

# Final summary report of SUSPER (Sustainable Development of Peri-Urban Agriculture in South-East Asia)

## *Rapport final de SUSPER*

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**SUSPER**

**Sustainable Development of Peri-urban Agriculture  
in South-East Asia Project**  
(Cambodia, Lao PDR, Vietnam)

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## 2.14 Vegetable Market Flows and Chains in Phnom Penh

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The main objectives of the research are: (1) to understand the organisation of the market in terms of the geography of produce flows and stakeholders' functions, (2) appraise market performance in terms of import competition/supply variations and (3) to set the basis of an information system on origins and quantities.

To reach these objectives, a review of the available data was conducted. Then rapid market surveys were implemented to investigate market flows and chains. The surveys were conducted on one fifth of traders in the three largest markets selling vegetables: Oressey (retail market), Dumkor and Chaba Ampou (wholesale and retail markets). Questions mostly related to the origin of supply, function of middlemen, calendar of supply and quantities sold. Eight commodities were selected according to their importance in consumption and in peri-urban agriculture: tomatoes, cabbage, Choy sum, Chinese cabbage, lettuce, cucumber, yard-long green beans, water convolvulus (kangkong). The surveys were conducted three times in 2002 (April, July and October) and four times in 2003 (January, April, July and October).

Comparisons were made with previous surveys carried out in the market (including those carried out by FAO and AGRISUD). This survey aimed at quantifying origins and flows of vegetables available in the market, although difficulties in getting data on quantities are manifold (especially the fact that many of the wholesale transactions take place at night and traders are reluctant to answer).

From the survey results, vegetables can be categorised as follows according to their origin (the distance between production and markets is related to product characteristics, with most perishable vegetables originating from areas closest by; the origin is also related to climatic constraints and land availability):

### Imported vegetables

- These vegetables mostly come from Vietnam. This is the case of tomatoes which come from Vietnam for 91% or more of transactions in 2002 (100% in April, 94% in July and 80% in October) and 60% or more transactions in 2003, except in January (25% in January, 73% in April, 94% in July and 93% in October); the remainder originated from Kandal, Phnom Penh (Chamcarmon) and Kampong Speu province in October 2002; cabbage originated from Vietnam for 86% or more transactions in 2002 (100% from Vietnam in April and October, 95% from Vietnam in July and 5% from Kandal), in 2003 (77% from Vietnam in January, 97% in April, 99% in July and 99% in October), the rest came from Kandal and Kampong Cham; Chinese cabbage: 100% from Vietnam at the three periods in 2002, while in 2003 it comes from Vietnam 99% and from Kandal 1% in January and April, and 100% as well as from Vietnam in July and October.

### Local vegetables

- Vegetables that only come from Phnom Penh municipality (maximum of 20 kilometres from centre): this is the case of water convolvulus: 53% from Dangkor district, 43% from Meanchey district, 3% from Chamkarmon and 1% from Russei Keo in 2002. And 46% from Dangkor, 52% from Meanchey, 1% from Chamkarmon and 1% from Russei Keo in 2003.
- Vegetables that mostly come from Kandal province (20-40 kilometres from centre) for more than 98% in 2002 and 99% in 2003 of transactions (the rest from Phnom Penh municipality): this is the case of choysum (Kandal province: Saang, Takhmao Mokampoul, Kandal Stung, Ponhealeu and Kien Svay districts, Phnom Penh: Russei Keo and

Chamkarmon districts), lettuce (Saang, Kien Svay Takhmao, Mokampoul, Lek Dek and Bakheng), yard-long beans ( Saang, Kien Svay, Takhmao, Mokampoul, Kandal Stung, Pnhealeu, Banteidek and Lek Dek).

- Vegetables that come from Kandal, Kampong Speu, Kampong Chhnang, Takao and Phnom Penh (50 kilometres beyond Phnom Penh): this is the case of cucumber (99% from Kandal in April, 60% in July, 23% in October in 2002 and 2003: 77% in January, 100% in April, 73% in July and 62% in October from Kandal), the rest is from Kampong Speu (27% in July and 34% in October) and Kampong Chhnang (1% in January).

The classical result is that the longer the distance between the production area and market, the more middlemen there are. This is shown by the survey results: more than half of the retailers get water convolvulus directly from producers, as this vegetable is produced around Phnom Penh, while vegetables from Kandal and Vietnam usually go through collectors and wholesalers (and the wholesaler stage is more frequent in the case of vegetables from Vietnam than in the case of vegetables from Kandal, which may go directly from collectors or producers to retailers). Transport takes place by motorbike in half the cases, the other means of transport are by foot or by truck. 70% of traders sell all year round. The main reasons for stops in the activity are the floods during the rainy season, as well as ceremonies in January and April.

The surveys provide information for the selection of project sites relative to their importance in the vegetable supply: Phnom Penh municipality for work on water convolvulus; Saang district for work on the other vegetables. They stress the importance of increasing the scale of production and assembling in the present periods of shortage for the local supply to be competitive with respect to imports. Vegetable imports mostly correspond to the deficit in local production due to heavy rainfall and high temperatures in the rainy season (from May to October, with floods mostly from August to October) and also to water deficits in the dry season (especially from February to May). When available at the same time, the prices of local and imported products are similar or lower than local products. It stands out that in January 2003, tomato imports dropped to 25% of the total supply owing to favourable climatic conditions. Hence there is some leeway for local production to substitute for imports if the water availability is improved during the dry season and if innovations are promoted to grow tomatoes, cabbage and Chinese cabbage in the rainy season.