



Cambodia Perspective on Rice Production and Mechanization in Cambodia

The Regional Seminar on Rice Production & Mechanization

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Background

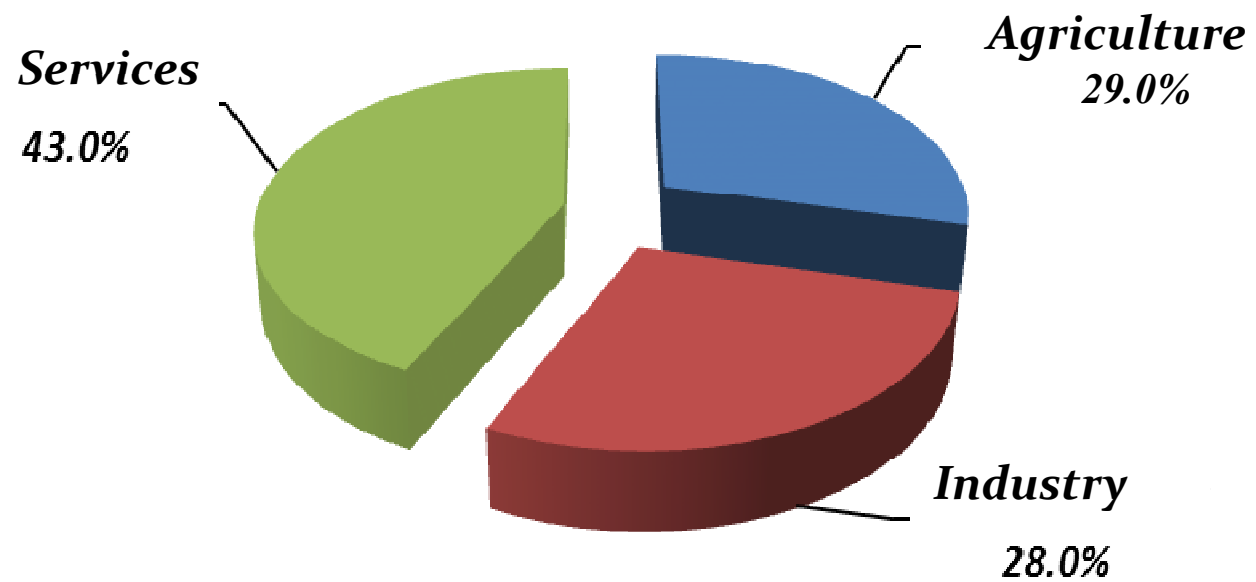


- ❖ Location: SEA and bordered with Vietnam, Laos and Thailand
- ❖ Total area: 181,035 km²
- ❖ Total population: 14 millions (51 % are women)
- ❖ Population by Urban - Rural residence
 - ❖ Urban = 3 millions
 - ❖ Rural = 11 millions

