



**Advantages, constraints and key success factors in establishing  
origin- and tradition-linked quality signs:  
the case of Kampong Speu palm sugar geographical indication,  
Cambodia**

**Case study on quality products linked to geographical origin in Asia carried  
out for FAO**

**by**

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The views expressed in this information product are those of the author and do not necessarily reflect the views of the Food and Agriculture Organization of the United Nations (FAO)

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## Acronyms

ADI	Agriculture Development International Inc.
AFD	French Development Agency (Agence Française de Développement)
CEDAC	Cambodian Centre for Study and Development in Agriculture
CESDE	CEDAC Enterprise for Social Development
DATE	Development and Appropriate Technology (a Cambodian NGO)
FAO	Food and Agriculture Organization of the United Nations
GI	geographical indication
GTZ	German Agency for Technical Cooperation (Deutsche Gesellschaft für Technische Zusammenarbeit)
GRET	Technical Research and Exchange Group (Groupe de Recherche et d'Échanges Technologiques, Paris)
KSPA	Kampong Speu Palm Sugar Promotion Association
PGI	protected geographical indication
PGI Project	Pilot Project for the Protection of Geographical Indications in Cambodia
PRASAC	Rehabilitation and Support Programme to the Agriculture Sector in Cambodia (Programme de Rehabilitation et d'Appui au Secteur Agricole du Cambodge)

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## **Abstract:**

After its accession to WTO, the Cambodian Government prepared a draft law on the protection of GIs, intending to use the GI system as a tool to promote the country's agricultural and rural development. With a view to facilitating the registration and protection of Cambodian GI products while awaiting implementation of the law, the Ministry of Commerce has been executing pilot projects since 2007, including one focusing on Kampong Speu palm sugar, to provide assistance for the dissemination of knowledge and skills in this connection. On 18 May 2009, it issued a ministerial edict that provides a legal framework for the protection of registered GI products.

Palm sugar production has a long tradition in Kampong Speu Province. The area's sandy soil and low rainfall, combined with producer expertise, make its palm sugar particularly tasty, strong and aromatic. It is characterized by a typical palm aroma and light brown colour, features that allow its recognition on the market and among Cambodian consumers, leading to fraudulent use of the name.

A GI management organization – the Kampong Speu Palm Sugar Promotion Association – was established in 2008 with support from the Pilot Project for the Protection of Geographical Indications in Cambodia. This association, composed of producers, local collectors and private enterprises marketing palm sugar, seeks to manage the GI system, carrying out such activities as formulating a code of practice, raising awareness regarding the potential of the GI system, training farmers, organizing a control system, disseminating information and promoting the GI itself. The sustainability of this registered GI, which has been built on a solid basis, will now depend on the future market for products and on how much added value producers can obtain through quality improvement and a traceability system.

## **Introduction**

As is true for all countries with major agricultural and gastronomic traditions, Cambodia has many traditional specialities of origin-linked quality that stand to benefit from a geographical indication (GI) system. Producer expertise has resulted in many popular food items that are resources to be optimized for the domestic and export markets, showcasing Cambodia's rich agricultural and food heritage for tourists. Kampot pepper, Kampong Speu palm sugar, Kampot durian, Battambang rice, Battambang oranges, Siem Reap *prahoc* (fermented fish paste) and sausages, Kratie pomelos and Phnom Srok silk are examples of Cambodian agricultural, food and handicraft products that are known for qualities linked to their geographical origin.

### **1. Institutional context**

Cambodia's WTO membership agreement was formally approved during the September 2003 WTO Ministerial Conference in Cancun. The agreement was ratified by the appropriate

Cambodian institution, and in October 2003 Cambodia became the 147<sup>th</sup> WTO member, after which it prepared a draft law on the protection of GIs, intending to use this tool to promote the country's agricultural and rural development. This law, drafted by the Ministry of Commerce, is moving toward approval by the national assembly, but the process may be lengthy. In the meantime, with a view to facilitating registration and protection of Cambodian GI products, on 18 May 2009 the Ministry of Commerce issued a ministerial edict that provides a legal framework for the protection of registered GI products. The edict establishes rules concerning the recognition, registration and protection of GIs for the purpose of protecting the intellectual property rights of producers and consumers, preserving and boosting traditional know-how and national identity, creating jobs in rural areas, and promoting community development, tourism and poverty reduction.

Under the edict, protection of GIs may be obtained for agricultural goods, foodstuffs, handcrafted goods and any other goods complying with the following definition of a GI: "a name, symbol or any other thing that is used to express or represent a geographical origin and can identify the goods originating from such geographical origin, where the quality, reputation or other characteristic of the goods is attributable to the geographical origin." The Department of Intellectual Property Rights of the Ministry of Commerce is the main institution involved in managing GIs in Cambodia. The draft law states that:

1. The ***Geographical Indications Board*** is established and headed by the Minister of Commerce and shall have the following permanent members:

- the Secretary of State of the Ministry of Commerce in charge of Intellectual Property Rights, who shall be Chairman of the Board;
- the Director of the Department of Intellectual Property Rights, who shall be Secretary of the Board;
- representatives of the Ministry of Agriculture, Forestry and Fisheries;
- representatives of the Ministry of Industry, Mines and Energy;

Other board members may be added as necessary.

2. The Chairman of the Board may appoint any person to assist the Secretary of the Board.

3. The Geographical Indications Board is responsible for recognition of national and foreign geographical indications in the Kingdom of Cambodia and for monitoring of the goods registered.

4. The Government of the Kingdom of Cambodia shall allocate a budget in order to ensure the continuous operation of the Geographical Indications Board. The budget is separate but annexed to the budget of the Ministry of Commerce.

In operational terms, prior to the ministerial edict and approval of the protected geographical indication (PGI) law, the following steps have been taken:

- The Ministry of Commerce has established the Geographical Indications Office under the Department of Intellectual Property Rights.
- With the support of technical assistants, the GI Office is setting up operating procedures for dialogue with applicant organizations. In this way, the GI Office will acquire the expertise needed for GI management while at the same time giving GIs immediate effect (learning by doing).
- The GI Office is starting to work with the Ministry of Agriculture, Forestry and Fisheries, the Provincial Department of Agriculture, Provincial Chambers of Commerce, other provincial authorities and NGOs to establish a "GI culture" in Cambodia.

