

KINGDOM OF CAMBODIA
NATION RELIGION KING



**ANNUAL CONFERENCE 2007
ON
AGRICULTURE, FORESTRY AND FISHERIES**

**(Taking stock of 2006-2007 Performance
and Setting Direction for 2007-2008)**

Unofficial Translation

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TABLE OF CONTENT

	Page
I- GENERAL SITUATION.....	1
A- POLITICAL, SECURITY & SOCIO-ECONOMIC SITUATION.....	1
B- MAIN FEATURE IN AGRICULTURE SECTOR.....	1
1- Rainfall Condition in 2006.....	2
2- Flood Condition, 2006.....	2
3- Other Features.....	2
II- ACHIEVEMENT AND SUB-SECTOR EVALUATION.....	2
A- PRODUCTION AND NATURAL RESOURCE MANAGEMEN.....	2
1. CROP PRODUCTION.....	2
2. ANIMAL HEALTH AND PRODUCTION.....	8
3. RUBBER PRODUCTION.....	14
4. FORESTRY.....	16
5. FISHERIES.....	19
B- SUPPORTING SERVICES & MANAGEMENT.....	22
1. POLICY PLANNING, AGRICULTURAL ECONOMICS AND INVESTMENT..	23
2. INTERNATIONAL COOPERATION.....	28
3. FINANCE AND ACCOUNTING AFFAIRS.....	28
4. HUMAN RESOURCES AND DEVELOPMENT.....	30
5. ADMINISTRATIVE AFFAIRS.....	31
6. AGRICULTURAL LEGISLATION.....	31
7. INSPECTION AND INTERNAL AUDITING.....	32
8. AGRICULTURAL RESEARCH AND DEVELOPMENT.....	33
9. AGRICULTURAL EXTENSION.....	33
10. AGRICULTURAL MECHANIZATION.....	35
11. AGRO-INDUSTRIES.....	36
12. AGRICULTURAL INPUT SUPPLIES.....	36
13. GENDER ACTIVITIES IN AGRICULTURE.....	37
III- CONCLUSION AND RECOMMENDATIONS.....	38
1. Strengths.....	38
2. Weakness.....	38
3. Conclusion and Recommendations.....	39

**ANNUAL REPORT
ON
AGRICULTURE, FORESTRY AND FISHERIES, 2006-2007
AND
DIRECTION FOR SECTOR DEVELOPMENT, 2007-2008
&**

CHAPTER-I

**FEATURE AND ACHIEVEMENTS OF AGRICULTURE, FORESTRY
AND FISHERIES, 2006-2007**

I- GENERAL SITUATION

A- POLITICAL, SECURITY & SOCIO-ECONOMIC SITUATION

The year 2006 is the third year for the implementation of Rectangular Strategy of the Royal Government of Cambodia (RGC) which is under the strong committed leadership of Samdach HUN SEN. The overall situation of domestic as well as external political affairs is considered to be in the stable condition which led to ensure the internal security and enhance the socio-economic activities.

The arrangement process for the 2nd election of Commune Councils which will be held on 01 April 2007 is well organized. There have been observed that some political issues occurred and the structural changes have been done in the internal political parties and these can be assumed that the progress of the democracy in Cambodian society is considerably made.

The Cambodian people, in the urban and rural areas, are fully engaged in their business operation with the competitive manner and in line with the free market conditions for the country development. The agriculture sector is still remained as an important sector which this can be accelerating the growth of socio-economics in the whole country.

The Government institutions have been gradually and strongly strengthened through the implementation of the reform programmes and good government process of the Royal Government of Cambodia (RGC).

B- MAIN FEATURE IN AGRICULTURE SECTOR

The supporting services as well as the intervention activities from the Government have been actively provided with efficient & effective achievements. The research and extension works are successfully carried out which these could be observed in the changes in farming techniques among the farmer communities resulted in the increases of yielding and quality improvement.

The agricultural policy and strategy as well as the necessary measures have been carefully implemented to solve the main issues related to the marketing and the exportation of agricultural products that led to contribute to the agricultural economic development and poverty alleviation.

For the livestock production, the diseases outbreaks, especially the Avian Influenza have been successfully prevented to assure the public health and the animal production.

The agricultural mechanization is gradually developed and this can be clearly indicated in the changes of the farmers to use the smaller agricultural machinery including small tractors for farming activities in the country.

The rubber production is considerably developed and increased in production and quality in the state rubber estates and private sector including small & medium rubber holders.

The natural resource management (Forestry and Fisheries) has been continued to carry out the prevention of the anarchy and illegal activities of forest land grabbing and fishery resources. The huge endeavors concentrated on the technology development for the conservation and the restoration of forestry, through the replanting of forest, and fishery sub-sector by promoting the aquaculture & improving the sustainable fishery resource management.

1- Rainfall Condition in 2006

The climate condition, especially rainfall in 2006 is considered to be in better condition for crop production in the country, except for the some areas of the following provinces where faced some problems of drought:

- Slightly mid-season drought occurred in several areas of Svay Rieng, Kampong Speu and Kandal province;
- Slightly end-season drought occurred in some areas of Kampong Speu, Takeo, Kampot, Kampong Thom and Prey Veng; and
- Svay Rieng and Kampong Speu strongly affected by drought in wet season 2006.

2- Flood Condition, 2006

Some parts in the provinces of Kampong Thom, Kampong Cham, Kratie and Prey Veng faced the flooding problem caused by heavy rain in mid season and Mekong River flood occurred in late wet season.

3- Other Features

The other main situations which considered as important features are the occurrences of the diseases and insects destroying crop production, especially in rice. The investment on land concessions was increased in 2006.

II- ACHIEVEMENT AND SUB-SECTOR EVALUATION

A- PRODUCTION AND NATURAL RESOURCE MANAGEMENT

1. CROP PRODUCTION

1.1 Rice Production (Annex-2 to 8)

The total cultivated area of rice crop production has been estimated around 2,541,432 hectares (it was increased around 103,395 hectares compared to last year, 2005). The cultivated area of wet season rice reported at around 2,212,015 hectares, this figure is higher than last 10 years around 218,632 hectares.

The damaged area was reported at 31,633 hectares, in which 30,244 hectares for wet season. However, the area of 6,955 was restored for rice production.

The total harvested area was estimated around 2,517,095 hectares (it was increased around 102,640 hectares compared to last year, 2005). The harvested area for wet season rice was around 2,188,726 hectares which is increased more than last year of around 95,162 hectares.

The average rice yield estimated at 2.489 tons per hectare (increased around 0.010 ton/ha higher compared to last year). The wet season rice yield estimated at 2.272 tons per hectare (increased around 0.011 ton/ha higher compared to last year) and for dry season rice, the average yield was estimated at about 3.93 tons per hectare.