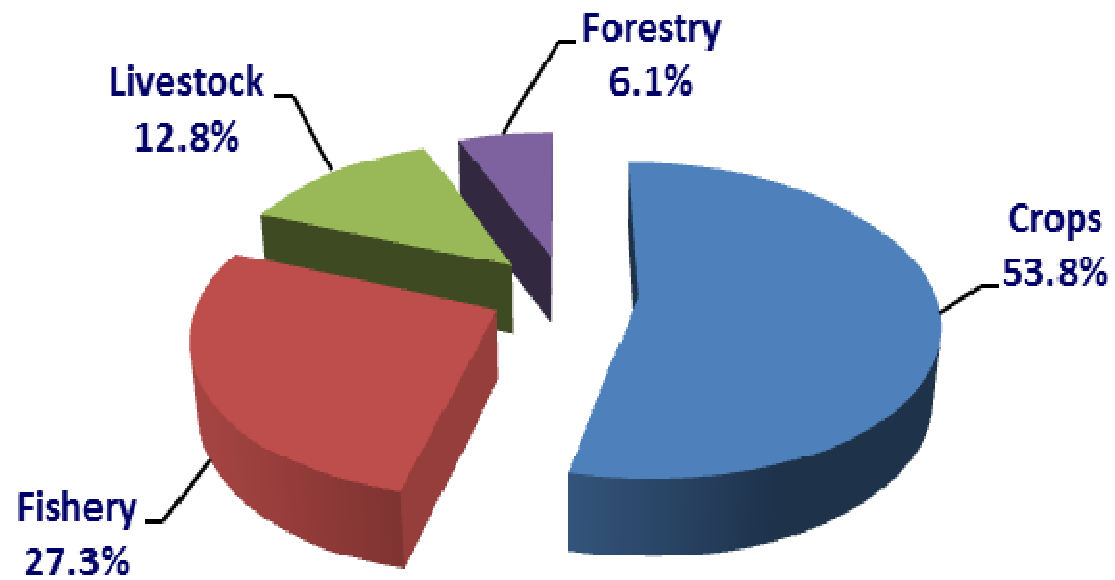
Agricultural situation in Cambodia

- Agriculture dominates the economy of Cambodia, contributing 29% (2010) of the gross domestic product (GDP);
- Rice is the most important crop in terms of production and significance to Cambodian population and occupies approximately 90% of the total available cultivated land;
- Agriculture also employs around 80% of the rural population and provides the main source of income in rural areas;
- The utilization of agricultural mechanization in Cambodia is limited due to low purchasing power of most small holding farmers; high cost of agricultural machinery; lack of agricultural credit; lack of well-trained operators and mechanics for agricultural machinery;
- However, the agricultural mechanization is progressively developed in the last few years.

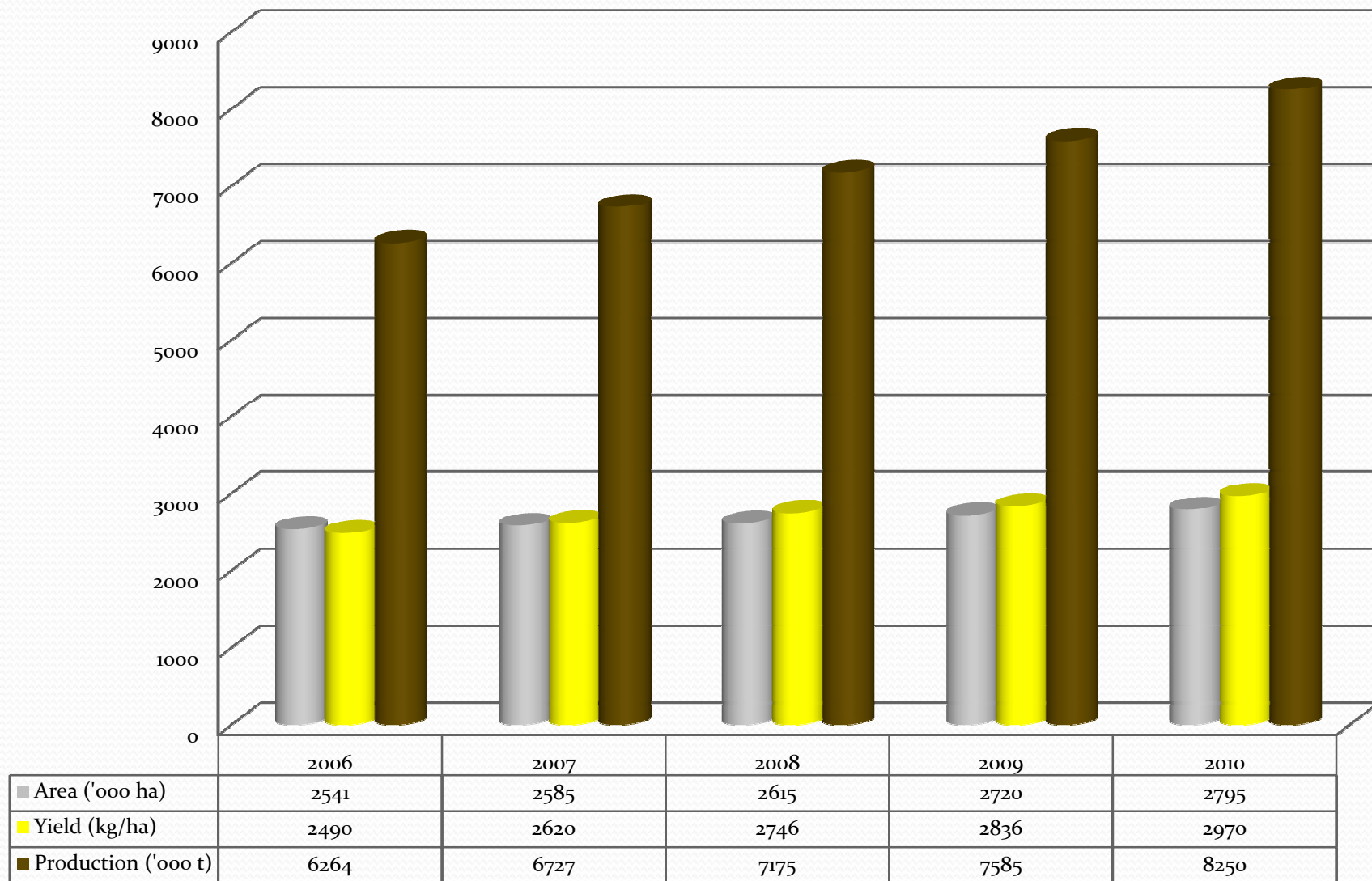
Contribution of Agriculture in GDP in 2010



