

## **PRODUCTION AND MARKETING FOR VEGETABLES**



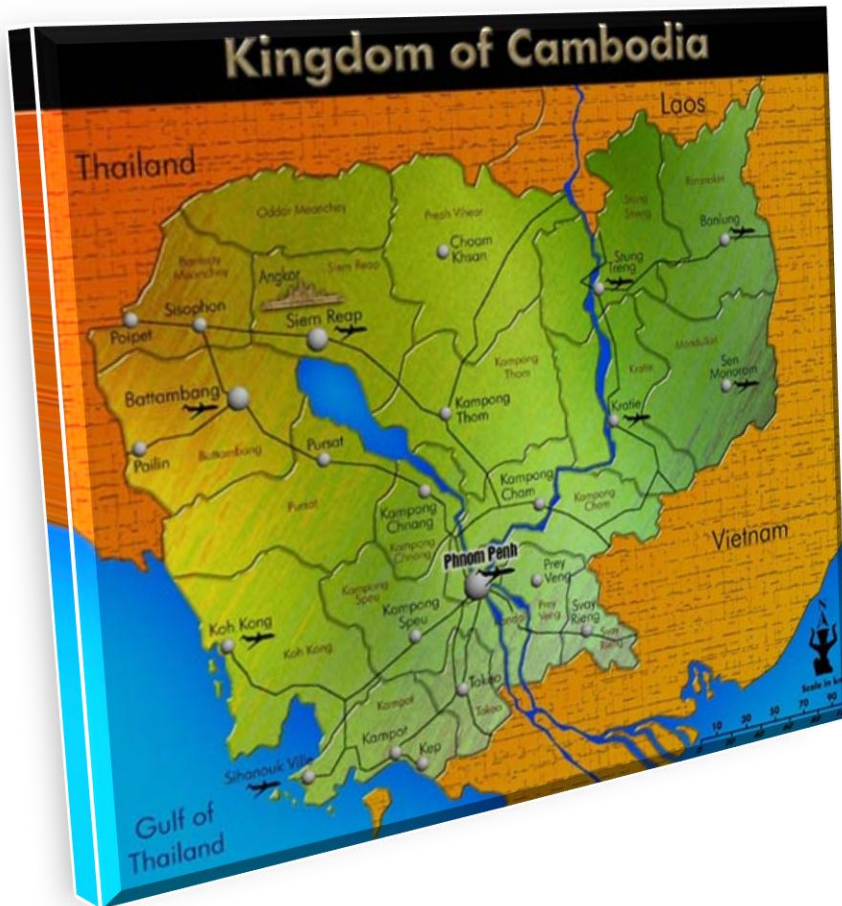
**Cambodiana Hotel , Oct. 19-20, 2017**

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## A. Summary of Information on Cambodia



- **Region: South East Asia**
- **Climate: Wet and Dry Seasons**
- **Frontiers: Thailand, Laos, Vietnam**
- **Surface area: 181,035 Km<sup>2</sup>**
- **Population: 15.8 million (2014)**
- **Language: Khmer**
- **Religion: Buddha**
- **Currency: Riel (1USD = 4,000 R)**
- **Capital: Phnom Penh**