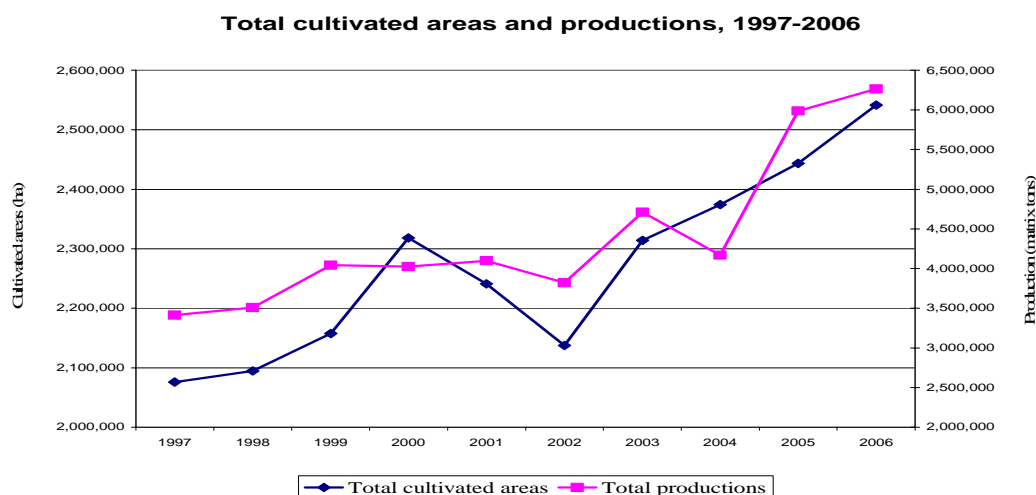
The total rice production was estimated at 6,264,030 tons this year (277,851 tons more than last year, 2005). The production for wet season rice was around 4,973,695 tons (239,395 tons more than last year) and for dry season rice was 1,290,334 tons.

Food balance has been assessed and white rice surplus estimated at about 1,433,829 tons or 2,240,357 tons of paddy (178,527 tons of paddy more than last year and 947,610 tons of white rice compared to last 10 year).

Table: Rice Production 2002-2006

Description	Unit	2002	2003	2004	2005	2006	Change 2002-06 (%)
Cultivated Areas	Ha	2,137,125	2,314,285	2,374,175	2,443,530	2,541,432	3.95
Harvested Areas	Ha	1,994,645	2,242,036	2,109,050	2,414,455	2,517,095	4.25
Average Yield	T/Ha	1.916	2.101	1.977	2.479	2.489	0.10
Production	Tons	3,822,509	4,710,957	4,170,284	5,986,179	6,264,030	4.64

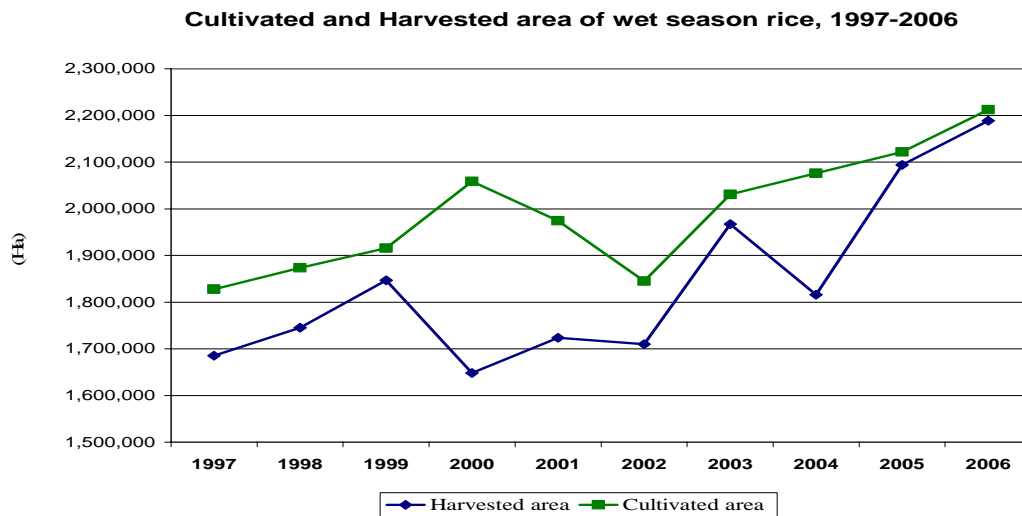
Figure-1: Trend of Cultivated Areas & Production of Rice, 1997-2006



For the 10 year period, 1997-2006, it was noted that the production of wet season rice as well as the total rice production was increased, except 2002 and 2004, the rice production faced some problems of long drought that incurred during mid of season until end of the season. For the year 2006, the rice production was increased, if compared with 2005, around 277,851 tons (105%) due to better climate condition and changes of farming techniques, especially application of high yielding seed of the farmers.

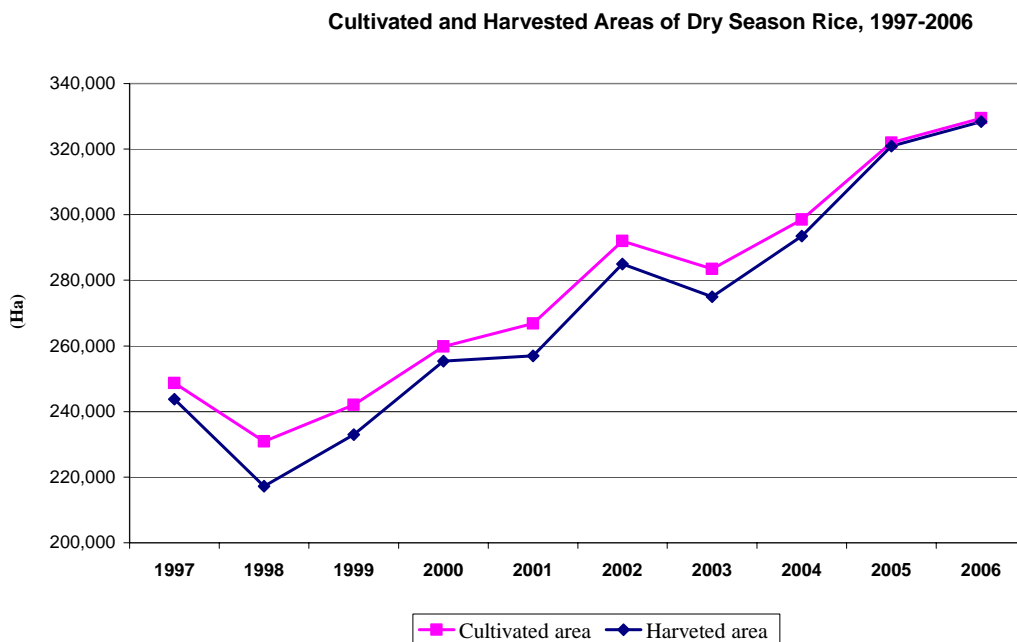
The total rice cultivated areas have been increased since 1997 until 2001, but for the year 2002 the cultivated areas were decreased because of the natural calamity (drought and flooding). However, the production has been gradually increased since 2003 from 2,137,125 ha to 2,541,432 ha in 2006.

Figure-2: Trend of Cultivated Areas & Production of Wet Season Rice, 1997-2006



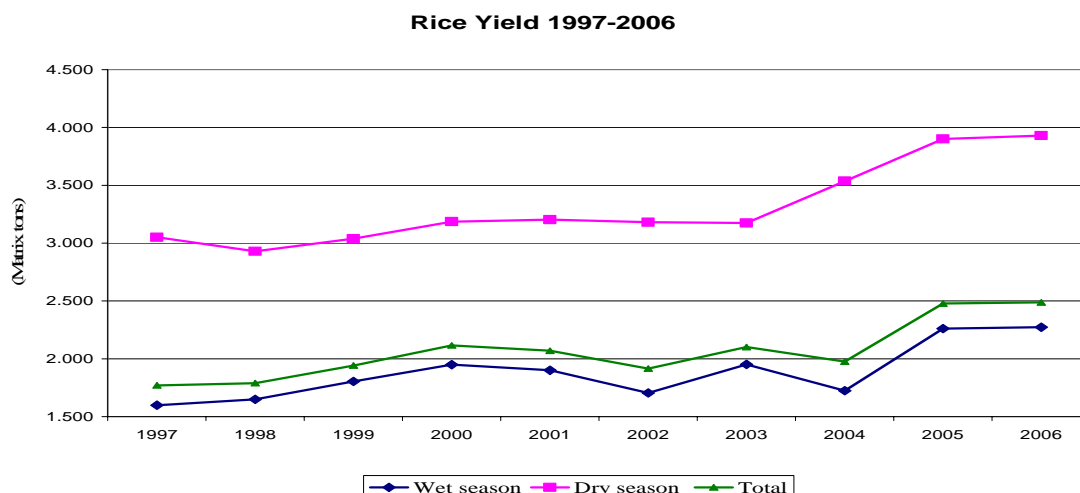
The production of wet season rice contributed around 8% to the total agricultural production. Cambodia affected by natural calamity, flooding and also drought in mid of season resulted both production as well as cultivated areas irregularly changed.