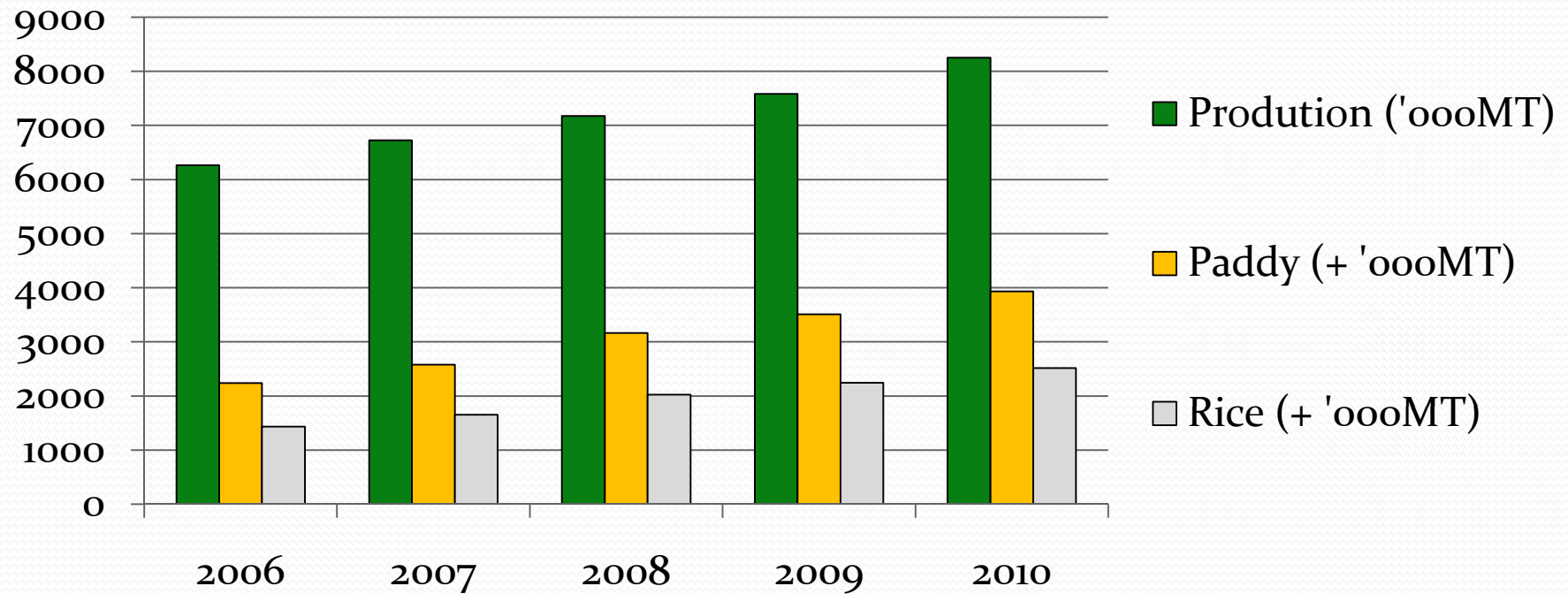
Composition of sub-sector in Agriculture in 2010



Rice Production status for the last 5 years (2006-2010)



Paddy & White Rice surplus in the last 5 years (2006-2010)