## A. Summary of Information on Cambodia

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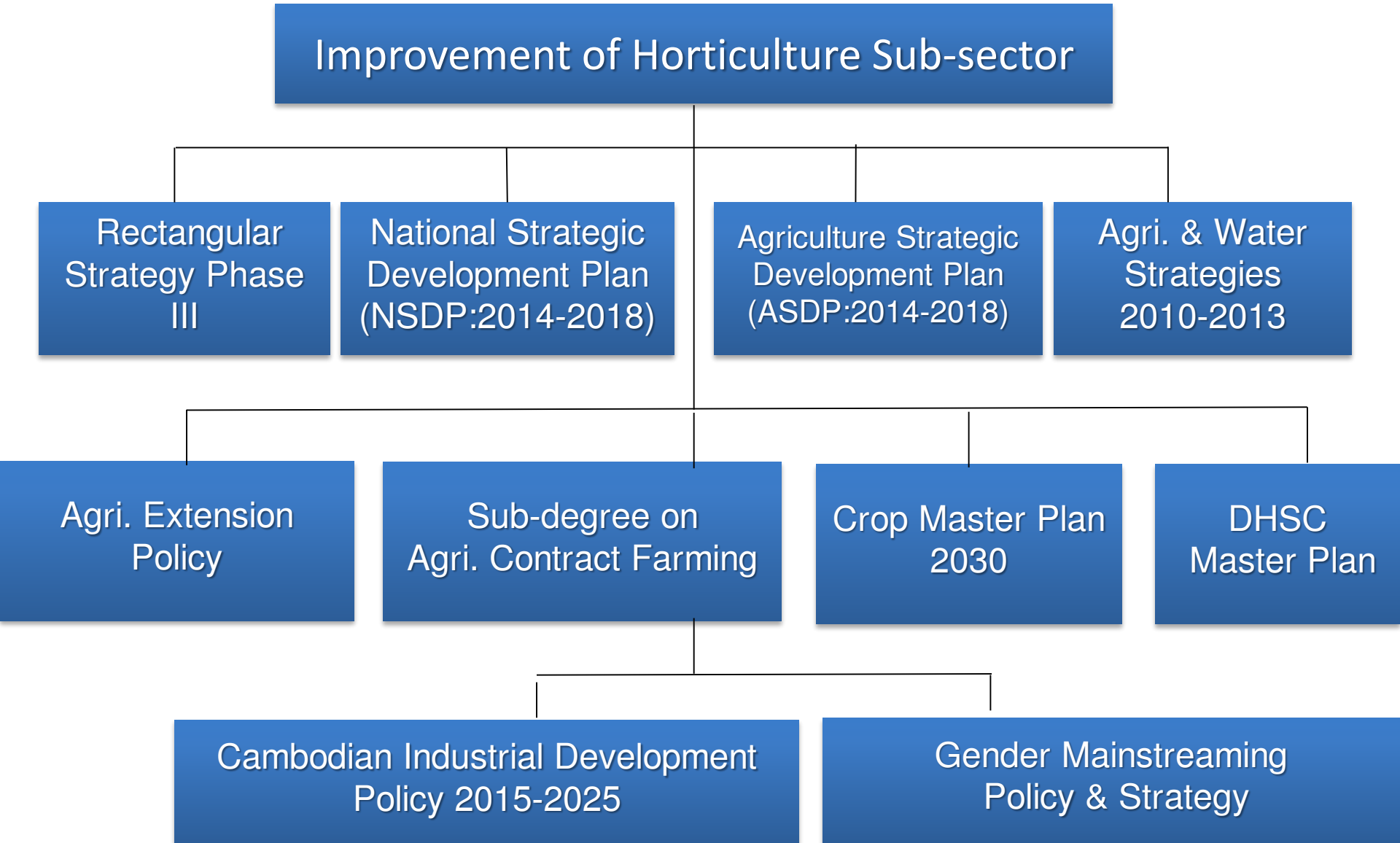


- Number of households 2.6 million
  - Household agricultural holdings 2.1 million
- Total area of agricultural land 3.3 million ha
- Total area planted to vegetable 1.3%
- Agri. household using inorganic fert. 70%
- Agri. household using organic sources 50%
- Agri. household using extension services 30%
- Agri. household receiving agri. Information from the radio 52%
- Agri. household aware the location nearest market for agri. produce 70%





## B. Regulations Related to Horticulture Sub-sector



## C. Cambodian Agriculture shared in GDP

- Agriculture shared 26.3% in GDP and about 70% of labor force
- Vegetable role important part in the third place beside rice and fish in providing food and nutrition in order to reduce malnutrition.
- Vegetables provide more value and currently, the planting area covered approximately 1.8% compare to other crops in Cambodia