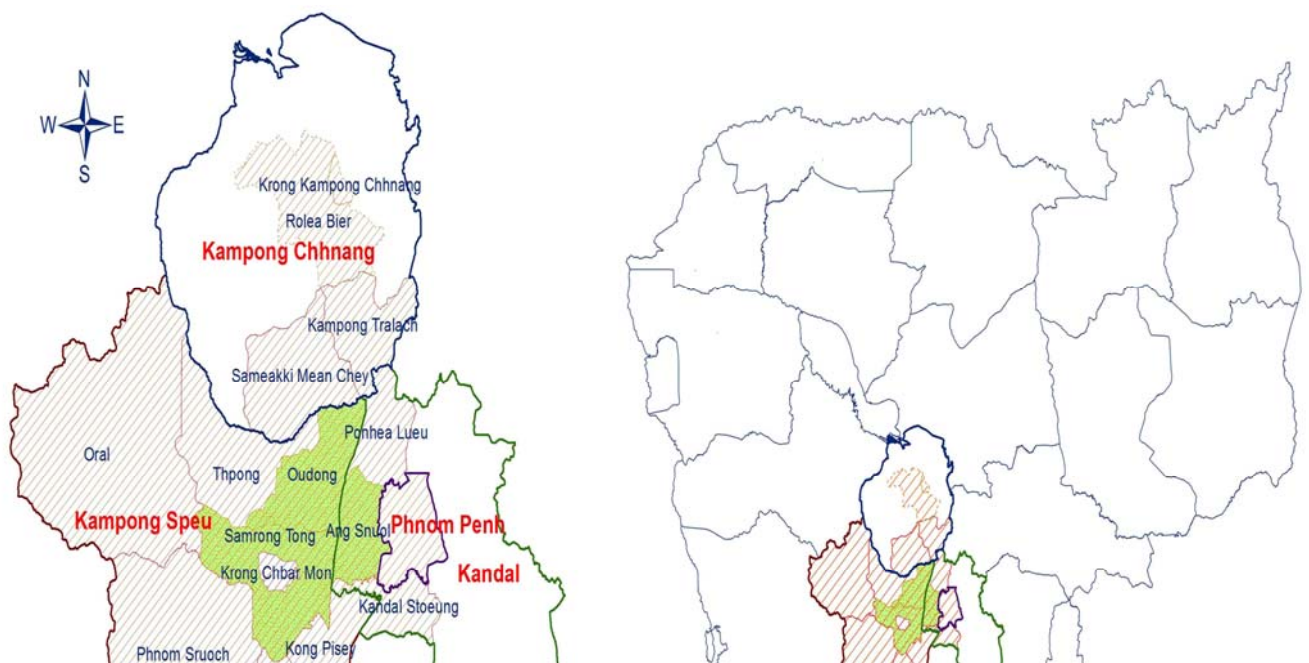
- Since 2007, the Ministry of Commerce has been executing a pilot project for the implementation of a PGI system in Cambodia with funding support from the French Development Agency (AFD) and technical assistance from the Technical Research and Exchange Group (GRET), a French NGO based in Paris, and the Cambodian Institute for Research and Rural Development. This Pilot Project for the Protection of Geographical Indications in Cambodia (hereafter referred to as the PGI Project) is providing assistance for the dissemination of knowledge and skills. A feasibility study was conducted in 2005 and other thematic studies (the production situation and market possibilities) have been conducted within the framework of the PGI Project. Such support has acted as a strong spur, making producers and operators receptive, so that they volunteer to start preparing applications for GI registration of their territorial products.

## 2. Geographical zone and specific resources

### General context

The production zone (Oudong and Samrong Torng Districts of Kampong Speu Province) is located in the south of Cambodia (see the map in Figure 1 below), about 30 kilometres from Phnom Penh. The zone lies within Cambodia's lowland rice-based farming system area. More than 80 percent of the inhabitants of the zone are farmers, producing rice as their main agricultural activity on household plots averaging about 1 hectare in size. The average rice yield in the zone is low (2.3 tonnes per hectare) due to poor sandy soil and low rainfall. After the rice harvest, farmer families generally grow vegetables. They also grow fruit trees and raise animals in the homestead area (on higher ground rather than the lower rice fields), allowing them to generate additional income. Farmers in the two districts studied also have a long tradition of producing palm sap and sugar as part of the family farming system. Palm trees are scattered around the homestead area, on dikes between rice fields and along rural roads. Each of the villages studied has upland areas where palm trees are grown more densely. Although almost all families used to produce palm sugar, the number of producers has decreased considerably since the early 1990s because of competition from crystallized white sugar made from cane and the higher price of firewood used for cooking and evaporating palm sap.

*Figure 1. Kampong Speu palm sugar production zone*



**Table 1. SWOT analysis of the zone in terms of palm sugar production**

<p><b>Strengths</b></p> <ul style="list-style-type: none"> <li>- Soil (sandy) and climate (not too humid) produce good-quality palm sap.</li> <li>- The quality of Kampong Speu palm sugar is recognized by the market as linked to its production zone.</li> <li>- Nearness to Phnom Penh facilitates the transport of palm sugar products to the central market.</li> <li>- Nearness to forest areas allows producers to find non-wood forest products such as bamboo, <i>popel (Hopea recepei)</i> and firewood for palm sap and sugar production.</li> <li>- Producers in the zone have recently organized themselves for the protection of their products.</li> </ul>	<p><b>Weaknesses</b></p> <ul style="list-style-type: none"> <li>- Soil and climate are good for the quality of palm sap but not for other agricultural products, which also adversely affects palm sugar production inasmuch as it limits income from other activities and hence producers' capacity to invest in palm sugar production.</li> <li>- Farmers' access to nearby forests is increasingly difficult, and non-wood forest products are becoming poorer.</li> </ul>
<p><b>Opportunities</b></p> <ul style="list-style-type: none"> <li>- The recent establishment of a legal PGI framework is an opportunity for palm sugar producers in the zone to protect their products in the near future.</li> <li>- Kampong Speu palm sugar was selected by the PGI Project as a pilot GI product, and producers in the zone can obtain support from the project for the whole process of registering their products.</li> </ul>	<p><b>Threats</b></p> <ul style="list-style-type: none"> <li>- The zone is under pressure from urban expansion. Rising land prices are leading some producers to sell their land. Investors cut down palm trees to clear land for construction purposes.</li> </ul>

**Delimitation of production zone in the specifications (or code of practice).**

According to the specifications or code of practice for Kampong Speu palm sugar, the production area is confined to Oudong and Samrong Torng Districts in Kampong Speu Province and Ang Snuol District in Kandal Province (see the map in Figure 1 above).

