activities are not effective for farmers who are losing time that would otherwise be spent tending their crops. Investment in village level applied farmer field schools has proven a good model for farmers and should be rigorously promoted in future.

Farmers recognise the benefits of training provided by NGOs and the Provincial Department of Agriculture, as well as the success of some programmes supporting model farmers. However, they are reluctant to copy them, claiming that they would need the same kind of support to replicate their success. In order for farmers to implement what they learn, training needs to be tailored to different audiences to ensure it is relevant. Specific modules can be provided for farmers producing vegetables on a commercial scale and for those who produce for self-consumption. However, additional provisions on how to access working capital, negotiate with collectors and buyers, or find specific technical knowledge should be in place. Targeted farmers also have a propensity, once they start believing in a programme, to apply introduced techniques and technologies as is, making it difficult for both farmers and the programme to change practices, therefore it is critical that each new technique or technology needs to be carefully assessed and designed before it is introduced.

Poor technical knowledge of vegetable cultivation is not the main or most important determinant for a farmer's decision to produce and sell vegetables. Rather, there are a number of interrelated factors that prevent farmers from switching from growing for home consumption to cultivation on a commercial scale. This suggests that any support and activities aimed at encouraging farmers to cultivate

vegetables, both for self-consumption and commercialisation, need to involve a number of different actors and a wider spectrum of knowledge. This includes knowledge of the financial management of small-scale farms, management of savings and loans, marketing services, access to information on the demands, trends and pricing of suppliers and purchasers, basic nutrition, home garden production, and postharvest processing. While this may require a reassessment of current support and funding, the opportunities to increase positive outcomes on household income are many. There is often the expectation that free inputs and other financial subsidies will be made available and these expectations discourage farmers and other vegetable value chain actors from investing their own capital in their business. The programme needs to impress on both farmers and stakeholders the disadvantages of the free provision of inputs and other business related financial subsidies and at the same time actively promote the advantages of commercial links and transactions between value chain actors through closer contact and the exchange of experiences and needs. This approach has the added advantage of leading to the sharing of risks more evenly across different stakeholders (SNV 2011).

Small but beautiful. Developing Cooperative Marketing

The objective of SNV's programme complements MAFF's strategy as improving vegetable production in the province is part of the PDA's implementing and planning strategy. Working together with SNV and other development partners, we have shared a lot of experiences and learned lessons from each other

The agricultural knowledge of farmers has been improved and farmers are now more aware about the problems associated with and the proper use of pesticides and chemical fertilisers. While some still use these inputs they now follow the good agriculture practices guidelines

Interventions will help actors along the supply chain, especially farmers, to improve their market competitiveness. Furthermore, disseminating lesson learnt and experiences of the programme through training and publications will also be very important for farmers and other value chain actors as well as development partners.

The PDA must support farmer associations and develop a registration process compliant with Cambodian law. This way the PDA can help farmer associations to become pre-cooperative and cooperative businesses making them competitive commercial enterprises. With the PDA's and SNV's support 10 cooperatives are already registered and receiving technical advice and startup capital from the PDA.

Mr Thach Ratana,
Director of Svay Rieng Provincial Director of
Agriculture

Annex 1

Categories of Commonly Grown Vegetable in Cambodia

Vegetables imported from Vietnam are all of varieties that are commonly grown, or have been cultivated successfully in the past, in Cambodia. This includes 69 types of vegetables, herbs and spices.

Categories	Vegetable types
Leafy type	kang kong, amaranth, ivy gourd, iceberg lettuce, Indian spinach, lettuce, arum leaf, jute leaf, Ceylon spinach
Cabbage type	mustard green, swanton mustard, white petiole, Chinese cabbage, petsai (green petiole), common cabbage, cauliflower, Chinese kale, broccoli
Fruit/Tomato type	green pepper, tomato, eggplant, pimento pepper, chilli pepper, Tabasco pepper, green papaya, bitter eggplant, okra
cucumber/Gourd/Trellis type	wax gourd, pumpkin, cucumber, angled loofah, bitter gourd, sponge gourd, bottle gourd, snake gourd, watermelon
Legumes/Bean type	yard long bean, winged bean, hyacinth bean, mung bean, cowpea, snap bean, peanut, soybean
Onion type	Chinese chives/onion stock, bunching onion, shallot, onion, garlic leek
Root type	arrow root, taro root, cassava, sweet potato, radish, turnip, beet, Chinese radish, winged yam (white), winged yam (purple), potato yam, tiger paw yam
Edible Leaves/Flowers of trees	sesbania javanica, sesbania grandiflora, epil epil, neem, drumsticks, sauropus androgynous
Spices and Herbs	coleus, basil, coriander, ginger, turmeric, swarm leaf, lemon grass, Japanese pepper mint, mint leave, lemon grass
Yam type	winged yam, potato yam, tiger paw yam

Source: Helen Keller International Cambodia 2003, Handbook of home gardening in Cambodia.