Figure-3: Trend of Cultivated Areas & Production of Dry Season Rice, 1997-2006



However, the production of dry season rice has been regularly increased since 1998 to 2006 (132% if compared to 2005 in terms of cultivated areas and 102% for harvested areas). This is considerably acknowledged that dry season rice cultivation is not highly depended to the climate condition or it was not much affected by the natural calamity.

Figure-4: Trend of Rice Yield, 1997-2006



The above chart clearly illustrated that wet season rice yield is the core element to affect to total average rice yield down, in spite of the dry season rice has been gradually and highly increased.

1.2 Subsidiary & Industrial Crop Production

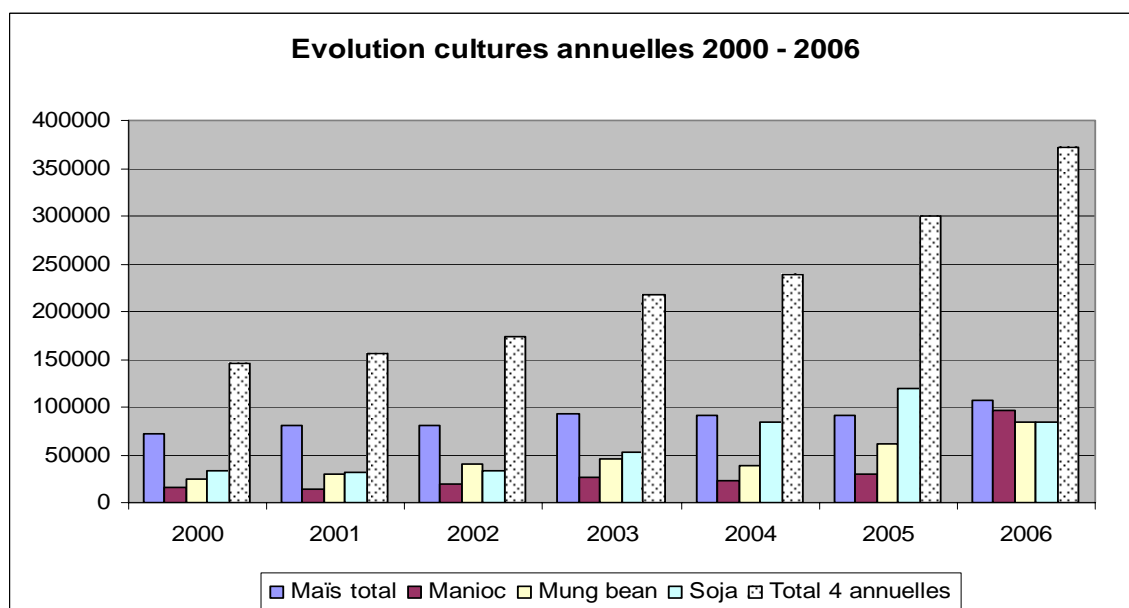
- Subsidiary Crop Production:

The total cultivated areas for subsidiary crops were reported at around 342,164 hectares (156,939 hectares more than last year) and the production was about 2,887,064 tons with the average yield of 8.438 tons per hectare.

- Industrial Crop Production:

The total cultivated areas for industrial crops were reported at around 172,468 hectares (42,465 hectares less than last year) and the production was about 326,389 tons with the average yield of 1.892 tons per hectare.

Figure-4: Trend of Cultivated Areas of Major Crops, 2000-2006



Generally, the cultivated areas of subsidiary and industrial crops seem to be increased or decreased by types of crops and these affected by various factors of pricing and markets. The production of these crops has been considered to be slightly increased. For the other permanent crops are reportedly increasing and under the development.

1.3 Soil Nutrient Management and Conservation

In the year 2006, the main achievements relating to the soil nutrient management and conservation were made and the most activities were to conduct the study on appropriate fertilizer application using on rice in different soil types.

The outputs of this component are:

- Conducted 120 field trials on the effective applications of fertilizer in 15 provinces,
- 1.200 farmers in 12 provinces were educated on how to collect and use compost pits,
- 420 farmers were introduced on integrated crop production in 3 provinces.
- Conducted 45 field demonstration on the change of farmer practice in the fields in order to reduce the effect of natural disaster for 45 farmers in 4 provinces including Prey veng, Kampong Speu, Takeo and Kandal through conducting field demonstrations on soil improvement, especially educating farmers to collect and use manure as well as introduce them to do crop rotation and farming system.

1.4. Seed Production

The main activities of this component have been done through producing and disseminating the qualified seeds such as: rice, mungbean, soybean, corns and vegetables in state farms and research stations including:

1.4.1. Adapted field trials and seed purification

- Research activities were carried out for the seed production. As a result, the adapted field trials for 81 varieties, consisting of 30 varieties of mungbean, 2 varieties of Chinese kale, 26 varieties of tomato, 20 varieties of chili and 3 varieties of sugar beet, were carried out at Kbal Koh Research Station,
- Seeds purifications were conducted for 17 crop varieties, including 2 varieties of mungbean, 1 variety of soy bean, 2 varieties of yard long bean, 4 varieties of tomato, 2 varieties of chili, 4 varieties of egg plant, 1 variety of sweet corn, 1 variety of composit corn, and 1 variety of Kantop corn.
- Field demonstrations were conducted on different soil conditions at Kien Svay, Mukam Poul, Ta Saang, and Koh Thom districts, Kandal province, in order to assess the suitability of seed growing within different agro-ecosystem in Cambodia.

1.4.2. Seed Conservation

The main activities has been done in term of collecting local genetic resources for 500 varieties of 10 families from such respective province in the purpose to preserve and seasonally testing on the areas of around 3,600 m².

1.4.3. Seed Production

- 108.6 tones of rice seed were produced on the areas of 59 ha (50 ha in Toul Samrong state farm and 9 ha in Prey Phdau station). These consisted of CAR 4, CAR 6, IR66, Neang Khon, Phka Rumdoul, Sen Pidor and Rang Chey varieties,
- Produced 7.5 ton of Soy bean seed (B3039 and DT84) for 17 ha in Chancar Leu state farm,
- Produced 1.2.ton of Mungbean seed (KK2 variety) for 10 ha in Chamcar Leu state farm,

- Produced 355 Kg of corn seed (A4, Composite and sweet corn varieties) for 5 ha in Chamcar Leu state farm.

1.4.4. Training and Technology Transfer

The major activities have been done through conducting such trainings as multi-agriculture technique, System of Rice intensification, vegetable production and Crop budget to 7,800 farmers in 8 provinces, conducting field demonstration on Limited Area Maximum Product (LAMP) for high land areas and conducting field demonstration on Vegetable Home Garden for addition food support to 300 farmers in 7 provinces, and doing 6 times of farmers exchange visit for 600 farmers from 16 provinces.