## F. Vegetable production and the demand

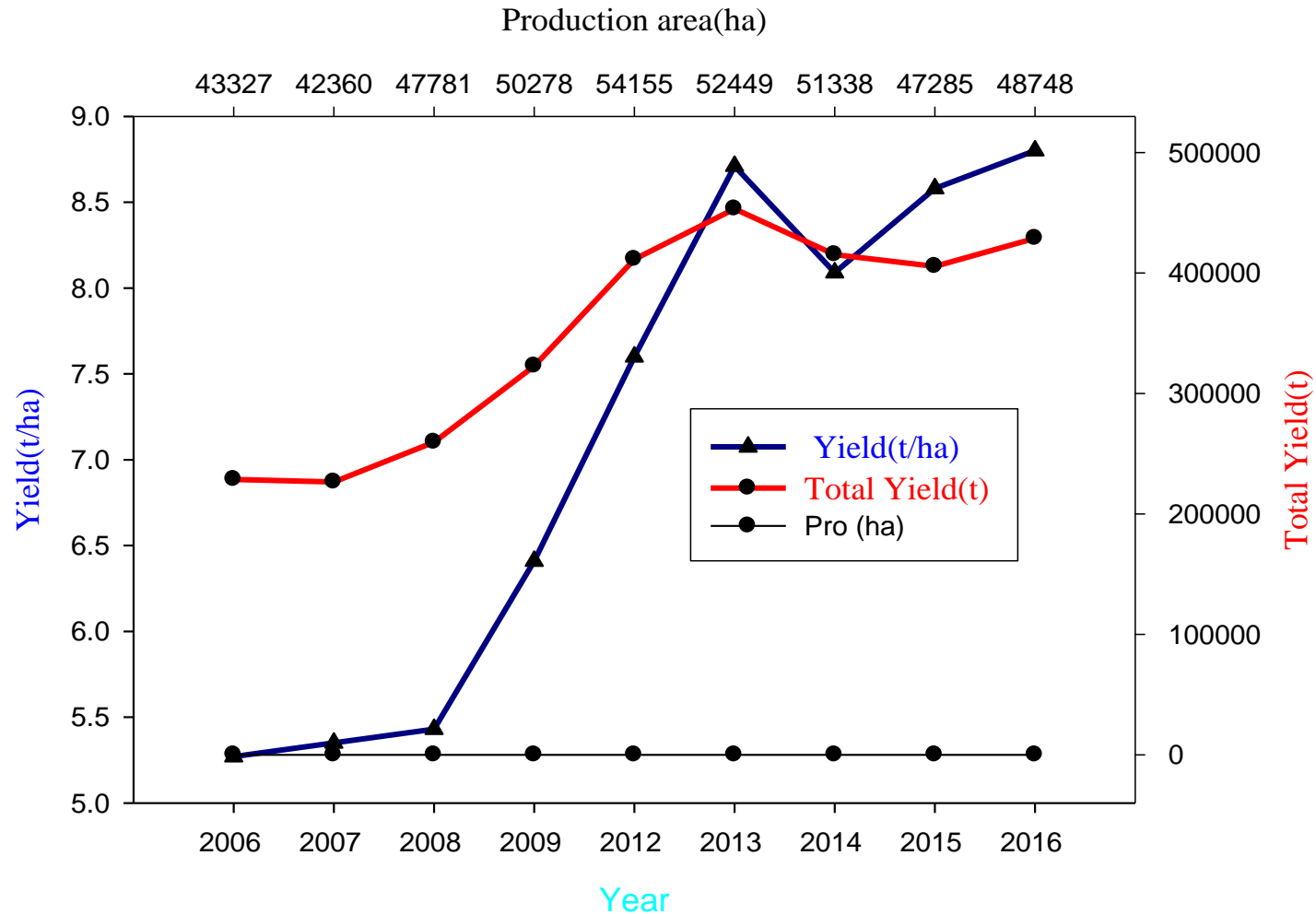
Table1: Vegetable status 1981-2015

| Year        | Area (ha)    | Production (t) | Average yield (t/ha) | other                  |
|-------------|--------------|----------------|----------------------|------------------------|
| 1981        | 30000        | 290000         | 9.66                 |                        |
| 1982        | 27000        | 131000         | 4.85                 |                        |
| 1983        | 27000        | 172000         | 6.37                 |                        |
| 1984        | 24000        | 140000         | 5.83                 |                        |
| 1985        | 24000        | 149000         | 6.21                 |                        |
| 1986        | 21000        | 156000         | 7.43                 |                        |
| 1987        | 22000        | 120000         | 5.45                 |                        |
| 1988        | 27000        | 168000         | 6.22                 |                        |
| 1989        | 26000        | 192000         | 7.38                 |                        |
| 1990        | 29000        | 164000         | 5.65                 |                        |
| 1991        | 30000        | 214000         | 7.13                 |                        |
| 1996        | 46010        | 249710         | 5.43                 |                        |
| 1997        | 44000        | 250000         | 5.68                 |                        |
| 1998        | 37747        | 217258         | 5.75                 |                        |
| 1999        | 31450        | 181851         | 5.78                 |                        |
| 2000        | 33755        | 195894         | 5.8                  |                        |
| 2001        | 35310        | 184640         | 5.23                 |                        |
| 2002        | 34433        | 163175         | 4.74                 |                        |
| 2003        | 36090        | 139626         | 3.87                 |                        |
| 2004        | 32604        | 179050         | 5.49                 |                        |
| 2005        | 35762        | 172399         | 4.82                 |                        |
| 2006        | 43327        | 228558         | 5.27                 |                        |
| 2007        | 42360        | 226486         | 5.35                 |                        |
| 2008        | 47781        | 259610         | 5.43                 |                        |
| 2009        | 50278        | 322731         | 6.41                 |                        |
| <b>2012</b> | <b>54155</b> | <b>411435</b>  | <b>7.6</b>           | <b>Increasing year</b> |
| 2013        | 52449        | 453200         | 8.71                 |                        |
| 2014        | 51338        | 415239         | 8.09                 |                        |
| 2015        | 47285        | 405527         | 5.58                 |                        |