Annex 2

Abbreviations

ADB	Asian Development Bank
CDRI	Cambodia Development Resource Institute
CFAP	Federation of Farmer Associations
CFA	Commune Farmers Associations
CBO	Community Based Organisations
CIEDC	Cambodia India Entrepreneurship Development Centre
EDII	Entrepreneurship Development Institute of India
EM	Efficient Microbes, Probiotics
FBA	Farm Business Advisors
FEDA	Family Economic Development Association
FFS	Farmers Field School
GAP	Good Agricultural Practices
IDE	International Development Enterprises
IPM	Integrated Pest Management
IVY	International Volunteer of Yamagata
LCB	Local Capacity Builders
MAFF	Ministry of Agriculture, Forestry and Fisheries
MFI	Micro Finance Institutions
MoU	Memorandum of Understanding
NCCD	National Committee for Sub- National Democratic Development
NGO	Non-Government Organisation
NIS	National Institute of Statistics
PDA	Provincial Department of Agriculture
RPRP	Rural Poverty Reduction Project
SAC	Svay Rieng Agro product Cooperative
SACKS	Samakum Akpiwat Chamros Khum Svay Ang
SEZ	Special Economic Zone
SNV	Netherlands Development Organisation
SRPTC	Provincial Training Centre of Svay Rieng
SVR	Svay Rieng Province
SWOT	Strength, Weakness, Opportunity and Threat
TOT	Training of Trainers

Appendix 1

Basic Facts about SNV

Our Mission

SNV is dedicated to a society where all people enjoy the freedom to pursue their own sustainable development. We contribute to this by strengthening the capacity of others.

We help alleviate poverty by focusing on increasing people's income and employment opportunities in specific productive sectors, as well as improving their access to water and sanitation, education and renewable energy.

What do we do?

SNV supports national and local actors within government, civil society and the private sector to find and implement local solutions to social and economic development challenges. We stimulate and set the framework for the poor to strengthen their capacities and escape poverty. We do this by facilitating knowledge development, brokering, networking and advocacy at national and international level. Partnerships with other development agencies and the private sector are key to our approach.

Our advisors work in over 30 countries across five geographical regions-Asia, the Balkans, East and Southern Africa, Latin America and West and Central Africa-by providing advisory services to local organisations in seven sectors: Pro-Poor Sustainable Tourism, Renewable Energy, Water, Sanitation & Hygiene, Education, Health, Small Holder Cash Crops, and Forest Products.

SNV & Agriculture

Agriculture is recognised as a key **driver of economic growth**. In Asia, Latin America and Sub-Saharan Africa agriculture accounts for up to **40 per cent** of Gross National Product. But it is also important for **other reasons**. Agriculture enables **sustained food productivity** and helps to keep **prices stable** and **employment opportunities** open around and along viable value chains, thereby contributing to **poverty reduction** and **food security**. The grand opportunity at hand is to ensure that poor agriculture-dependent countries can **transform the sector into a driver of sustainable, economic growth**.

Three quarters of the world's poor live in **rural areas** in developing countries, including almost two billion **smallholders** (small-scale farming families) and pastoralists. From rice farmers to cattle herders, these individuals and their communities depend on the land and forests for livelihood and security. Agriculture provides the best opportunities for these groups to work and trade their way **out of poverty** by enhancing **productivity**, increasing **incomes** and improving **living conditions**.

Food demand is projected to increase by 50 per cent globally over the next 20 years. **SNV's key response** to improve agricultural productivity and achieve food security is to provide **innovative market-based solutions** along value chains, contributing to overall **equitable economic development** of the sector by **making markets work** effectively for the **rural poor**.