More specifically, to produce “Kampong Speu palm sugar”, producers must harvest the sap of palm trees growing in the three above-mentioned districts and the palm trees must grow on a particular type of sandy soil at least 80 centimetres deep, with gravel and good drainage. These criteria, together with the climatic conditions of the area, give Kampong Speu palm sugar its specific quality. Additional tests were carried out on the farms of all GI producer applicants to verify their compliance with soil criteria.

While sap collection and processing must take place in the three districts, packaging can also be carried out in the eleven bordering districts of Kampong Tralach and Sameakki Mean Chey in Kampong Chhnang Province, Oral, Thpong, Phnom Sruoch, Basedth, Kong Pisey and Krong Chbar Mon in Kampong Speu Province, Kandal Stoeung and Ponhea Lueu in Kandal Province and Dangkor in Phnom Penh Province.

### Local resources

The palm sugar production area, lying in the three districts mentioned above, is marked by the presence of red-yellow podzol soil (sandy soil with good drainage capacities). All palm sugar professionals (producers and local traders) recognize that the location of trees on deep sandy soils is a key factor in the quality of the sugar. Sap appears to be more concentrated, explaining the rich aroma of Kampong Speu palm sugar. Moreover, the area is characterized by low rainfall, which contributes to the high sugar concentration in the sap.

Palm trees are a feature of Cambodian rice-field landscapes. In 1967, Delvert<sup>1</sup> described the Kampong Speu region (which is larger than the three production districts under consideration) as the country’s palm sugar production region, with 375 000 palm trees being exploited. Between 2003 and 2005, the total number of palm trees within the three districts of the GI production zone was 457 291, about 261 898 of which were exploited (statistics of the district offices of agriculture). The number of palm trees is gradually decreasing with urban expansion (producers sell land and palm trees are felled), and the number of exploited trees is also decreasing because the income from palm sugar production is lower than that from other jobs that producers can find (producing and selling charcoal, garment factory and construction work or driving a motor taxi).



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<sup>1</sup> Jean Delvert, *Le paysan cambodgien* (Paris: Mouton, 1961).

**Table 2. Number of palm trees and production volumes by GI district**

District	Number of palm trees <sup>1</sup>			Production volume (tonnes per year)	
	Total	Exploited	Exploited by KSPA members	Total <sup>2</sup>	by KSPA members <sup>3</sup>
Oudong	189 539	84 524	3 267	5 916	204
Samrong Torng	172 203	121 798	251	8 525	18
Ang Snuol	95 549	55 576	0	0	0
Total	457 291	261 898	3 518	14 441	222

1. Statistics of the Agricultural Offices of Oudong (2005), Samrong Torng and Ang Snuol (2003) and KSPA + PGI Project (2008).

2. Estimate based on an average annual yield of 70 kilograms of sugar per palm tree. In the case of Ang Snuol, almost all producers sell their palm sap to the Khmer Beer Company for palm beer production, while palm sugar production is very limited.

3. KSPA + PGI Project data (2008).

Apart from palm trees, the agricultural and natural resources of the area include a range of rice varieties, fruit and non-fruit tree species, vegetable and animal species.

### 3. Product specification

#### Specific quality

Palm sugar production has a long tradition of Kampong Speu Province. The area’s sandy soil and low rainfall, combined with producer expertise, make its palm sugar particularly tasty, strong and aromatic. It is characterized by its typical palm aroma and light brown colour, features that allow its recognition on the market and among Cambodian consumers, leading to fraudulent use of the name. Although the fame of Kampong Speu palm sugar is long-standing, without a protection mechanism and legal framework, misappropriation of the name gives the product a lower quality image, which is why it is important to reinforce correct identification.

Kampong Speu palm sugar can be produced and marketed in the form of powder, paste, blocks or syrup.



## **Definition of the product in the specifications**

The producers of Kampong Speu palm sugar collaborated in drawing up the specifications (or code of practice), which is the reference document defining the product, its specific quality, the GI area and common production rules. In this document, a choice was made to work on improving quality. Producers thus need to improve their current production practices in order to meet the following requirements.

### ***With regard to palm tree exploitation***

- The geographical production zone is delimited on the basis of its deep sandy soils (> 0.8 metres), good drainage and low rainfall, and is located in Oudong and Samrong Torng Districts in Kampong Speu Province and Ang Snuol District in Kandal Province. Within this geographical area, additional checks are carried out on the farms of all GI producer applicants in order to verify compliance with soil criteria.
- After 1 January 2011, palm sugar producers must use bamboo receptacles (*bampongs*) instead of plastic containers.
- Receptacles must be cleaned between each use with cool water and boiling water.
- The use of *phnear* (made of palm leaves and used to transfer palm sap from flowers to receptacles) to filter palm sap is prohibited.
- The producer may place no more than one female palm tree flower or four male flowers in each receptacle.
- Receptacles should be collected from palm trees no more than 15 hours after they were installed, and the processing of the sap must be started no more than 2 hours after collection.
- The use of any chemical substance such as Sodium hydrosulphite to decrease the fermentation of palm sap and whiten palm sugar, for example in the *bampong* before the sap is collected or during processing of the sap, is prohibited.
- After taking the *bampong* from the palm tree, producers must put the sap directly into the pan; in other words, they may not pour the sap into a box or plastic bottle prior to processing.
- Before processing, producers must filter the palm sap by using special double strainers with a mesh of no more than 12 microns. The dimension of the strainer was studied and recommended by Confirel (a private enterprise marketing palm products from the production zone).