# F. Vegetable production and the demand

(Continue...)

Graphic1: vegetable crop year 2006-2016





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## F. Vegetable production and the demand

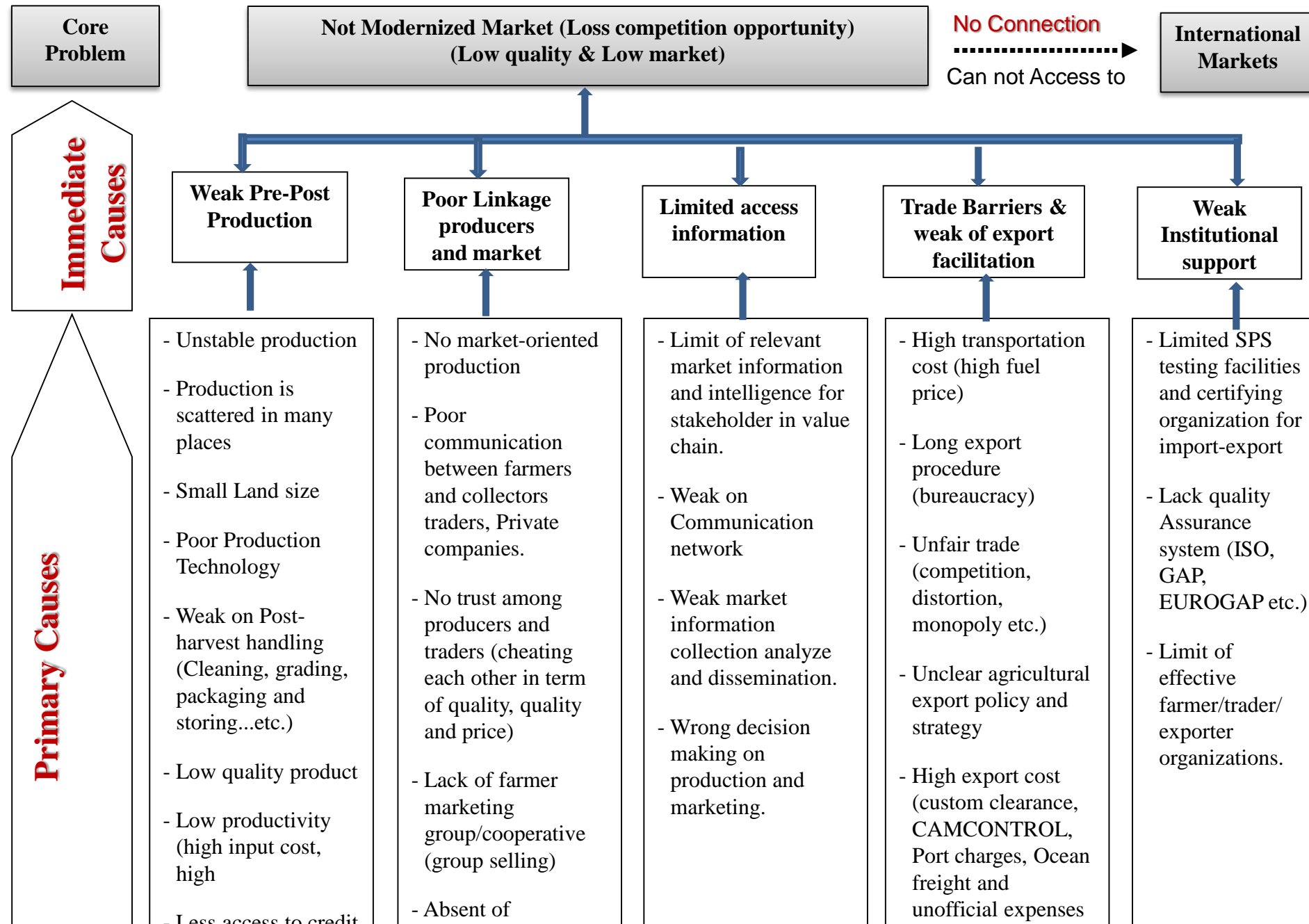
- Currently, Vegetable production seem to be increasing:
  - ✓ Production area (52,000-54,000 ha)
  - ✓ Total yield (400,000-420,000 ton)
  - ✓ Yield(8-8.5 t/ha)
- Vegetable had been cultivating for a long time ago and it is suitable crop for smallholder farmers( the favorable climate for cultivating from October-December. Such seasonal cultivation leading to unsustainable supply chain)