SNV's approach

SNV believes there should be a good balance between the added values of agriculture for **food security**, **inclusive economic growth** and **environmental sustainability**. New business models are called for including sustainable and balanced **trading relationships** and expansion of **economic opportunity** to include a greater number of people at the **base of the pyramid**. Collaboration between the public, private and civil sectors is a major opportunity area.

SNV takes a **systemic change view** of agriculture and views a value chain as a web of actors, relationships, constraints and opportunities that influence the flow of products to market. This enables the identification of key actors and issues along the whole chain and **informs intervention choices**. Working this way, with a focus on **governance** and **inclusive development**, we create a platform for smallholders not only to gain access to markets, but also to express their **collective agency** in markets for example, through forming cooperatives.

SNV's roles

- **Advisory services:** SNV has over 45 years of experience in the local implementation of agricultural programmes. SNV fills a specialist support role, facilitating creation of and change in market systems, bringing parties together, promoting innovation and developing capacities in new expertise areas.
- **Knowledge development and networking:** Through studies, analysis, effective M&E systems and practices, and market analysis and development for inclusive agricultural production, in partnership with local consultants.
- **Evidence-based advocacy:** Inclusive public policy development working with the appropriate local (governmental) partners.

Our main objectives in agriculture

3. 1) To increase income and employment for smallholders;
4. 2) To improve food security and living conditions for the poor and vulnerable groups;
5. 3) To strengthen the environmental sustainability of agricultural production and meet the challenges of a changing climate.

Scope

- **Target audience:** Focused on poverty reduction and inclusive growth, SNV's primary target groups are **smallholders** and **pastoralists**, as well as **processors, retailers, service providers** and **cooperatives**. SNV involves medium to large scale **private, for-profit companies** who can benefit from collaborating with smallholders and labour pools through our Inclusive Business and Impact Investing services.
- **Subsectors:** The subsectors we work in include - livestock, oilseeds, dairy, horticulture, fruits, vegetables, staple crops, spices and non-timber forest products.

Practices and services

Systemic **Value Chain Development (VCD)** is SNV's central approach in the agricultural sector. The focus in VCD is two-fold: (1) development of **profitable and sustainable practices in the value chain**, resulting in increased income and employment for the poor and (2) development of **appropriate sector financing solutions** and improved value chain governance.

Next to VCD, other selected key practices SNV deploys in agriculture are:

- **Inclusive Business:** inclusion of low-income communities within the value chains of companies to create shared value with a focus on new market entry and supply chain development;
- **Impact investing advisory services:** advising and connecting social investors to investment opportunities in emerging markets, with a focus on financing the 'missing middle', including investment mapping, deal generation, business readiness, deal structuring, quality assurance and measuring impact.

Appendix 2

SNV's Approach to Value Chain Development

SNV adopts Value Chain Development (VCD) approach as one of key approaches for promoting inclusive economic development for poverty reduction and good governance. The cornerstone of SNV's VCD approach is to focus on market opportunities and the critical constraints that inhibit growth in the chain. The objective is to facilitate VC actors to design and implement interventions that have the potential to be commercially viable. In addition, SNV's emphasis is on improving chain governance to ensure inclusion and enhanced roles for the poor and marginalized chain actors.

SNV as a development organisation assumes the role of a chain facilitator providing capacity building, advisory and knowledge development services to largely sub-national organisations level organisations that offer support and services demanded by chain actors.

SNV value chain development approach can be explained in the cycle below:

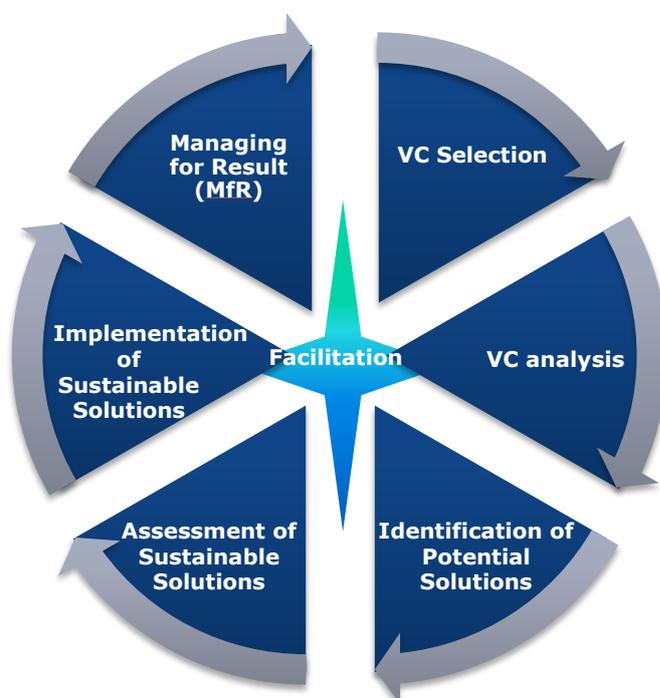


Figure 1: Schematic presentation of SNV's value chain approach

Value chain selection

SNV works out in detail a regional sector strategy every three years. Such three year regional strategy provides direction to regional and country sector programmes. The regional sector strategy is drafted based on the country based sector strategy. Country sector strategy is drafted every three years to provide direction to the country programmes and various working themes and subthemes for the country. In the context of Agriculture and Forest Product (AFP) Sector of SNV, value chains to be promoted are identified in the country strategy. These value chains are selected based on consideration of two major criteria such as value chains having market demand and those having potential for poverty reduction especially those value chains that have potential for increasing income and creating employment for poor farmers. In order to select these value chains SNV consults with its partners and key stakeholders for a detailed analysis of the existing poverty context, development trends, government and development partner's priorities, scalability, poverty reduction potential, gender and social inclusion prospects, in the particular value chains and lesson learnt of previous strategy cycle. Hence, result of these analyses provides a basis for SNV to work in a particular value chains.

Value Chain Analysis

Once the value chains are selected and validated, a team of SNV professionals together with its partners and consultants conduct an in-depth value chain analysis that forms the basis of interventions design. SNV collects information required for value chain analysis through desk studies, interviews, focus groups discussions and consultations with chain actors, business service providers, and support organisations such as the government, development partners and donors. Once a value chain analysis report is prepared, it is validated with the stakeholders.

To understand ways to upgrade any value chain it is important to understand the actors and the market in which the chain actors sell their products or services. Hence, it is important to analyse actors' relationships, chain governance, business linkages, market trends, quality standard requirements, benchmarking with competing and existing products, service markets and providers including finance, policy environment and end markets in order to identifying key bottlenecks and opportunities that obstructs better performance of the particular value chain.

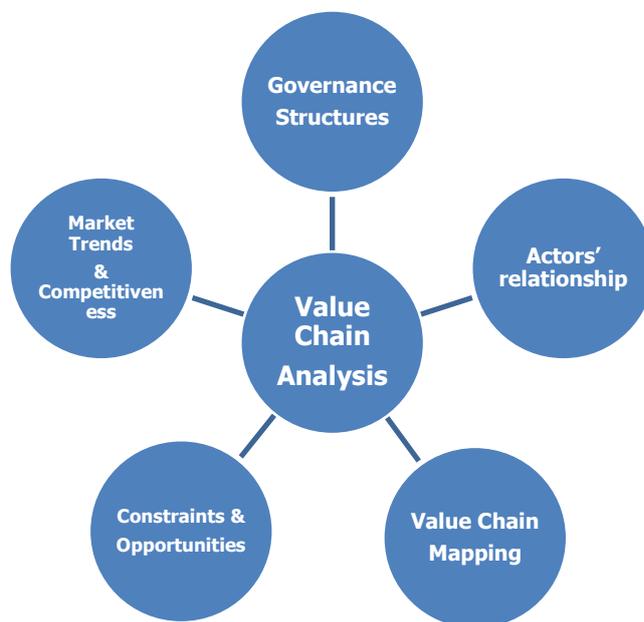


Figure 2: Components of Value Chain Analysis

Identification, assessment and implementation of systemic solutions

Once the potential systemic solutions are identified, they are then subjected to in-depth analysis and rigorous assessment. Based on their potential to increase growth and competitiveness of value chain, and their potential impact and outreach to the poor, potential systemic solutions are then finally selected for facilitation. The key to this step is to identify, assess and facilitate solutions to address the root cause of the constraints and ensure that these solutions are commercially sustainable.

With a keen eye on upgrading the value chain, promotional strategies have strong elements of commercial orientation and are provided by the private sector wherever possible or in private public partnerships to ensure commercial sustainability. SNV with the stakeholders and its partners (clients and LCBs) assess different possible sustainable solutions and short lists the most appropriate one.