Challenges on high yielding rice varieties for food security

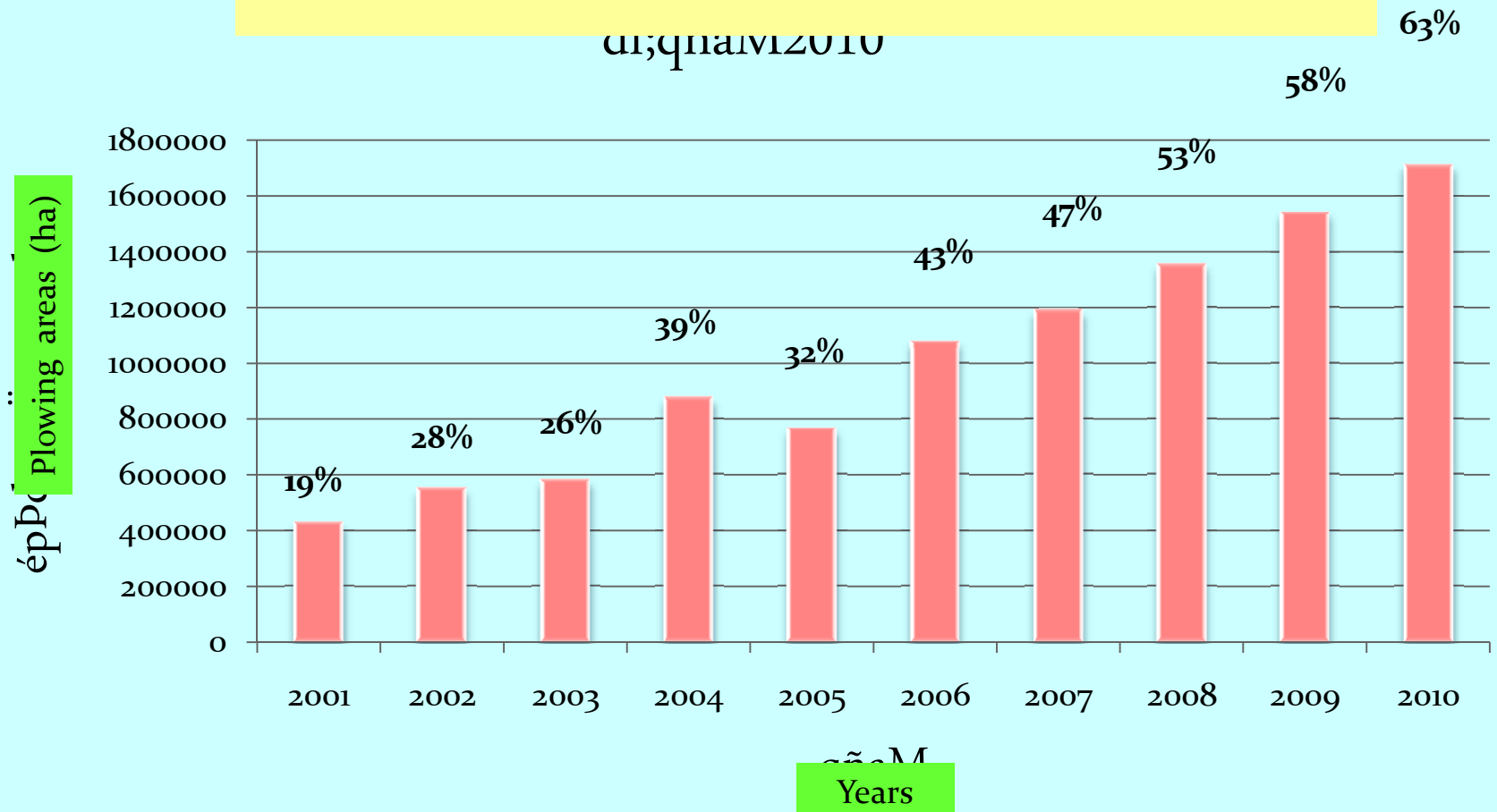
- Cambodia is just only emphasis on **Plant Breeding Program** to develop varieties of major agricultural crops for high yielding and good quality;
- Hybrid rice technology is not yet fully applied in Cambodia research program, due to farmers are not adopted to this technology;
- Irrigation schemes are not sufficient enough for rice field and natural disaster also effected to the rice production, therefore farmers are hesitated to apply hybrid rice in their rice fields;
- Limited budget from the Government to support the research programs and also lack of private investment in rice seed research and seed production program.