### ***With regard to the processing of palm sap***

- After 1 December 2009, producers must process palm sap by using improved cooking stoves, i.e. stoves equipped with chimneys, thus reducing amounts of firewood and preventing contamination of the sugar by smoke or ash. The use of improved cooking stoves helps to obtain a clearer colour of palm sugar because there is no burning around the mouth of the wok during processing.
- The cooking place must be set up and covered with leaves or zinc roofing.
- Only wood, rice husks, dry plant matter or gas may be used as fuel.
- Palm sap may not be added during processing. In the case of paste sugar, processing takes a maximum of 3 hours, with shaking for a minimum of 15 minutes. In the case

of powder sugar, processing takes a maximum of 3 hours and 15 minutes, with shaking for a minimum of 30 minutes.

- When evaporation has reached its target point, the pan is taken off the stove and crystallization starts in order to whiten the sugar: in the case of powder sugar, the shaking or crystallization is carried out with *antoks* (traditional tools made of wood for the purpose of crystallizing sugar) and *khnos* (traditional tools made of light wood or palm branches to shake boiled palm sap to make sugar); for other forms of sugar, the shaking or crystallization may be carried out with either *antoks* or *khnos*.

#### ***With regard to packaging***

- Packagers may not use materials that could affect the quality of the sugar.
- Packaging must be suited to the product (no interaction).
- Packaging must allow conservation.
- Packaging must be environmentally friendly (manufacturing, recycling and local transport of materials).

#### ***With regard to hygiene***

- Producers must wash their hands thoroughly with soap before processing the sugar.
- Producers must clean all other materials used.
- Producers must clean the processing premises.

### **Situation of producers vis-à-vis the specifications**

Some of the requirements for palm tree exploitation, processing, storage and hygiene stated above have already been adopted by some producers, while the remaining producer members of the Kampong Speu Palm Sugar Promotion Association (KSPA) are being or will be trained and monitored to make sure that they comply with the rules by the deadline. The main constraint is that some producers cannot read or write, so that training must be practical. However, the advantage is that local producers have already gained some knowledge and have good practical skills regarding tree exploitation, processing and storage. The PGI Project is an opportunity for them to gain access to training, but the project will come to a close at the end of 2009.

Producers who do not undertake to meet the specifications may not become members of KSPA, although they can always apply in the future when they are able to meet the specifications. According to its statutes, the association is open to all producers producing palm sugar according to the specifications.

## **4. Stakeholders and organization**

### **Actors in the supply chain**

The palm sugar supply chain is illustrated in Figure 2 below.

Kampong Speu palm sugar producers are farmers who exploit palm trees grown in the GI production area to produce palm sugar. They also grow rice, which is considered their main

agricultural activity, securing family food security and providing them with some cash income. However, for most palm producers, palm sap and sugar production is the most important source of cash income for the family. According to the KSPA statutes, to be eligible for membership of KSPA, a producer must exploit at least 10 palm trees. On average, each producer family exploits about 16 palm trees. So far there is no professional producer organization in the area for the palm or rice sectors. Palm sugar producers produce and sell their products separately to individual collectors and processing enterprises, who determine the price paid to producers for palm sugar and sap.

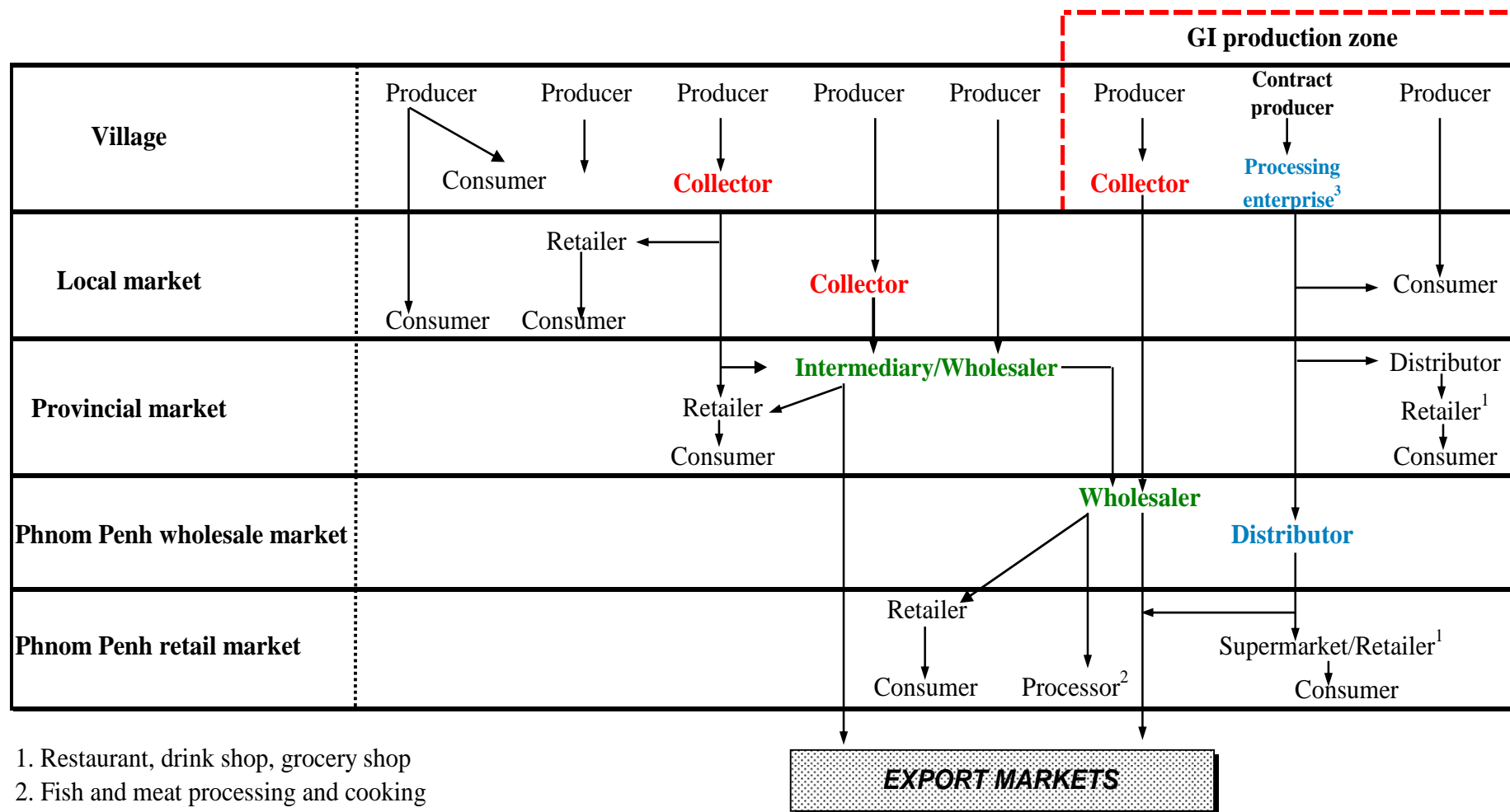
Individual collectors are mainly better-off villagers (most of them are farmers) who have access to the financial capital to purchase palm sugar and sap from producers to sell to wholesalers in Phnom Penh and retailers in the province. There are also individual collectors from outside the region who come each year to collect palm sugar and sap in the area. Both local and outside collectors play an important role in marketing palm products from the area.