Not all the systemic solutions for the poor must be private sector solutions. Some public sector solutions (e.g. access to basic services of healthcare or education) can also contribute to the poor and support them to better integrate into value chains. The solutions to be facilitated should be systemic and have the potential to contribute to broad-based value chain impact.

The ultimate sustainability of identified solution/s will be based on whether or not provision is commercially viable without continued SNV or donor subsidy in the long run.

SNV uses multi-stakeholder platforms in forming and collectively working towards actively supporting the implementation process of value chain interventions in order to achieve the industry vision.

Monitoring and assessing performance and impact

Monitoring seeks to understand and know the extent to which interventions and the value chain facilitation are on track to produce expected benefits and to whom. Key issues in monitoring impact include: whether the promotional activities are being used and supported by the value chain actors? Is value chain upgrading actually taking place? Is the value chain upgrading vision still realistic or should it be adapted? The answers to these questions provide guidance to project steering and implementation as well as for general learning and improvements in the design of the next interventions and projects. Impact measurement is also important for the accountability of resource use.

Managing for results, starts at the very beginning of any value chain intervention – i.e. during selection of the commodity and value chain to be promoted and contains a number of key blocks.

Formulating impact hypotheses of value chain promotion: SNV designs hypotheses by designing the result chains once the value chains are selected. The result chains are the logical relationships of SNV interventions to outputs, outcomes and impacts on poverty reduction and serves as a basis for intervention monitoring and evaluation. The result chains are periodically reviewed to reflect changes in programming.

Checking the impact hypotheses: At each level of result, key indicators (with a reasonable mixture of quantities and qualitative indicators) are developed. Measuring the progress in these indicators enables SNV to gauge the change before, during and after the interventions and to attribute the change to the intervention. Some of the key questions to be tracked and answered in this step are as follows:

- Whether interventions are making positive progress?
- to see if businesses are growing or not
- If the chain actors especially marginalized actors are earning additional income?
- Improved sector policies and support initiatives
- new jobs in processing, marketing and services stages are created
- redistribution of value-added and margins across stages in the value chain to create successful examples for replication

SNV follows the following activities to complete this step:

- Designing and clarifying indicators
- Establishing /creating a baseline
- Determination information /data collection
- Compile and analyse information /data and the process
- Disseminating lessons learned and use of the monitoring results for the next intervention design.

A key element is also to document and manage the knowledge developed in a project for future use. This can be technical knowledge on the sectors we work in but maybe more important also knowledge on the facilitation process that helps to improve project design, implementation and management for results.

Why Value Chain Development Approach?

SNV's overall strategic goal is to support local actors to strengthen their performance, resulting in poverty reduction and good governance. SNV believes that eliminating poverty involves empowering the poor, improving governance, and increasing people's ability to provide for their own needs and make informed choices. SNV's mission is to help alleviate poverty by focusing on increasing people's income and employment opportunities in specific productive sectors and improving their access to basic services, including water, sanitation, education and renewable energy. Therefore, SNV works with several selected commodities and services to achieve its mission.

Through its work SNV strives to increase employment of and income for poor and marginalised entrepreneurs. Of the many sectors with which SNV is engaged, the agriculture and forest product sectors are prominent. The majority of poor people involved in these two sectors live in rural areas and derive their livelihoods from crops and forest products. Creating jobs and income for smallholder farmers through value chain development approach has also been a core approach in SNV's Global Value Proposition paper where potential value chains are identified and promoted. Numerous factors inhibit marginalised farmers from realising benefits of commercial production because, in a country such as Cambodia, most agricultural commodities have not developed commercial-scale operations.

Hence, the industry concept in this sector is almost non-existent. SNV believes strongly that functional linkages and collaboration among various chain actors must be established to achieve sector competitiveness that can result in additional benefits, especially for marginalised actors. SNV in Cambodia adopts the value chain development approach as a way to understand how local communities are linked to and economically interdependent with, each other and the wider environment of the chain. By adopting the value chain approach, SNV seeks to link isolated businesses to achieve their common goals through collaborative actions. Through careful selection, analysis and development of value chains, SNV facilitates chain actors in identifying sustainable interventions that ultimately benefit poor people, both economically and in provision of basic services.

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