Cambodia Perspective on high yielding rice varieties for food security

1. Promotion of Paddy Production and Rice Export through enhancement of the rice productivity, especially “rice intensification” & “diversification” ;
2. Determine the number of prioritized high yielding rice varieties as a target for promotion of production and utilization extension;
3. Strengthen and increase institutional & technical capacity of Cambodia Agricultural Research & Development Institute, research stations, and development centers;
4. Improve extension service at sub-national level, and
5. Support the establishment of farmer organizations through strengthening the capacity of famers and ag cooperative.

Agricultural mechanization condition in Cambodia

Total of plowing areas by farm machinery from 2001 to 2010



Note: The total of plowing area is approximately 3 million hectares/year

Statistical data on Farm Machinery and equipment from 2001 to 2011

No	Items	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
1	Combine harvesters						325	395	430	836	947
2	Tractors	3,072	3293	3310	3857	4166	4247	4475	4611	5495	6200
3	Thresher Machines	3780	4199	4967	6220	7338	7795	8036	8237	13,798	14,390
4	Hand Tractors	8789	9782	13,693	20,279	26,504	29,706	34,639	38,912	53,220	66,548
5	Milling Machines	30,542	31,507	32,945	36,531	38,606	38,618	38,680	39,429	47,620	48,217
6	Engine water pumps	64,406	82,622	99,875	106,569	120,968	127,610	131,702	136,061	164,974	166,633

The challenges of Ag Mechanization in Cambodia

- Structure of the Provincial Office of agricultural engineering is still weak;
- Inadequate skilled workforce at both national and provincial level;
- Most of workshops for repairing and maintenance of farm machinery and equipment are inactive;
- Limited annual budget allocated for the implementation of activities fails the nationwide coverage;
- External support and cooperation with development partners is still missing;
- Wide gap in cooperation with private sector dealing with farm machinery.

The positive points of Ag Mechanization in Cambodia

- National policy and strategy in place as a milestone;
- Clear structure and mandate;
- Support from the Ministry of Agriculture, Forestry and Fisheries;
- Good cooperation with other line departments under the Ministry of Agriculture, Forestry and Fisheries;
- Academic institutions providing services in agricultural mechanization from short-term certificate courses to graduated degrees;
- Annual budget allocation from the Government to implement its activities.

Orientation of Agricultural Mechanization Development in Cambodia

Main Objectives



Increase in
Labor
productivity



Increase in
Land
productivity



Decrease in
Costs of
production

Orientation of Agricultural Mechanization Development in Cambodia- *continued*

Pre Harvest Technology



Engineering and Ag. Land Reform/Consolidation

Bio-Technology

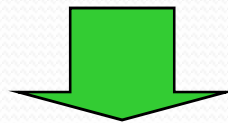
Post Harvest Technology

Mechanization in both pre and post harvest technology will increase rice production in Cambodia

Agricultural Mechanization Development Strategic planning in Cambodia

Goal:

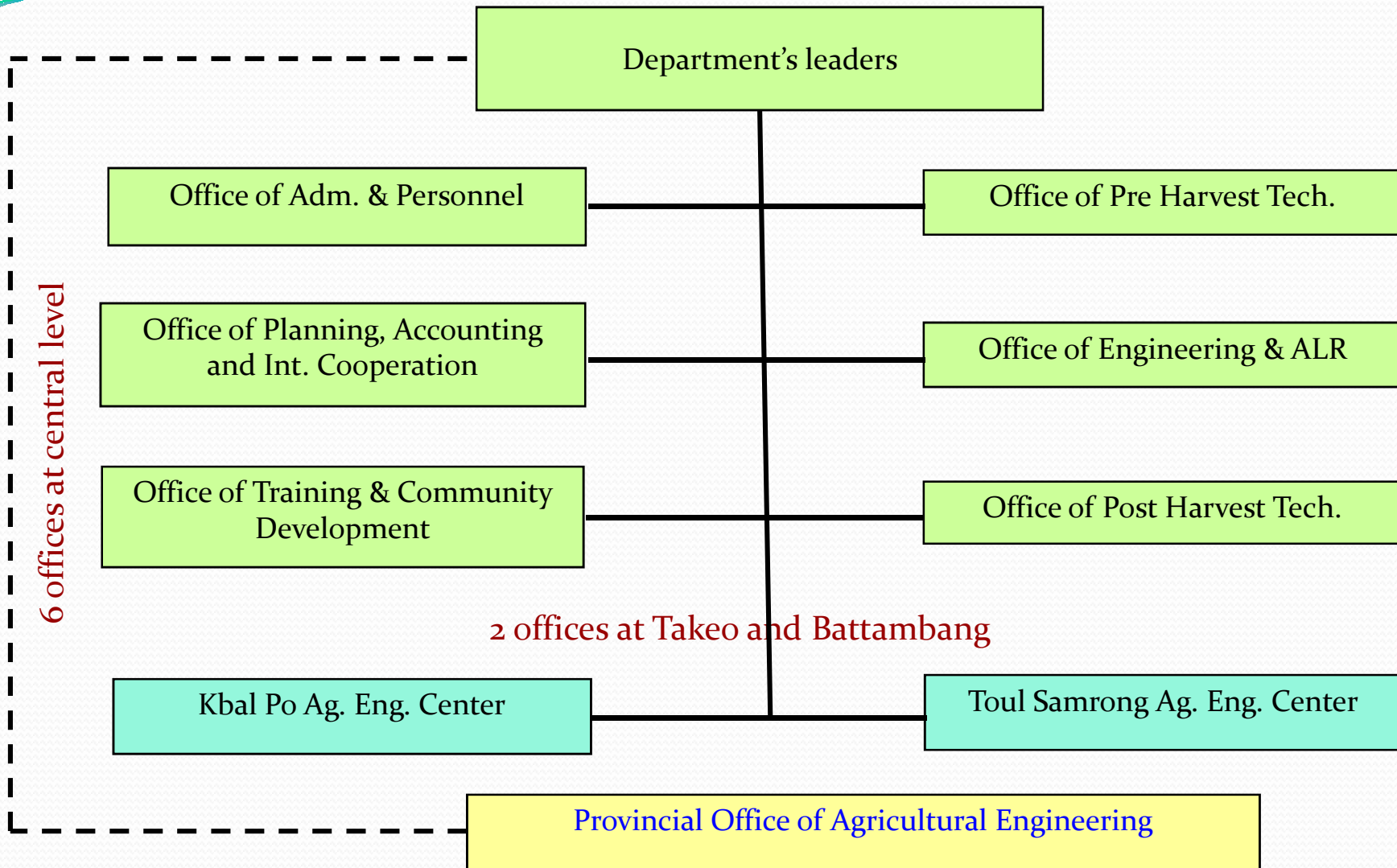
We are committed toward contributing to **poverty reduction**, ensuring **food security** and **adapting to climate change**.