Confirel, the Cambodian NGO Development and Appropriate Technology (DATE), Khmer Natural Enterprise and the CEDAC Enterprise for Social Development (CESDE) are the four national private companies collecting and marketing palm sugar and sap in the area, and Confirel is the largest processing, packaging and trading enterprise for these products. Confirel and DATE specialize in palm products and have both local and export markets, while CESDE does not specialize in palm products and currently has only a local market for such products, and Khmer Natural Enterprise specializes in the processing and marketing of palm beer and vinegar made from palm sap for the domestic market. Neither CESDE nor Khmer Natural Enterprise produces palm sugar. Due to the location of its processing facility, Khmer Natural Enterprise can collect palm sap only from producers in Ang Snuol District, which lies inside the Kampong Speu palm sugar production zone.

Prior to inception of the Kampong Speu palm sugar GI process, Confirel, Khmer Natural Enterprise and DATE had already conducted research with a view to improving the quality of processed products made from palm sap, and several discovered innovations have been applied in the production of granulated palm sugar, vinegar, palm wine and palm liquor. These processed palm products are well packaged and labelled with the company brand and trademark. However, no territorial brand name identifying the GI of Kampong Speu palm sugar is yet found on labels, since Kampong Speu palm sugar has not yet been officially registered as a GI product. With its export markets in developed countries, Confirel is the leading enterprise in Cambodia in improving the quality of palm products.

***Creation of an association regarding Kampong Speu palm sugar.*** With support from the PGI Project, a GI management organization – the Kampong Speu Palm Sugar Promotion Association (KSPA) – was officially established through a founding general assembly of representatives, organized in Oudong District on 29 November 2008. The association's membership is comprised of producers and local collectors (142) and private enterprises marketing palm sugar (3). A Governing Board with an Executive Committee was formed, made up of 15 members representing the various types of stakeholder in order to defend and manage the Kampong Speu palm sugar GI.

Figure 2. Current palm sugar supply chains



## Process and dynamics of GI implementation

In order to improve its quality and protect Kampong Speu palm sugar as a GI product, a GI management organization, KSPA, was established. For this, the PGI Project in Cambodia organized a number of meetings, workshops and round-table discussions in various places, ranging from the village to the national level. These events were intended to introduce producers, operators and concerned government agencies to the concept and benefits of GI registration, the protection of GI products and the development of a GI legal framework in Cambodia, and also to mobilize interested palm sugar producers and operators to start the process of establishing a Kampong Speu palm sugar GI. Through an election process from village level up to the overall geographical production area level, a task force was officially formed on 30 June 2008, composed of 14 members representing producers, local government and private stakeholders. The main tasks of this group were to:

- draft association statutes;
- organize consultations regarding specifications with producers in all the target villages and to draw up draft specifications;
- draw up a draft plan of work for the association;
- participate in GI zone delimitation with experts;
- carry out an inventory of producers and exploited palm trees within the production zone.



*Local meeting of palm sugar producers*



*KSPA General Assembly*

These tasks were implemented with assistance from the PGI Project. Then, five months later, a founding general assembly was organized on 29 November 2008 to review and discuss the work of the task force. This assembly approved the statutes of KSPA and elected a Governing Board and Executive Committee to manage the association.

The next two general assemblies were held in January 2009 to discuss and approve the association's plan of work and specifications. After obtaining approval from the general assembly and with the support of the PGI Project, the KSPA Executive Committee organized training meetings with producers in all target villages in order to:

- disseminate the contents of the specifications to all producer members;
- present KSPA's plan of work and the activities to be undertaken by the Governing Board and Executive Committee;
- train producers in the quality improvement required by the specifications so that they are capable of meeting these: production, processing and storage techniques, proper use of production tools, application of hygiene standards and production of improved cooking stoves.

Official registration of Kampong Speu palm sugar is under way and is expected to be completed by the end of 2009.

### **Importance of external support**

*At the local level.* GI management is completely new to the whole Cambodian context. Moreover, KSPA is a newly established GI management organization and lacks experience in both organizational management and GI management. With a view to promoting the protection of GI products in Cambodia, the PGI Project is therefore providing technical and managerial support to KSPA until the end of 2009, focusing specifically on:

- preliminary and feasibility studies;
- delimitation of the GI area;
- facilitation of meetings and dissemination of information;
- assistance in the establishment of KSPA;
- assistance in drafting the specifications;
- training for farmers regarding the specifications;
- development of a certification system;
- marketing and promotion.

*At the national level.* In order to create a favourable framework for PGI development in Cambodia, the Ministry of Commerce coordinated the establishment of the following bodies:

- a national committee for GI law development;
- a GI Office under the Department of Intellectual Property Rights of the ministry, with a national GI Secretariat composed of officials from the Ministry of Agriculture, Forestry and Fisheries and the GI Office;
- a national GI Board composed of the Secretary of State to the Ministry of Commerce in charge of Intellectual Property Rights, a representative of the Ministry of Agriculture, Forestry and Fisheries, a representative of the Ministry of Industry, Mines and Energy, and the Director of the Department of Intellectual Property Rights.