1.5. Plant Protection

The major activities has been done in term of conducting field observations and intervention for 671 ha in 7 provinces, 205 ha in Takeo, 51 ha in Kandal, 133 ha in Svay Rieng, 62 ha in Kampong Cham, 150 ha in Kampong Chhang, 30 ha in Kampong Speu and 40 ha in Cihanuk vill.

1.6. Research and Development

The main activities were studying and disseminating the appropriately simple techniques of rice intensification system through conducting field demonstrations to 500 farmers in 5 provinces, Svay Rieng, Takeo, Prey Veng, Kampong Speu, and Phnom Penh municipality and also educating 60 farmers in Svay Rieng and Phnom Penh on the techniques to plant fruit trees. Moreover, the field demonstration on rice intensification system has been done in Research Stations and Research Development Centers under DAALI, including 10 field demonstrations in Kouk Trap Research Station, 10 in Ta Saang Agricultural Development Center, 10 in Por Lors Agricultural Development Center, 10 in Tonle Baty Agricultural Development Center, 10 in Kbal Por Agricultural Development Center, 10 in Prey Phdau Research Station, and 10 in Kab Srau Agricultural Development Center as well.

On the other hand, the component has been doing initial adapted trials on corn which focusing on seed breeding and monitor and evaluate the growing and yielding of local seed and seed imported from outside countries which is sold in local markets. Until the present, the results of the research are as following:

- Found out varieties included KC2 DMR, KC\$DMR-LSR, KC6 (Suwan 1), KC 10 DMR, KC25, nig KC35 (Suwan 5) are the varieties strong resistant to Downy Mildew disease and provided high yields as well as good quality,
- Ridomil chemical is very useful for protecting plant from Downy Mildew as well as very sufficiently apply to Downy Mildew on corns which are selling in Phnom Penh markets especially Y-IV SPL-Y and S-SA seeds.
- Found out corn seeds (14) x (4) and SSA are strongly resisted to Downy Mildew and provided high yield as well as better quality,
- Corn cultivation during April, May and June, mostly infected by Downy Mildew disease. For other cases, corn production in high land areas (Kampong Cham) has heavily been effected from Downy Mildew in August.

1.7. Integrated Pest Management (IPM)

The IPM programme has been implemented and achieved as follows:

- Conducted 24 Farmer Field Schools on Rice-Fish-Vegetable for 709 farmers in which 320 are women and organized 56 Farmer Field Schools on vegetable for 1,166 farmers in which 534 women,
- Organized 23 farmer clubs, consisting 432 farmers in which 210 women,
- Organized activities after the farmers field school for 18 locations and 275 farmers participated, in which 128 women,
- A training course on fish breeding was conducted for 15 farmers,

- Organized meeting in villages where existed IPM for 1,195 villages and 27,485 farmers participated, in which 5,479 women,
- Conducted farmer clubs study visit for 388 clubs and 6,597 farmers in which 1,319 women and organized 12 times of Farmer Trainer study visit for 248 farmers trainers and district trainers,
- Conducted 88 short training courses in farmer clubs and farmer communities for 1,496 farmers in which 231 women and 2 training courses on strengthening techniques for 71 district and farmer trainers in which 22 women,
- Organized 22 farmer congresses for 1,361 farmers in which 403 women,
- Initially launch organic rice product in 6 provinces, who participated 1,413 people in which 515 women,
- 23 people in which 5 are women, consisted district trainer and provincial coordinators joined study tour in Thailand.

1.8. Strengthening Staff Capacity and infrastructures

- For this parts, focused on the strengthening of laboratory capacity through renovating existing building, installing laboratory equipments. The main activities had been analyzed 105 soil samples, 837 fertilizer samples, 366 plant samples, and 522 water samples. The analyzing has been done focused on pH moisture, Organic carbon, Nitrogen and phosphorus availabilities, and carbon exchanges.
- Constructed a complex laboratory (Soil and plant, plant protection, and seed quality control laboratory) in O Backar Orm, Phnom Penh (DAALI warehouse).
- Constructed new DAALI main building in MAFF compound.
- Constructed 2 canals, 01 in Battambang province and other in Prey Veng province.

1.9. Conclusion

In year 2006-2007, the weather was almost suitable condition for crop growing, even though, it were facing such natural disaster as flood, drought and pest outbreaks but we has overcome all obstacles and gained fruitful results. The good outcomes were brought from farmer's effort and their achievements, and provided technical and economic service and timely taken intervention by Royal Government of Cambodia in general and Ministry of Agriculture, Forestry and Fisheries in particularly.

2. ANIMAL HEALTH AND PRODUCTION

2.1 General Situation

Livestock development has also been carried in line with the Government's Rectangular Strategy. The responsibilities of Department of Animal Health and Production (DAHP) are mainly concentrated on the following activities.

- ✓ Control and prevention of infectious diseases of animals;
- ✓ Reduction of morbidity and mortality rates of animals through increasing vaccination program of herds.
- ✓ Enhancing of animal productivities through improving animal breeds, nutrition and animal feed.
- ✓ Strengthening and expansions of capacity building for Village Animal Health Workers as well as animal health services

The most important targets are that:

- Strictly examination and sanitation of herds, poultry, meats and other animal products.

- Improvements of animal breeds, concentrated feeds and promotion of local feed processing (Factory) in order to increase quality assurance, hygiene of animals and meats and public health concerns.
- Enhancing of utilization of draft power and supplies of animal and their products for consumptions in local and exportations to regions and other countries, especially Asian countries.
- Strengthening of scientific researches on animal health and production complained with international standards and requirements.

In order to response to the issues as mentioned above, many activities have been implemented for increasing the national revenue and family's income as well, particularly reduction of farmer's poverty. Even though we encountered some constraints such as insufficiency of finances, transport means, materials and equipments for supporting to these needs during application of animal health and production activities, but we were successful to achieve the desired outputs.

In fact, we were conducted disease control and prevention of Avian Influenza and other infectious diseases of animals exposed in some areas of provinces and city. In addition, the animal production activities have been grown up very fast too in different scales of animal production: small, medium and large scales and we can expect that in the near future they may be able to provide sufficient supplies for local consumptions and possible for exportations as well.

2.2 Activities, Main Evolution and Achievements, 2006

2.2.1 Animal Health

a/ Status of Avian Influenza in Cambodia

Since 2004 till 2006, Department of Animal Health and Production was confronting with an encountered obstacle of avian influenza outbreak as epidemic, which is zoonotic disease and widely spread and affected to million heads of birds as well as totally, 06 humans died. In case of emergency, Royal Government of Cambodia and Ministry of Agriculture, Forestry and Fisheries pay attentions to set up emergency measures for control and prevention on time. Contribution of financial and technical supports from development partners, national and international organizations push out Department of Animal Health and Production and provincial Office of Animal Health and Production attempt actively to provide suitable ability and capability early to detect these diseases on time to apply some measures for prevention and to protect animal health and public health to be ensured social stability. In fact, the AI outbreaks were six places only in 2006 and 7,767 poultry died and 1,113 birds were culled in 4 provinces as well as 02 humans died. If comparison to 2004 (13 outbreaks occurred) the outbreaks of AI in 2006 were lower. But it is more increasing than in year 2005 (2 outbreaks only). Moreover, in this year, poultry are increasing suddenly (0.33%).

