Speaker Summary Note

Session: **East Asia**

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Title: **From Food Shortage to Surplus: Experience from Cambodia**

In Cambodia, general concepts about agriculture, nutrition and health are:
Agriculture = Rice
Food = Rice
Rice = Nutrition and Health

The words food, agriculture and rice are synonymous in Cambodia. Cambodians eat rice in an average of 143 Kilogram per person per annum. Therefore, it is the third largest consumers of rice after Laos and Myanmar.

In Cambodia, rice is about everything: food, economic, social title, and power. About one-third of the country GDP comes from agriculture with the share of about 10–15 percent from rice. Rice is the main staple food of the people, the main source of daily diet, energy, protein and fat. In 2007, from the share of 75% carbohydrate, 10% protein and 14% fat in the daily diet of averaged Cambodians, rice provides up to 65 percent of calorie, up to 55 percent of protein and 13 percent fat.

Within the last ten years, rice consumption has slightly declined due to the invasion of fast foods, increases in the consumption of meats and vegetables. However, this decline is not expected to change the ranking of rice as the major and staple daily diet of the people in the short coming future.

After the fall of the Khmer Rough Government in 1979, Cambodia faced big deficit of food (rice). Donations in the forms of foods and other commodities from international communities were ones of the major issues for the country during that period. However, the situation has gradually changed and as a result of continuous growth in rice productivity, in 1995 the country was declared self sufficient in rice. The development was steady and encouraged. Rice production in the country has strongly grown above the national consumption requirement and consequently in 2009 more than 2 million tons of milled rice was reported as surplus.

This significant achievement has been contributed by many factors, including:

1. New technologies developed and released to farmers
    a. Variety: varieties of major crop plants with high yield and marketable qualities have been developed and released to farmers.

b. Nutrient management: integrated soil-nutrient management systems, including fertilizer rates for different crop plants at different soil types have been developed and recommended to farmers.

c. Pest management: some successes in this area through integrated pest management, chemical and botanical controls have contributed significantly to generate both quantity and quality (clean and safe to eat) agricultural produces.

d. Post-harvest management: significant works have also been carried out in the area of post harvest (harvesting, storing, processing and transportation) for all agricultural commodities originated from crop plants, animals and fishes.

e. New innovative production systems: some new production systems have been tested, and adapted by the rural communities.

2. Conversion of less productive to more productive production systems
    a. Floating rice to receding rice or irrigated (fully/supplementary) rice
    b. Slashed and burn to permanent crop production system
    c. Single crop production system to integrated farming systems
        - Rice fish farming system
        - Crop-Fish-Animal Farming System
3. Establishment of national agricultural research system, and strong linkage with regional and international networks.
4. Political settlement: the returned of peace to the country after more than 20 years unrests with wars, internal conflicts, and political divisions.

As conclusion, a great success in agricultural production, particularly in rice, has brought Cambodia from a food (rice) donated dependent into a potential rice exporter. However, regardless of this achievement about one third of Cambodians are still living under poverty line of one dollar per day and more than 22 percent of Cambodians are undernourished (higher than in Vietnam 11% and Thailand 16%). It is obvious therefore that the subjects on food security, nutrition and food health related issues are still very much debatable. To solve the situation and to keep people unite on this issue, a compromised strategy may be required.

Suggested actions to leverage agriculture for nutrition and health:

1. Develop crop varieties or animal/fish breeds with high nutritional values, free of toxins as in addition to yield *per se*. This may be the best and cheapest way to secure, both quantitatively and qualitatively, foods for all classes of people.
2. Encourage the development of production technologies/systems that produce less harmful produces for consumption. Active participation from policy makers, producers, researchers and extension people in this action is quite important.
3. Improve post-harvest (processing) management/technologies to prevent the qualitative losses that may happen after the time of harvest. Certain nutritious values in agricultural produces may losses and/or become harmful to the health of consumers.