Under the PGI Project, the capacities of the GI Office and Secretariat are being boosted. The mandate of the secretariat is to promote, regulate and support the development of GIs in Cambodia. Starting with support for the establishment of Kampot pepper and Kampong Speu palm sugar as two pilot products, the secretariat is currently being assisted by international experts from GRET and national experts from the Cambodian Institute for Research and Rural Development. Market and marketing studies, technical research and development regarding the processing and packaging of palm sugar and the promotion strategy for Kampong Speu palm sugar are also being supported by the PGI Project in collaboration with the Cambodian Technology Institute and Agriculture Development International (ADI). These activities are essential for promotion of the Kampong Speu palm sugar GI.

## 5. Marketing

### Markets

KSPA is still in process of obtaining registration of Kampong Speu palm sugar, so that producers currently sell their produce in bulk with no labelled packaging. Several types of market actor operate in the production area to collect palm sap and sugar from producers (see Figure 2 above). Most potential market operators for GI palm sugar are private enterprises who have experience in marketing palm products, especially Confirel, DATe, supermarkets and modern stores (about ten) in Phnom Penh, and possibly the cooperative of Kampong Speu palm sugar producers, which will be established when necessary and feasible.

Kampong Speu palm sugar is not yet marketed as a GI product. However, with the establishment of the GI management organization, the launching of the quality improvement process and increased producer and consumer awareness regarding GI products, sales of Kampong Speu palm sugar have already been better this year:

- prices have been higher;
- prices have been stable over a long period (whereas there is usually a major difference between the production and post-production seasons);
- all producers have been able to sell their produce more easily and faster.

**Table 3. Palm sugar prices in 2008 and 2009**

	2008		2009	
	Low period <sup>1</sup>	High period <sup>2</sup>	Low period	High period
Farmgate price of paste sugar (Riels <sup>3</sup> /kg)	1 200	1 400	1 500	2 000
Retail price of paste sugar in normal markets in Phnom Penh (Riels/kg)	2 200	3 000	3 000	3 500
Farmgate price of granulated sugar (Riels/kg)	3 000	3 000	3 000	3 000
Retail price of granulated sugar in supermarkets and modern stores in Phnom Penh (Riels/kg) <sup>4</sup>	5 000-10 000	5 000-10 000	5 000-10 000	5 000-10 000

1. March to May, especially April.

2. June to February, especially September and October.

3. US\$1 = 4 100 Cambodian Riels.

4. The minimum and maximum prices are for different categories of granulated palm sugar and different forms of packaging and labelling (different processing and trading companies).

Paste sugar is currently sold in bulk by producers and all operators from local collectors up to retail sellers, while granulated sugar is sold only in packaged and labelled form.

In order to enhance the value of the Kampong Speu palm sugar GI for future marketing, the national PGI Project has been supporting a research-and-development initiative conducted by the Cambodian Technology Institute to identify various appropriate packaging techniques for syrup, paste and tablet sugar, and also to find ways of conserving these types of sugar for

longer periods. Packaging and conservation of the various forms of palm sugar are essential tools for the marketing of Kampong Speu palm sugar as a GI product, since it cannot be sold in bulk form – as is the current practice with non-GI palm sugar.

Confirel plans to purchase larger quantities of palm sugar paste and palm sap for their local and export markets in the next production season. A new foreign company (Eco Bis) is coming this year to collect palm sugar in the area for its export markets.

**Table 4. Production and marketing by KSPA members and totals within the GI production zone in 2008**

	<b>Among KSPA members<sup>1</sup></b>	<b>Total for GI production zone<sup>2</sup></b>
Number of producers	<b>142</b>	<b>10 000<sup>4</sup></b>
Number of exploited trees	<b>3 518</b>	<b>261 898</b>
Annual production (tonnes)	<b>250–350</b>	<b>14 441<sup>3</sup></b>
Volume sold to processing enterprises (packaged and labelled products) (tonnes)	<b>55–70</b>	<b>55–70</b>
Volume sold to other operators (unpacked and unlabelled products) (tonnes)	<b>195–280</b>	<b>the remainder</b>

1. 2008 data from KSPA and the PGI Project.

2. Statistics of the Agricultural Offices of Oudong (2005), Samrong Torng and Ang Snuol (2003). The number of palm trees has fallen considerably since 2003.

3. Estimate based on an average annual yield of 70 kilograms of sugar per tree, excluding non-sugar products processed from palm sap (palm beer production in Ang Snuol).

4. Estimate based on an average of 25 trees per producer.

### **Coordination and collective action**

All the stakeholders are now collaborating within the GI management organization (KSPA) in order to carry out the following collective actions:

- quality improvement through: the development of specifications; the establishment of a quality control plan; implementation of quality control measures; and capacity-building and awareness-raising for producers and processing enterprises to enable them to meet the specifications;
- communication and promotion: with technical assistance from ADI, a promotion strategy, tools and an action plan were developed for Kampong Speu palm sugar; the promotion action started in the second week of September 2009;
- registration of Kampong Speu palm sugar: the process is under way and it is expected that official registration will be obtained before the end of 2009.

Figure 3. Logos of Kampong Speu palm sugar developed jointly by ADI and the stakeholders involved



### Certification and control

Quality control is important in assuring consumers of the quality and credibility of the product. With a view to improving quality, control and traceability systems were established, and the first internal monitoring measures were implemented with support from the PGI Project. An internal control committee has been set up within KSPA, while stakeholders' capacities have been boosted and the control plan is well on the way to completion.

**Initial registration of producers:**

- signing of an undertaking to meet the specifications and comply with the control rules;
- verification of compliance (at the plantation level).

**Record keeping:**

- registers of production volumes and sales by producers (see Figure 4 below);
- registers of purchases, modification of batches and sales by other operators.

**Internal control carried out by KSPA:**


- verification of compliance with the specifications and inspection of registers (all producers at least once a year);
- verification of compliance at packager level (sensorial analysis of samples of X percent of batches).

**External control carried out by an accredited certification body:**

- inspection of 10 to 30 percent of producers (based on the internal audit);
- inspection of all packagers.

In order to ensure the traceability of products during the control or inspection process, each producer has to fill out and present complete documentation in a “producer’s folder”, comprising a certificate of KSPA membership, certificates of delivery and a register of volumes. These forms and files were designed with support from the PGI Project, which also helped to train producers in filling out the forms.