## F. Vegetable production and the demand

(Continue...)

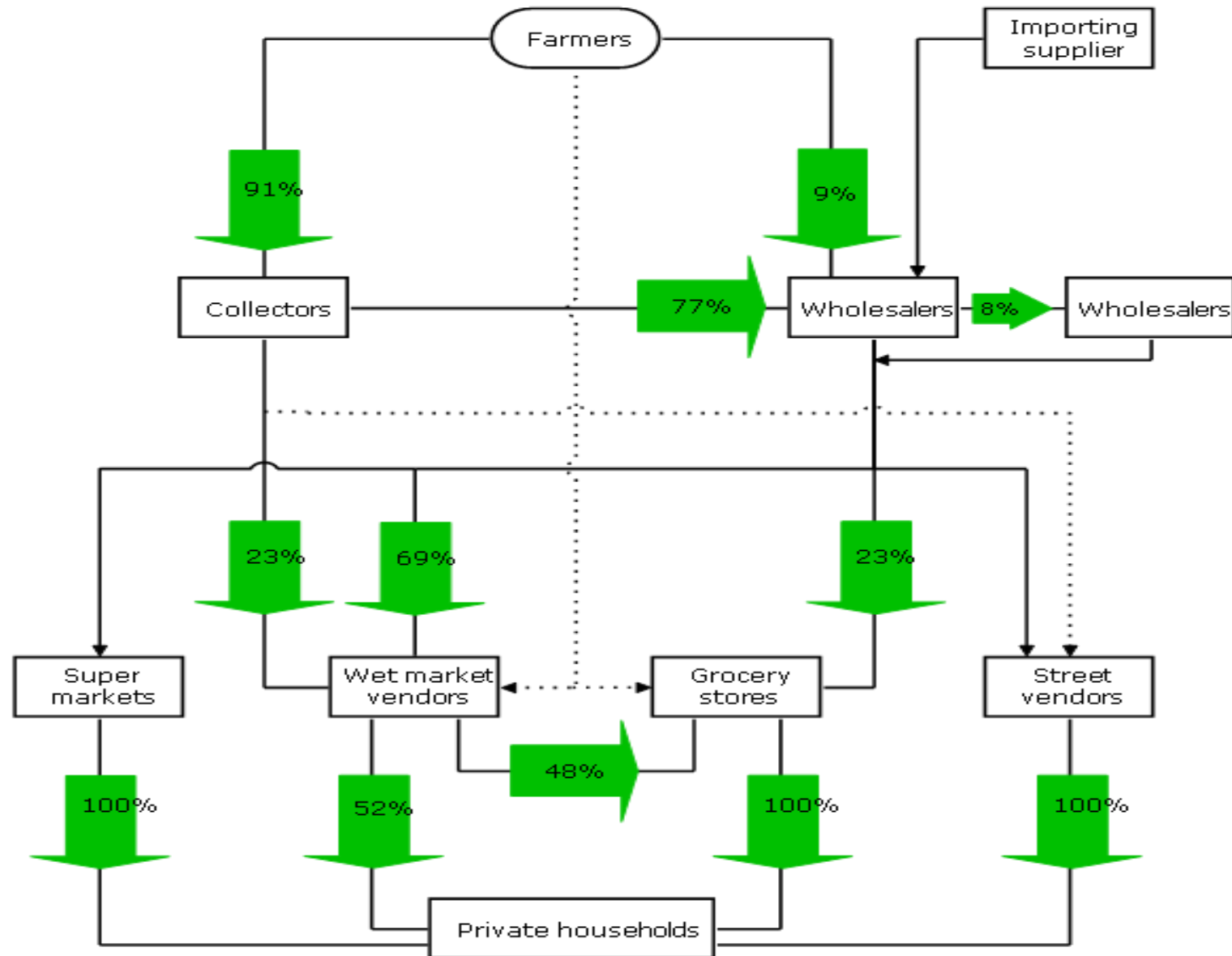
- The majority of vegetable cultivation area including: Kandal, Kompong cham, Tboung Kmum, Kompong Chhnang, Siem reap and Kompot with the total land roughly 57%
- The trend is increasing for local market
- ✓ Emerging of restaurants and mini marts.
- ✓ Local demand and tourists ( with the population of 15.8 million, consume vegetable about 930,000 tones while the production only 420,000 tones so about 50% need to be imported from foreign countries)
- ✓ Vegetable eating habit increased (people in rural area consume about 40kg/pers/year, people who live in Urban area or in city 45kg/pers/year. It is still below the recommendation rate of FAO: 73kg/pers/year.