b/ Animal Vaccination Campaigns

Department of Animal Health and Production has been setting up vaccination program for against to some diseases: HS, BL, Anthrax, FMD (cattle & Pigs), pasteurella of pigs, Swine fever, Salmonella in pig, Newcastle, cholera, duck pest and others. The totals of herds were achieved to vaccinate in this year: cattle-buffaloes- 1,530,228 heads, pigs: 487,728 heads and poultry: 605,514 flocks.

c/ Morbidity and Mortality Rates of Animal

The morbidity and mortality of animals can be occurred by many reasons and factors. But the main reasons are: severe infectious diseases, deficiency of feeds and nutrition contents and others. In year 2006 the numbers of animal morbidity were a proximally: cattle-buffaloes- 23,164 heads (0.57%), Pigs: 10,890 heads (0.40%). The number of animal mortality: cattle: 2,610, buffaloes: 1,193, pigs: 15,139 heads and poultry: 7,767.

d/ Control and restrictions for prevention of illegal trade of animals

In order to reduce or stop of spreading out of diseases from areas to another, Department of Animal Health and Production has been defined restricted measures for control and restriction for prevention of illegal trade of animals by setting up of quarantine checkpoints along borders of Cambodia. In 2006 Terms of DAHP has been achieved to examine, fine and cull animal and their products: eggs- 53,707, duck- chickens-5, 348, poultry product-5, 318 Kg, cattle 6 heads.

e/ Strengthening and Expansion of Capacity Building of VAHWs

DAHP has been organized and planned expansion of capacity building of VAHWs responding to MAFF policy: 1 village-1 VAHW. In whole country there are totally 11, 540 VAHWs and in the end of 2006, the numbers of VAHW were trained 3,430 and ongoing: 2,610.

2.2.2 Animal Production

The animal production is main sector that smallholders are considering that it is very benefit for them due to this is a pathway can help them to generate the works and to increase their incomes for livelihood improvement. At the present day animal production is playing important role in economical reformation and growing up greatly from household raising to the semi- intensive farms in order to undertake draft powers, food security and food safety parallel with rectangular policy of Royal Government for economic reformation and poverty reduction in rural areas. Even though it has many constraints in an achievement of these duties, but the sector of Animal Production is to attempt carrying out of their responsibilities for improvements of animal production tasks very highly as follows:

- Assisting in smallholder livestock development by cooperation with SLPP, FAO and other relevant organizations.
- Enhancing improvement of animal breeds and feed crops in rural areas
- Coordination and promote good relationships with business and investment related to animal production development, waste management and livestock marketing.
- To find out investors or donors for development of feed processing in local and feed laboratory
- To strengthen collaboration with national, regional and international organizations for improvement of animal production sector.
- Strengthening of capacity building of staffs by training inside and outside countries.

The following animal Production tasks have been carried out and achieved in year, 2006 as below:

a/ Household Animal Raisings**Table 1. Animal Population in Cambodia**

Animals	Total of herds (Heads)	Comparison of flocks 2006-2005	
		No. (Heads)	Percentages (%)
Cattle	3,344,712	160,566	4.80
Buffaloes	724,378	47,732	6.60
Draft powers	1740,616	-6,065	- 0.35
Pigs	2,740,815	52,203	2
Poultry	15,136,065	50,518	0.33

b/ Semi-commercial farms:**Table 2. Type of semi-commercial farms and animal herds**

Types of animal farms	No. of farms	Total of herds (Heads)	Comparison 2006-2005			
			Farms		Herds	
			No.	%	No.	%
Layer farms	41	188,950	-12	-29.26	41,855	22.15
Broiler farm	59	208,522	-50	-84.74	-101,027	-48.45
Duck raising	1,881	1,793,281	1,495	79.48	1,412,228	78.75
Pig farm	171	345,273	119	69.60	-554,837	-160.7
Cattle farm	08	2,726	1	12.5	2,114	77.55

c/ Improvement of Animal Breeds:

Department of Animal Health and Production contributed to farmers to buy breeds in local or import breeds from regions such as cattle, pig and poultry breeds. The animal breeds supported for extension campaigns from institutions, NGOs and others in 2006 include: cattle breeds : Brahman and Hariyana (Totally 15 heads- By DAHP-MAFF) Kor Khmer (140 heads by Heifer Project), Buffaloes (52 heads by Heifer); pig breeds: Landrace, Large White and Duroc; for poultry: Layer hens-Isabrouwn, chick-hybrid Broiler and ducks: Khaki Campbell.

d/ Biogas Development as a key of Environmental Protection

Contribution of grant support from People's Republic of China and SNV Program to push out Department of Animal Health and Production has attempted actively to enhance animal production development and contribute to reduction of deforestation for firewood and fuel use or gases as well as cleaning environment through construction of biogas plants. As known at the present days the biogas program has built totally 294 plants in 05 target provinces.

2.2.3 Phnom Ta Mao Cattle Breeding Station:

In 2006 MAFF contributed mechanization (Machines, tractors and equipments) to the Cattle Breeding Station for improvement of cattle breeding production donated by E.H. Dr. CHAN SARUN Minister of MAFF. At the present day, the total of cattle is 244 heads and increasing of herds: 33 heads or 13.52% (bulls: 04, Cows: 104, mature males: 13, Females: 33, male calve: 42 and female 48. The Cattle Station has distributed by selling 30 cattle breeds to farmers (Bulls: 09 and cows: 21) for extension program. At the same time, Station distributed grass breeds and crops for animal feed to farmers in whole country. The feed crops contain high protein and high productivity. Moreover, this station provided trainings related to mechanization to the staffs and cattle breeds and crops for animal feeds to farmers in some provinces in order to understand benefit of these crops for their animals.

2.2.4. Veterinary Public Health

In fact, Animals can be slaughtered everywhere in Cambodia. The slaughter of animals is still not organized well and illegal to lead serious problems for public health. Most slaughter slabs are not registered, no hygiene, easy to contaminate and difficult to conduct sanitary inspection of animal and their products due to poor slaughtered technology. According to these situations, Department of Animal Health and Production has planned to organize with municipalities and provinces of whole country to enhance establishment of suitable slaughter slabs ensured sanitary meat inspection, hygiene, some measures for prevention of animal diseases and easy to collect taxes from animals and their products. In 2006 total of slaughter places is 253 sites in Cambodia, which include slaughterhouses: 65 and slaughter slabs: 178. Within 2006 the numbers of slaughter animal were recorded the following data: 65,411 heads of cattle, 2,179 buffalos and 506,500 pigs.

2.2.5. NAHPIC

NAHPIC is main sector for representative of animal laboratory in whole country and plays important role for diagnostic investigation of animal diseases, especially during AI outbreak, this sector has been high responsibilities for control and prevention against with AI. At the present days, NAHPIC has been

conducted investigation of several infectious diseases such as AI, parasitic diseases, viruses, FMD, bacteria: Salmonella, E coli and others. In 2006 this sector was achieved:

Table 3. Numbers of samples applied for diagnoses and results of lab analyses

Names of Sector	No. of samples	Positive
Parasitology	1,579	460
Bacteriology	1,199	29
Hematology	357	56
Serology	6,959	356
Pathology	422	-
Total	10,516	901

2.2.6. Extension Works

DAHP organized partnership with national, international organizations, NGOs and extension sector to prepare publication of different type materials for trainings and extension campaigns. The activities of these achievement show in the table:

Table 4. Publication of type materials for training & extension campaigns

Names of Partnership and materials	No. of publication	Distributions
FAO:		
-Posters of AI	200,000 sheets	
-Booklets of VAHW for AI	100,000 books	
AED:		
-Posters of AI (Large)	4 sheets	
-Posters of AI (Small)	223,000 sheets	
-Leaflets of AI	120,000 sheets	
-Cassettes	180	
- CD, VCD and DVD	100, 250 and 60	
UNICEF:		
-Poster (Large)	406 sheets	19,710 times
-Radio Spots(commutations)		20,224 times
- TV Spots (commutations)		
Ministry of Health:		
-Magazine of health education on AI.	6,000 magazines	
ACIAR:		
-T-shirts on Fasciola	500	
-Leaflets on Fasciola	54,000 sheets	
-Posters on Fasciola	32 sheets	
-Booklets	4 book	
-Radio Spots and TV Spots	1 & 1	

2.2.7. Policy and Legislation

DAHP has been organized cooperation with Policy and Legislation to prepare sub-decree No. 16, its Prakas, Sub-decree on Management of Sanitation and hygiene of slaughterhouses and slaughter slabs and veterinary laws or veterinary rule. In 2006 this sector has been achieved 04 Prakas related to Sub-decree No, 16.