**Figure 4. Kampong Speu palm sugar producer’s register of volumes (sugar powder – 2009 season)**

 <b>ឆ្នាំដំណាំ ២០០៩ (Season 2009)</b> <b>ការលក់ដុះដាច់ដំណាំ គ្រាប់ស្ករ (SUGAR POWDER)</b>					
កាលបរិច្ឆេទ Date	ឈ្មោះអ្នកទិញ ( ឬក្រុមហ៊ុន ) Name of buyer (/ Company )	លេខអ្នកទិញ ( លេខសមាជិកសមាគម ) Code of buyer (if registered/KSPA)	លក់ ( គ.ក្រ ) sold (kg)	លេខត្រីប៊ី Lot n°...	ចរិតអ្នកទិញ Signature of buyer
___/___/20___		___-___	___ kg	C9-___-___-___	
___/___/20___		___-___	___ kg	C9-___-___-___	
___/___/20___		___-___	___ kg	C9-___-___-___	
___/___/20___		___-___	___ kg	C9-___-___-___	

ផលិតករ (Producer) : P-\_\_\_-\_\_\_-\_\_\_     
 កម្មវិធី គ្រាប់ស្ករ ឆ្នាំដំណាំ ២០០៩ (Sugar powder – season 2009)     
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The selection of an accredited external control and certification body is under way. In this connection, the long-term question of control costs and accessibility must be discussed, especially from next year when the project will end.

## 6. Impact analysis

### Perception by stakeholders

Although Kampong Speu palm sugar is not yet registered and protected by GI law, all the stakeholders encountered during the present study expressed hope for the future. The foundation of the GI management organization, the participatory development of the specifications, the commitment of producers and processing enterprises to follow the specifications and the establishment of a control system are among key factors leading to quality improvement. Moreover, stakeholders hope that project support for the marketing and promotion of Kampong Speu palm sugar will raise consumers' awareness of the efforts of producers and processing enterprises to improve quality and establish a quality guarantee system.

### Impact on rural development: economic, environmental and social aspects

The process to establish the Kampong Speu palm sugar GI started in mid-2007, but has yet to be completed, which means that Kampong Speu palm sugar is not yet marketed and protected as a GI product. However, during the establishment process, certain positive impacts on rural development and its economic and social aspects can be observed:

- Collaboration among producers and between producers and market operators has been built up and strengthened thanks to the establishment of the GI management organization and its operation to defend and manage the Kampong Speu palm sugar GI, thus improving social cohesion and protecting traditions and expertise. However, the poorest producers will face some difficulty in adopting the specifications due to a lack of investment capital.
- As part of the quality improvement process by KSPA members, some improved production, processing and storage requirements – such as prohibition of the use of chemicals to whiten palm sugar or the use of plastic palm sap receptacles, and promotion of the use of improved cooking stoves – are good for the environment. Moreover, the preservation and promotion of the tradition of palm tree exploitation will contribute to the protection of palm trees, the maintenance of typical landscapes and an increase in biodiversity.
- As a result of improved quality and closer collaboration among producers and market operators, the farmgate price of palm sugar is slightly higher and more stable (see Table 3 above). Moreover, producers have been able to sell their produce faster and more easily. Some private enterprises, especially Confirel, plan to purchase larger quantities of Kampong Speu palm sugar next year, which will increase cash income for palm producers' households.
- Despite various difficulties faced in the process of quality improvement, producers are more motivated and committed to exploiting palm trees as part of their households' livelihoods, thanks to awareness-raising, communication and promotion regarding the products, combined with improved market results this year. This situation will lead to a reduction in the felling of palm trees, a reduction in the seasonal migration of villagers to seek work elsewhere, and the preservation of culinary traditions.

These and other impacts, such as the promotion of tourism, can be better assessed over the forthcoming five years when Kampong Speu palm sugar is marketed and protected as a GI product.

## **Costs**

To improve and ensure the quality and specific nature of Kampong Speu palm sugar, producers and other operators have to meet additional costs, which can be estimated as follows:

- internal control: US\$8–15 per producer per year (US\$8 if one internal inspection per year, US\$15 if two internal inspections per year); the cost will be lower if the number of KSPA members increases);
- external control: US\$10–30 per producer per year (estimate based on Confirel's costs for external control of organic palm products by an international certification body);
- production materials: US\$20–40 per producer per year (improved cooking stoves, other small tools and implements, new packaging and labelling materials).

While the minimum costs are affordable for producers, the maximum costs seem too high for them in the current situation, depending very much on the sugar price obtained each year. However, most producers expect to have access to better markets with higher prices after quality improvement and official GI recognition.

## **Support and capacity-building required by stakeholders**

Producers need support to improve their capacities in the following spheres:

- processing and storage techniques and facilities in order to meet with improved quality and hygiene requirements;
- packaging and labelling in order to improve the presentation and explanation of products so that they obtain wider market access and added value;
- comprehension and filling out of all the documents required for control and traceability purposes.

The newly founded KSPA requires organizational and managerial support to make it more efficient and effective. It has to set up a control mechanism, a promotion strategy and a protection mechanism in order to ensure the image and increased value of Kampong Speu palm sugar. And for this purpose it requires external support until it is able to run things effectively on its own.

Processing enterprises and market operators need to develop marketing and promotion strategies in order to add value to the various forms of Kampong Speu palm sugar as GI products. Research is also needed in order to diversify the forms of palm sugar product that can be conserved for longer periods and used for a range of purposes.

## 7. Conclusions and recommendations

Considering the motivation and participation of palm sugar producers in the GI registration process and the results obtained to date, it can be concluded that the pilot case has been successful, although it is too early to assess the impact on producers' livelihoods. However, in terms of the GI establishment process, the pilot Kampong Speu palm sugar GI process is a good example for other potential products in Cambodia.

Although a Kampong Speu palm sugar GI organization has been established, specifications for the product have been developed and approved, application of the specifications have been reinforced with a clear control system and a product promotion strategy has been formulated, the sustainability of the GI system for Kampong Speu palm sugar will depend on the future market for the products and on how much added value producers can obtain through quality improvement and a traceability system. It will also depend on how far Kampong Speu palm sugar can be protected by a GI law, in other words, the effectiveness of the protection mechanism and the efficiency of law enforcement.