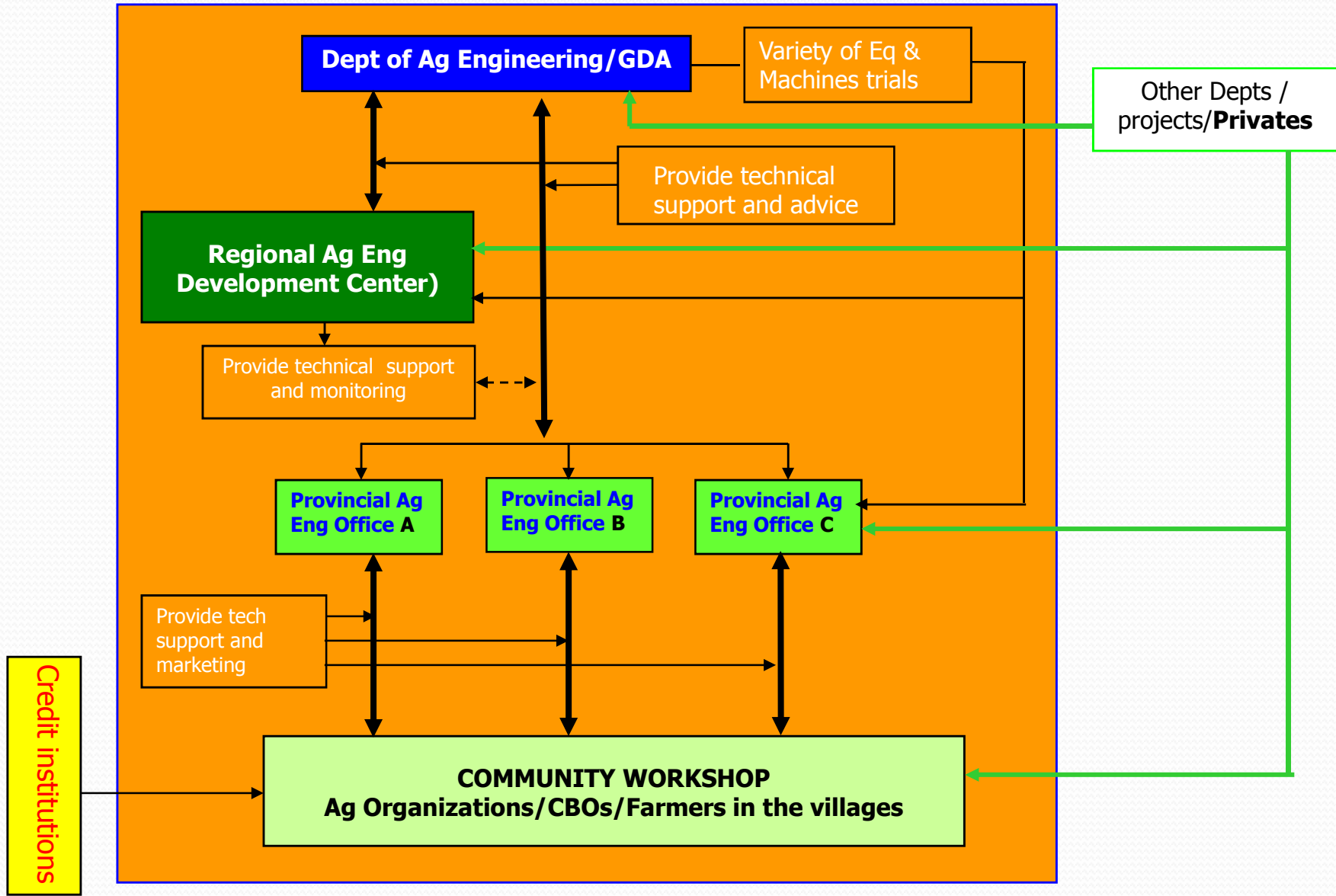
4 main objectives are considered and addressed:

1. Enabling access to Mechanization;
2. Develop broad-based skills and strengthen capacity in agricultural mechanization;
3. Commercialization of agriculture through mechanized farming; and
4. Improving policy, legal and regulatory environment for agricultural mechanization.

The Development of an organizational chart of Dept of Agricultural Engineering in Cambodia



The projected linkages from the Dept of Ag Engineering to the community agricultural mechanization workshop in Cambodia



Local made farm machinery & equipment



Farmer congress on farm machinery & equipment



Research & Demo of farm machinery & equipment



Field day on farm machinery & equipment



Field day on farm machinery & equipment



Expo of farm machinery & equipment



Partnership & Cooperation



Sharing information



1. Report of Agricultural Engineering activities in 2011
2. Report on UNAPCAEM Governing Council Meeting (06/12/2011); and
3. Other topics to be discussed



Prospective activities for 2012

- Strengthen the organization of the Provincial Offices of Agricultural Engineering;
- Conduct in-depth data collection on the use of agricultural machinery and equipment;
- Prepare laws, regulations and guidelines for the improvement of agricultural machinery;
- Research and develop most suitable implements equipped with hand tractors and tractors;
- Train and promote technical knowledge of farm machineries to farmers;
- Make technical documents available in both Cambodian and English;
- Organize events, at national and provincial levels, where end-users/farmers, distributors and artisans/manufacturers can meet together to share experiences and updated information.

Prospective activities for 2011- *continued*

- Organize workshops to update and upgrade farmers and artisans/mechanics who are enthusiastic about the creation/innovation and modification of farm machinery and equipment;
- Coordinate and cooperate with development partners, NGOs, partners, NGOs, and private sector to make the agricultural mechanization sector kept pace with the Govt's strategy on the promotion of rice export;
- Organize farm machinery expo in cooperation with private sector and development partners at national and provincial levels.



Thank you for your kind attention