# G. Problem Tree Analysis For Crop Marketing



## H. Concept of Vegetable Value Chain

| Value Chain        | 1. Production   | 2. Postharvest   | 3. Trade and Marketing  | 4. Consumption   |
|--------------------|---|--|---|--|
| Value Chain Actors | Breeder, farmers, farm enterprise, farmer organizations, cooperatives, village communities.   | Collectors, processors, transporters, warehouses.  | Traders, wholesalers, retailers, government, run cooperatives (APMCs) | Consumers, institutions, industries.   |
| Themes             | Seeds/planting material, fertilization and soil nutrient management, pest management and plant protection, irrigation, machinery, extension services, research, land, credit. | Storage, grading, processing, food safety, packaging, traceability, distribution, transport. | Price control, certification, market linkages, interest rate.         | School feeding, meal, other food distribution, nutrition education, awareness campaigns. |



Tomato supply chain in Cambodia, main trading partners

Source: Surveys in collaboration between AVRDC, GDA (Cambodia), MAF (Lao PDR) and RIFAV (Vietnam), 2014. N=200.

## I. The situation growing trade in fruit and vegetable

- ❑ F&V exports are increasingly important for many developing economics with a few subsidies for producers;
- ❑ Tariff escalation is taking place with processed produce and there are stronger phytosanitary controls in many countries which affect imports of f&v;
- ❑ There are demand for harmonization of technical standards and treatment of exports which affect production processes and agrochemical practices.



## I. The situation growing trade in fruit and vegetable

(Continue...)

- ❑ World trade in f&v has grown strongly in which fruit accounted for almost 60% and vegetable over 40% in which tomatoes and onions are the most one;
- ❑ The value of exports such as avocados, melons, pears, green beans, tomatoes, onions, asparagus, eggplant is higher in developing than in developed countries. However, the participation of LDCs in trade is very low (their in fruit was 0.5%, and in vegetable 0.8%);
- ❑ Developing countries have been less successful at adding value to their f&v and lower share in the exports of processed products.

## I. The situation growing trade in fruit and vegetable

(Continue...)

### A. Subsidies for f&v are lower than for other commodities

- ❑ Less intervention in f&v from the government;
- ❑ Horticultural producers are rarely subsidized directly, and there are no price support mechanisms;
- ❑ There are indirect supports through processing subsidies, provision of phytosanitary services and technical standards etc.
- ❑ The main trade intervention of the governments is through market access regulation (*tariffs, tariff quotas and minimum entry prices*)

## I. The situation growing trade in fruit and vegetable

(Continue...)

### B. Complex systems for market access

- ❑ The EU, USA, and Japan operate a complex system of seasonal duties, quotas and minimum entry price to regulate f&v imports with the aim to protect domestic producers;
- ❑ In case of bananas, EU has two tariff rate quotas: zero duties for Africa, Caribbean and Pacific (ACP) and 75 euro/t for non-ACP;
- ❑ In practice, this system has protected exports from ACP countries while limiting exports from Latin America suppliers

## I. The situation growing trade in fruit and vegetable

(Continue...)

### C. The number of SPS issues

- ❑ SPS controls imposed by importers are critical for exporting f&v. There are particularly stringent in the US, Australia and Japan;
- ❑ Recently nearly 270 SPS measures were introduced against imports of f&v worldwide;
- ❑ These are due to lack of harmonization technical standards and treatments for exports;
- ❑ Some countries apply the Codex MRLs, while others apply their own or regional MRL standards;
- ❑ New MRL regulations in the EU will affect production practices and cost in producing f&v;
- ❑ The challenges of exporting countries are still impediment while the harmonization is still a long way off.