### **Strengths:**

- collective organization of stakeholders, with a participatory approach;
- involvement of all the links in the supply chain – farmers, processors and distributors (processors and distributors are also motivated in the process);
- strong, clear support from the Cambodian Government for GI development;
- the fact that market remuneration will encourage producers.

### **Weaknesses:**

- the fact that the pilot project benefited from considerable external support, so that it may be hard to replicate such support for future Cambodian GI processes;
- the need for further support before the organization becomes autonomous;
- costs of the certification system that are too high for producers in the current situation (i.e. with the present selling price of sugar);
- possible exclusion of small-scale farmers, because they are unable to comply with the specifications, inasmuch as they may not be able to make the initial investments required and/or fill out the monitoring and traceability documents;
- risk of over-exploitation, leading to a negative impact on natural resources, if producers do not adapt innovations regarding energy saving: the planting of fast-growing trees and the adoption of fuel-saving stoves.

**Ongoing capacity-building of KSPA** is required in the following spheres:

- organizational management: internal information flow, coordination and meetings, service delivery to members, conflict resolution and external relations;
- the promotion strategy and action to be adopted and undertaken by the organization;
- GI management: members' understanding and application of the specifications, a recording and monitoring system, and a protection mechanism.

External support is therefore needed, especially in order to ensure a strong pilot GI process to demonstrate the benefits of the GI concept to rural producers and local development, and thus attract other potential GI producers and operators to organize themselves to manage and protect their own products. In addition, the GI concept and its benefits should be more widely promoted among producers and consumers.

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## **Annex : Methodology**

### **1. Review of secondary data and meeting with key informants**

Some recent (in 2000 and 2001) in-depth studies had been conducted by PRASAC, and GTZ on palm tree, palm sap and palm sugar production and commercialization in Cambodia in general and with particular focus on Kampong Speu region. The most recent study (in 2005-06) had been conducted by GRET and CEDAC on PGI feasibility of Kampong Speu palm sugar. These studies reports were review along with other related documents and reports produced by various organizations such as CFSP, GRET, FAO and others. Data obtained through the review of secondary data were used as basic information in preselecting of the target geographical areas and in designing the field in-depth study.

Some key informants were identified during this stage of the study. Interview with key informants were conducted in order to get information on their experiences and knowledge as well as their own perceptions on the sector.

### **2. Field survey at production area**

A study team comprising of PGI project stakeholders (the project staff including the consultant, CEDAC staff, staff from PGI office of the Ministry of Commerce, project counter part from the Ministry of Agriculture) was formed in order to conduct an in-depth field survey in 4 most potential districts of palm sugar production identified during the secondary data review and meeting with key informants. The 4 districts are located in 2 bordering provinces of Kampong Speu and Kandal (3 districts of Kampong Speu and 1 districts of Kandal). Technical and commercial staffs of Confirel and DATe, the two main private actors buying palm sugar sap from rural producers for processing and trading of different kinds of processed palm sap products, have also joint the study team since the study design stage. The in-depth field survey focused on the commercialization and current situation of palm sap and palm sugar production in the study area: farmer practices / techniques, production volume and qualities, situation of farmer producers and their perceptions on quality management and protection.

For this field survey a meeting workshop of the study team was conducted to develop a questionnaire for household interview and a checklist for stakeholder meeting interview. Then the field survey was conducted through the following process:

- First step: meeting with district authority and district offices of agriculture in the 4 target districts to get available data on palm trees and palm sugar production and to identify communes with significant palm sugar production in each district. During the meeting, the study team made some time to introduce the GI concept and to present the PGI project in Cambodia to participants of the meeting. The perception on the management and protection of Kampong Speu palm sugar quality link to its production area was also consulted.

- Second step: the potential communes identified during the first step were visited and meetings were conducted with commune council and chiefs of the villages in each target commune. This meeting aimed at getting additional available data and to identify villages with significant palm sugar production in ah target commune. As in the case of meetings at district level, the concept of GI and PGI project in Cambodia was presented and the perception on the management and protection of Kampong Speu palm sugar quality link to its production area was also consulted.
- Third step: With assistance from village chiefs and key informants in the target villages identified during the 2<sup>nd</sup> step meeting, the survey team could identify palm sap and palm sugar producers in each target village and randomly selected 3 to 5 producers per village interviews.

Through the above process of meetings and interviews we have identified 38 potential villages in term of production volume and number of producers. The 38 potential villages are located in 20 communes of the 4 target districts. House hold interviews were conducted with 106 producers in the 38 villages (see the list of the interviews in annex).

Table 1: Number of studied target groups, villages and communes by district

Name of district	Number	Number of			
		Commune	Village	Producer	Local collectors
Ou Dong	Total	15	251	No data	No data
	Target studied	5	8	21	4
Samroung Tong	Total	15	296	No data	No data
	Target studied	8	10	39	1
Kong Pisey	Total	13	236	No data	No data
	Target studied	2	9	25	2
Ang Snoul	Total	16	287	No data	No data
	Target studied	5	11	21	3
<b>Total of the 4 districts</b>	<b>Total</b>	<b>59</b>	<b>1070</b>	<b>No data</b>	<b>No data</b>
	<b>Target studied</b>	<b>20</b>	<b>38</b>	<b>106</b>	<b>10</b>

### 3. Focus group meetings in the target villages

The result of in-depth field survey was compiled and presented to the focus group meetings organized in each of the 38 target villages. All producers in each target village were invited to the meetings by PGI project staffs in collaboration with village chiefs. The meeting purposes were to:

- discuss on the field survey result, get feedbacks, comments and additional information from the focus group;
- introduce GI concept and present the PGI project to participants of the meeting and seeking for interested producers to start the process in managing their products quality linked to geographical area in collaboration with the project;
- consult the producers' point of view regarding the management and protection of their products quality linked to the production zone.

#### **4. Interview with market operators**

Two separate checklists were developed for interview with market operators including local collectors, wholesalers and retailers who commercialize palm sap and different form of processed palm saps (mainly palm sugars). Ten local collectors and wholesalers were interviewed on their business and perception on quality management and protection of Kampong Speu palm sugar under IG legislation. Retailer, distributors and exporters of packaged and labeled palm sugar products were also selected for interview (see the list of the interviews in annex)