2.2.8. Analysis: Evolution and Contribution to Economy

2.2.8.1. Evolution of animal development:

In reference of animal census in Cambodia, the evolution of animals shows in the figure below:

a/ Livestock Development

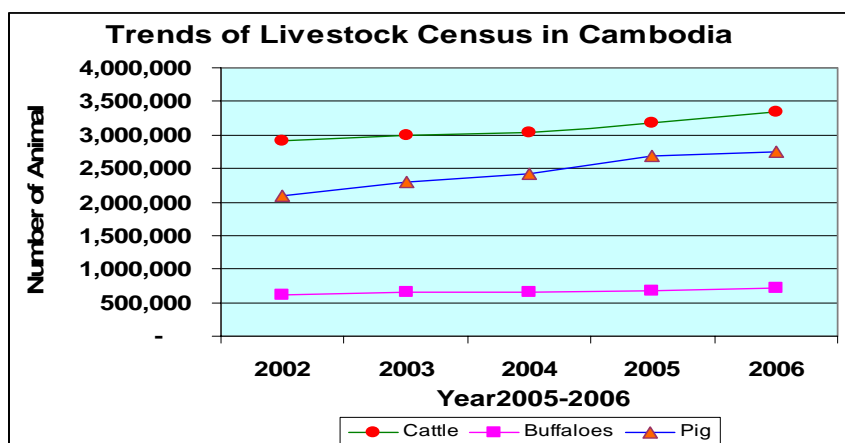


Figure 1. Evolution of Livestock Development in Cambodia

b/ Poultry Development

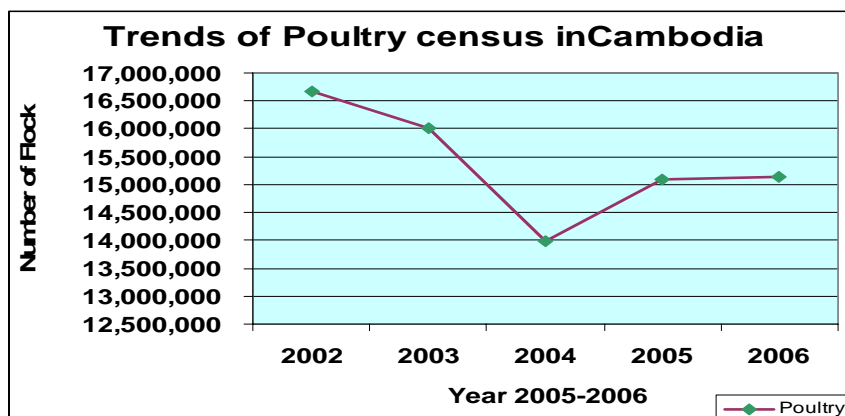


Figure 2. Evolution of Poultry Development in Cambodia

2.2.8.2. Contribution of Animal Production to Economy

In reference of annual revenue of animal development in Cambodia, the contribution of animal production to economy shows in the figure below:

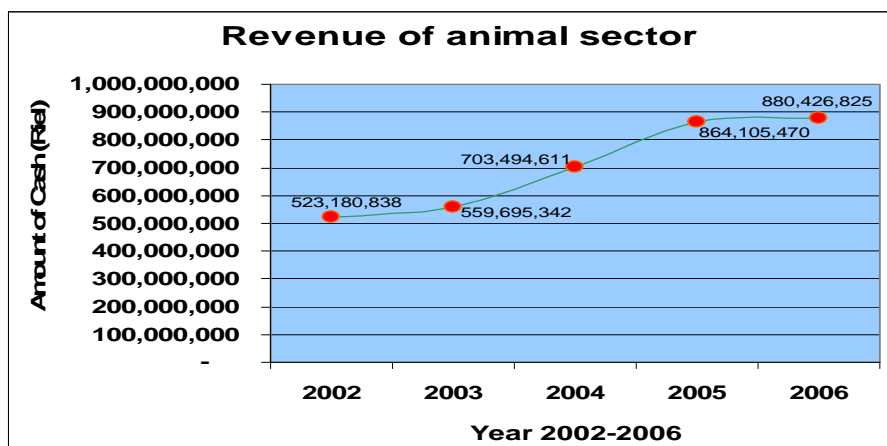


Figure 3. Contribution of Animal Development to economy in Cambodia

3.1 Human and Financial Resources

3.1.1. Human resource:

In whole country there are 1,040 staff and officers who are working in this sub-sector, that include:

- Department staff: 345
- Provincial staff: 695

3.1.2. Financial resource:

The resources of finances supported to all activities of DAHP mostly received from Royal Government and some development parts indirectly contribute as the Trust Fund through FAO, International Organizations, NGOs and from bilateral cooperation and investments.

- Annual Total Expenses: **3,684,152.26** CR (Cambodian Riel)
- Annual Total Revenues: **880,426,825** CR
- Comparison of annual revenue year 2006-2005: Increasing amount: **16,321,355** CR or 2%

3. RUBBER PRODUCTION

The rubber sector in Cambodia is an important contributor to national GDP and continues to be a significant potential for economic growth. In Cambodia, this crop has been grown since 1910 and expanded as agro-industry (state or private) and smallholders on red soil in various locations of the country. Even, it is till now grown on limited areas of about 70,000 hectares, but in the future we hope that, this crop will be largely expanded and faster developed, especially the development of smallholders rubber plantations.

Cambodia ranks the 16th country among the 23 natural rubber producers in the world. The world natural rubber price expected to increase that this is due to the increase of world price of fuel which affected the production of synthetic rubber price. Consumers who practically used the synthetic rubber, they now tend to use natural rubber as substitution and for this reason; the natural rubber production has been increased gradually to meet the demand.

It is noted that the evolution of natural rubber production in 2006 has been considerably increased if compared with the 2002-2003. This movement has been illustrated the participation of the private sector involved in the rubber production. The actual planted areas of rubber are around 70,000 hectares in which there are 44,850 hectares of state owned rubber plantations & private companies and

25,150 hectares of rubber smallholders which is including their own fund as well as the rubber development project fund.

The smallholders' rubber production had shown a high figure of the increased areas in 2006 of about 9,000 hectares per year. According to data collected, the Directorate General of Rubber Plantations can foresee that, Cambodia's rubber areas are expected to increase up to 150,000 hectares in 2015 in which the industrial rubber production expected to be about 50,000 hectares and smallholders' rubber production will be around 50,000 to 100,000 hectares.