## J. Navigation of vegetables in the markets in Cambodia

### A. Type of vegetables supply in domestic markets

- Kandal province(Muk kompoul, Kien svay, Leuk Daek, Saang distict: longbean, cucumber, tomato, chili, chinese radish, lettuce, eggplant, bitter gourd, chinese kale, cauliflower, green mustard,pak choi, pet sai,bunching onion, basil, ginger etc.
- Kompong chnnang province: taro, pumpkin, wax gourd, tomato
- Takeo Province: wax gourd, eggplant, bunching onion, brassica type.
- Siem reap province: Tomato, cucumber,eggplant, bunching onion, lettuce
- Svay rieng province: Cucumber, longbean, tomato, eggplant, bitter gourd, bunching onion.
- Kompong speu: lettuce, cucumber, eggplant
- Kompong cham: Chilli, taro, cucumber and brassica family

All of these vegetables covered about 47% in Derm Kor and Neak Meas markets from November to March.

## J. Navigation of vegetables in the markets

(Continue...)

### B. Type of vegetables imported from neighboring countries (Vietnam, Thailand and China)

- Imported vegetable including carrot, onion, tomato, chinese cabbage, head cabbage, Sweet pepper, garlic, red onion and potato
- Vegetables importing period start from April to October when it is the hottest time and torrential flood in Cambodia
- Importing falling down for leafy vegetables from November to march.
- *Neak meas* and *Derm kor* wet market in Phnom Penh is the targeted importing spots and these markets role play as contributor contributing to other provinces.



## J. Navigation of vegetables in the markets

(Continue...)

### C. Navigation vegetable from Phnom Penh to other provinces

- Hotel, restaurant, supper market in Phnom Penh.
- Retailer in Phnom penh
- Family consumers
- Wholesale and retail market in other province especially in Siem reap.

All of these vegetables cover approximately 50% of *Neak Meas* and *Derm Kor* markets and distribute to other provinces especially in dry season and water rising season.

**Table2: Vegetable and Fruit Export to EU (2015)**

| <b>No.</b> | <b>Year</b> | <b>Quantity exported<br/>(ton)</b> | <b>Total Production<br/>Area (ha)</b> | <b>Product<br/>Quantities<br/>(ton)</b> |
|------------|-------------|------------------------------------|---------------------------------------|---|
| I          | Fruit       |                                    |                                       |   |
| 1          | 2015        | N/A                                | 190,629                               | 617,000                                 |
| II         | Vegetable   |                                    |                                       |   |
| 1          | 2012        | 1,140.00                           | 53,757                                | 400,000                                 |
| 2          | 2015        | 1,687.00                           | 47,285                                | 405,527                                 |

## K. Vegetables Export Constraints in Cambodia

1. Low productivity and poor quality of products due to limited techniques on pre and post-harvest quality maintenance, horticultural standards together with limited storage facilities and processing;
2. Lack of market access due to inadequate marketing networks with regional and overseas markets plus weak bargaining powers;
3. Poor marketing infrastructures (absence of wholesale/export markets, poor farm to market road conditions;

## K. Vegetables Export Constraints in Cambodia (Continue...)

4. Unstable production due to many constraints in vegetable production, lack of irrigation system , and crop rotation based on demand/prices;
5. Limited trade facilitation between regional and world markets;
6. At the movement late development of Quality inspection and certification system such as **on** SPS, Food Safety , and GAP or OA.

## L. Future Endeavors

- Improved quality of Agricultural Products through the provision of technology on pre and post-harvest quality maintenance;
- Promote the organization of farmer Associations/ Cooperatives in order to strengthen their bargaining power, improve productivity and increase market opportunities;
- Develop the appropriate storage facilities and provide related technologies to farmers;
- Strengthening of Reliable Quality Assurance, inspection and certification system for potential crops for export;