In the year 2006, Seven State Rubber Plantations and the Cambodian Rubber Research Institute have fully attempted to implement the production, business operation for achieving the planned targets set by the Ministry of Agriculture, Forestry and Fisheries (MAFF) and the results are shown as follows:

3.1. Rubber Production & Exploitation (Appendix 1-4):

- Rubber tapping areas: 20,583 hectares which is about 96.65% of the planed target. It has been estimated at about 6.8% lower if compared with 2005 due to the activity of cutting down old rubber trees.
- Processed rubber products: 21,295 tons which is about 100.84% of the planed target. It has been estimated at about 4.47% higher, if compared with 2005 due to new opening for an increase number of young tapping rubber trees associated with RRIMFLOW experimentation at Chup and Peam Cheang Rubber Plantation.
- Export of processed rubber product (dry rubber): 20,688 tons of about \$US 38,719,898. The exportation of dry rubber was recorded at 310 tons lower than last year (if compared with 2005). But the revenue augmented up about 32.56% due to the increase of market price in the world market. The sale price in 2006 was reported at \$US 1,872 per ton that this has been about 34.58% higher, if compared with 2005 (\$US 1,391 per ton).
- Tax payment: 25,527,527,830 CR (real figure will be confirmed by annual closing account).
- Areas of new planting: Figure collected as of 2006 has been of 20,366 hectares of young rubber trees, including 4,307 hectares planted in 2006. In 2006, the new matured rubber trees for tapping had been 1,651 hectares.

3.2. Cutting down old rubber trees (Appendix 5):

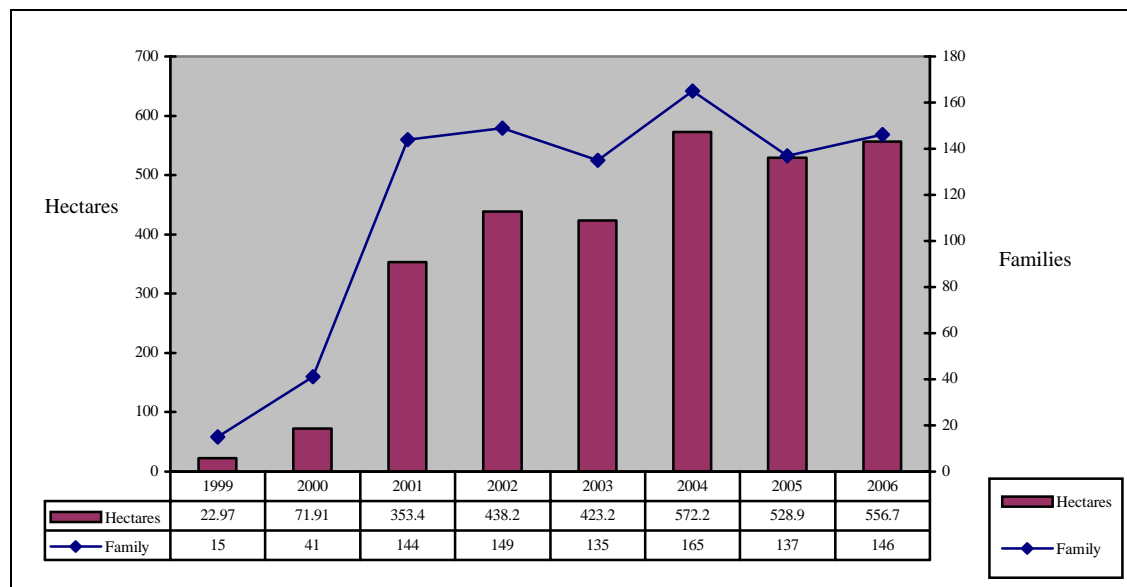
The old rubber trees, which are considered as a non-economic potential, started to cut down from 1996 until 2006 on an area of 25,275 hectares or about 77.43% of planned target (32,641 hectares), in which 3,477 hectares was cut in 2006.

3.3. Rubber Smallholders Development:

In line with the Rectangle Strategy of the Royal Government of Cambodia to tackle with the poverty reduction and improve the living standard of the Cambodian people, the Royal Government is concentrated with the development of agriculture sector and rubber production is one of the other important sources of revenue for the national economic growth for Cambodia.

The Project of Smallholders' Rubber Development funded by Agence Francaise pour le Development (AFD) has been started since 1999 in the province of Kampong Cham.

As a result, during 1999-2006, the Project has been participated by 932 farmers on the areas of 2,967 hectares. The rubber that grown in 1999-2000 has been matured for tapping with higher yielding on 95 hectares, belonging to 56 farmers.



The Nation Wide Rubber Development Project:

According to the Five Year Plan 2008-2012 of this project, the rubber production areas expected to grow around 5,000 hectares with a total project fund of about €12,000,000. In this project, the natural rubber will be planted in Kampong Cham and this could be expanded to other provinces where soils are suitable such as Ratanakiri, Mondulakiri, Kratie, Batambang, Kampong Thom and Preah Vihear.

3.4. Rubber Research Institute of Cambodia (RRIC):

In 2006, the Rubber Research Institute actively carried out its activities and achieved the followings:

- Support the experimentation and follow up the clone trials and fertilizer trial of the Agriculture Productivity Improvement Project (APIP) which implemented by the Smallholder Rubber Research Component (SRRC).
- Set up two essential documents related to: (1) Clone recommendations for planting season 2007-2009 presented in the International Conference on 09-10 November 2006 at Siem Reap province and (2) the presentation of preliminary results in the experimentation carried out by RRIC in the Conference of IRRDB on 14-17 November 2006.
- Physiological Research: experimentation to be carried out on tapping cadence d/3, d/4 and stimulation cadence in 08 clone trials and participation to RRIMFLOW in 03 field trials at Chup Rubber Plantation.
- Training and disseminating of knowledge to Officers of various Rubber Plantations on the system of soil analysis, leaves analysis and system of processing Rubber Smoke Sheet in cooperation with the Rubber Research Institute of Vietnam. A training course on tapping method and collecting product was organized for farmers, smallholders and privates.

4. FORESTRY

4-1 Regulation and Law Development

- Regulation under the forest law Which MAFF and the Councils of Minister decided as following:
 - + Joint Declaration on form of Notes of forest crimes.
 - + Sub-Decree on international trade of extinguish species.
 - + Declaration on community introduction.
 - + Sub-Decree on relying products and NTFPs which are allowed to export.

- Submit draft Sub-Decree on official uniforms, distinguish signs and rank signs of FA officials to the Councils of Minister.
- Have prepared Sub-decree draft on forest land entitlement for growing trees.

4-2 Law Enforcement

- Seizing forest products, NTFPs, Wildlife, legacy and culprits.
- Document of illegal forests
- Benefit from fining
- Forest land clearance throughout the country

4-3 Exportation (Appendix)

- Wood processing: 171 478 m³
- Private forest plantation: 200 (Acacia trees) and 171,098 tones (Slices of Acacia tree and Eucalyptus processing).
- By-products: 8,200 tones
- Charcoal: 240 tones

4-4 Tree Plantation (Appendix)

- 14 tree-plantation stations have cared and done the sanitation of new tree farming and renovation of main track and fire road.
- For Bor Seth Station, tree farm was transferred to grow along track dam and canals because of land conflict.
- For Russey Chrum Station, the tree planting activities have been carried out, but they were not reached the plan, because of land conflict and the implementation will be postponed to plant in 2007.
- For the production of tree seedling for the distribution to people, the Nursery is managed by FA in order to maintain the trees which are left mostly long-term trees and fruit trees for distribution for next year.
- Acacia Moncium seeds were produced at Hun Sen Paper Powder Station and kept some species of around 250 trees/hectare. These will be continued to plant in next dry season.
- Preparation of hybrid Acacia Nursery at Kbal Chhay tree station.
- Preparation of hybrid Acacia Nursery and renovation of Andong Prin dam at Hun Sen Paper Powder Station.