## L. Future Endeavors

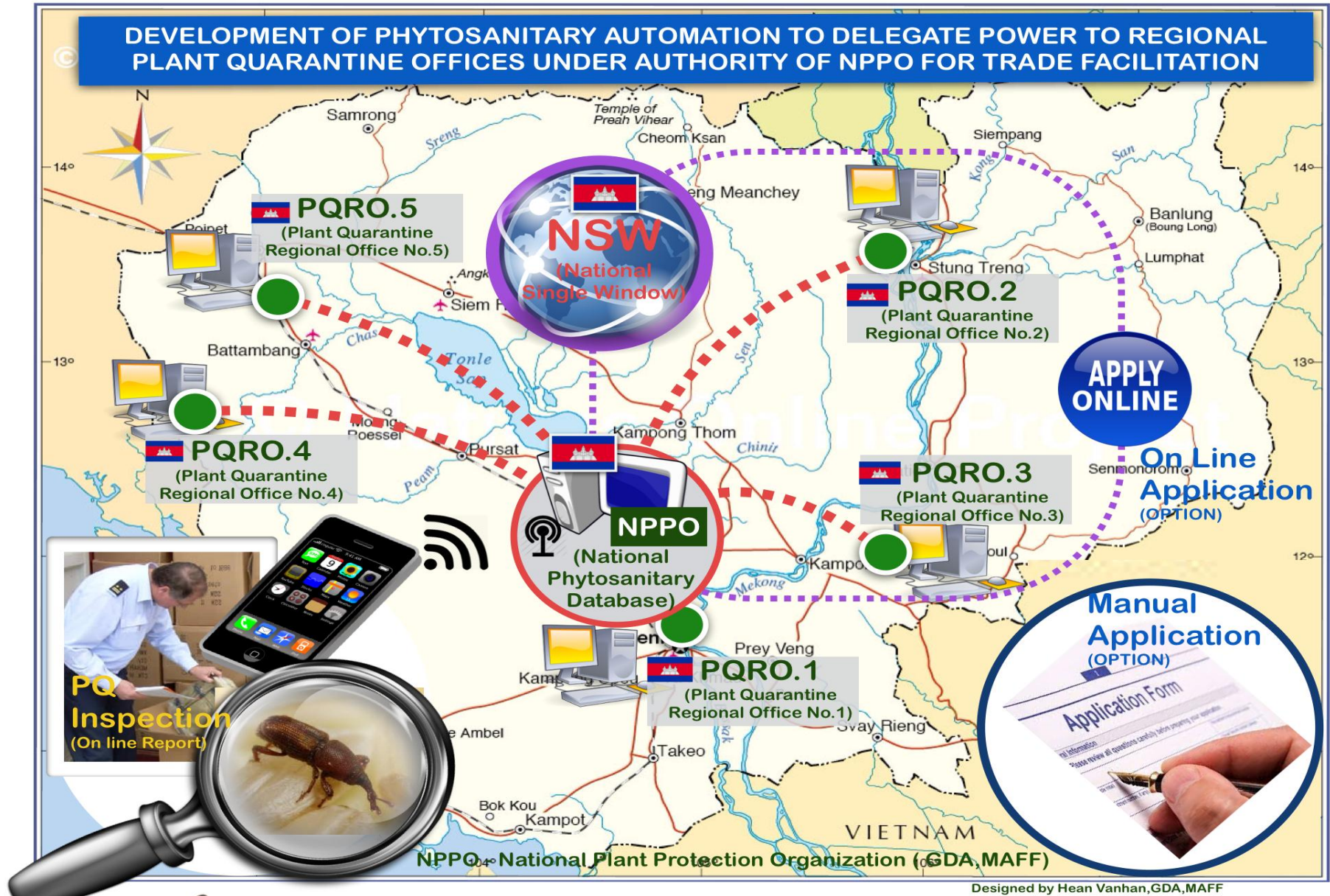
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- Improvement of farm to markets linkages by connecting farmers/producers with domestic and external traders/exporters, processors, and wholesalers through a contract system;
- Border Trade Development by legalizing border trade, simplify procedures at border gates, improved market information and marketing extension services, development of marketing networks nation wide and on regional markets;
- To harmonize international SPS standards and regulations for fresh produce ( MRLs, GAP, Organic, Hort. Standards...).



# L. Future Endeavors

(Continue...)



# M. Actions Taken for Vegetables Exportation

- Evaluation and Screening of Packing House for Export (follow guideline developed & endorsement);
- Training of Packing House staff on the related measure to strengthening the food safety & phytosanitary security (from farm to final packed product) of final product;
- Put the Phytosanitary Certification of export under specific mechanism controlled;
- New requirement in pesticide residue analysis will be push into force as mandatory for vegetables packing house;
- Push into force and harmonize international SPS standards, regulations and others relevant standards ( MRLs, GAP, Organic, Hort. Standards...).



# Thank You



# For Your Attention