4-5 Forestry Business Operation

- Supplying log for local uses : 2, 971. 993 m³
- Supplying saw timber for local uses : 779.636 m³
- Permitting license for transporting forest by-product and NTFPs such as luxury wood and wood for grade1, 2.

4.6. Wildlife Conservation

- Crane Conservation Project in Trapeang Thmar Reservoir area, Phnom Srok District, Banteay Meanchey Province (FA-WCS Sarus Crane Conservation Project).
- Bustard Conservation Project in Kampong Svay, Stung Sen District, Kampong Thom Province, Kampong Chhnang Province and Chikreng District, Siem Reap Province.
- Crane Conservation Project in Boeung Prek Lapov area, Koh Andeth, Borey Chulsa District, Takeo province.

- Elephant Conservation Project in Mondulkiri Province (FA-FFI) by equipping Kiwi-Sat 101 Platform Transmitter Terminal (PTT) and VHF Transmitter.
- Mountain Crocodile Conservation Project in Cambodia (FA-FFI Cambodia Crocodile Conservation Project).
- Peacock Conservation Program in Cambodia (FA-WPA Cambodia Galliformes Conservation Program).
- Central Kravanh Mountain Forest Protected Area Conservation Program (FA-CI Central Cardamon Conservation Project).
- National Monkeys Research Project (FA-FFI) is under research in Voeunsay District, Ratanakiri Province on biology of yellow-cheek gibbon specie.
- Srepok Landscape Project, Mondulkiri Protected Forest Area, the activity of protected forest area consists of three main compositions: cracking down logging offense, wildlife research, and establishing local community.

4.7. Zoo and Saving Phnom Tamao Wildlife

- All new species: 693
- Wildlife treatment: 289
- Release: 75

4.7.1. Legal Policy and Regulations

- Set up and drafted Guideline on forest community through national & local level consultation and finished and approved in July 2006.
- National forest community program in cooperation with the relevant organization passed in May 2006 by Forestry Administration. Forestry Administration was inserting this document into TRH's forestry management plan for implementation.

4.7.2. Forest Community Research

- A forest community study project was prepared for seeking the financial assistance from IDRC of Canada. This project is approved by Forestry Administration and waiting for approval from donor by linking national forestry community program and improving the living condition of forest community members for deducting rural poverty.

4.7.3. Dissemination and Data

- Activities relating to Forest Community Development have been disseminated to forest communities in the forms of direct dissemination, printing pictures on forest community activities, printing the forest community data, books and other documentations.
- Gathering and compilation of the norms, regulation, and law related to forest community works by extracting some articles within Forestry Law, Sub-Decree on forest community and Guidelines on forest community.
- Creation of forest community data system in computer system by entry the detailed data on forest community throughout the country, but this year new statistics have yet been recorded because of lacking fund to collect data.
- Strengthening & establishment of forest communities in cooperation with the relevant organizations. The goal of this work is to establish a national forest community network which are linking with forest community network at local forest administration sections and disseminate all these activities to the nationwide forest communities.

4.7.4. Forest Community Facilitation

- Cooperated with Oxfarm-GB to facilitate the implementation of the forest communities in Kampong Thom, Preah Vihear, Uddor Meanchey, Kampong Speu, Kampong Chhnang, Pursat, Kratie, and Stung Treng Province. The main activities are including the observation

of the implementation of forest community at targeted villages and provision of the technical consultation to facilitate and promote the implement under guidelines on forest community.

- The cooperation was made with timber & non-timber products development project sponsored by TTO in Kampong Thom, Ratanakiri, Mondulhiri and Kampong Chhnang Province. In particular, the main focus is to foster the implementation of forest community development at targeted villages in order to generate income from non-timber products and diffused more awareness to forest community implementers.
- Cooperation was also made with FAO's forest community project where has been implemented in targeted villages of Siem Reap Province. This project is mainly focused on strengthening the capacity and training to forest community members.

4.8. Forest and Wildlife Research

In 2006, the implementation of the project and forest & wildlife research plan is achieved as follows:

- Plant nursery and maintenance: 8,000 trees were produced.
- 06 hectares of tree plantation was created and maintenance of 6 hectares was carried out.
- The main goal of the project is to research water, soil and regional weather change, evergreen forest, second evergreen forest, semi-jungle and sparse forest. The activities were to collect monthly data for 24 times and research with Japanese experts for 4 times for the establishment & installation of a research station in sparse forest in Tumring. Three temporary results generated by this station, in first step, and released those at the end of each year.
- A staff from research institution cooperated with WWF to conserve wildlife in Siembok District, Stung Treng Province and wildlife conservation team disseminated the publicity on importance of wildlife and educated people to maintaining and protecting these as national property.
- Forest Science & Wildlife Research Institute conducted the project in cooperation with FA-ITTO to mitigate the affects during the harvesting & collection of wood in Cambodia. The main goal is especially concentrated to human resource training related to forest sector in both state and private institutions. As a result, 100 trainees obtained better understanding in this matter. In May 2006, ITTO's representative visited Cambodia for reviewing the inventory process in Stung Treng Forestry Administration and conducted the PTC meeting between H.E Director of Forestry Administration and ITTO's representative to monitor the progress of project implementation and find out further actions for implementation in the next step.

4.10. Revenue from Forestry

In 2007, FA contributed to generate the national revenue and the details are as follows:

- Revenue from forest products: 2,709,834,837 CR
 - Rental of fix assets: 73,800,000 CR
 - Non fiscal incomes: 947,583,026 CR
- (Note: CR=Cambodian Riel)

5. FISHERIES (Annex 41-58)

During 2006, the Fisheries Administration progressively implemented the fisheries sector reform including preparation of various fisheries legislation, establishing community fisheries, development of aquaculture activities, conducting research and conservation, suppressing illegal fishing activities, and other extension, etc. To date the Fisheries Law has been disseminated to provincial/municipal fisheries offices, local authorities and relevant stakeholders throughout the country. In addition, Royal Decrees, Sub-Decrees, Proclamations and some other legislative procedures have been amended and put into operation to ensure they are coherent with sustainable management of natural resources as well as with the current development context of the Kingdom of Cambodia.

5-1 Preparation of Law and Sub-law

The Fisheries Law was endorsed on the 30th of March 2006, and the Royal Decree No. nor.sor/ror.kor.mor/0506/011 was officially enacted on 21 May 2006. Once the Fisheries Law is published and disseminated, the Fisheries Administration will have to develop other legislation to fully support the functioning of the Law. The Fisheries Administration has been disseminating the Law to the public especially local communities and community fisheries for effective enforcement. In addition some other legislation has been developed and used.

- The draft proclamation on the functioning of the Fisheries Administration has been prepared. It has been discussed at MAFF.
- Technical documents for the operation of the fishing lots have been prepared viz fishing lots maps and burden books, and Fisheries Administration cooperated with provincial fisheries offices to facilitate some adjustments of technical aspects as required.
- An inter-ministerial meeting(MAFF and MEF) on determination of the fishing lots fee that the Government and MAFF will give for the lot owners in many provinces was organised and a decision prepared for giving fishing lots to the owners.
- Prakas on establishment of Quality and Processing Division of the Department of Fisheries; and the Information, Technology Transfer Division and Laboratory of the Inland Fisheries Research and Development Institute.
- National Action Plan for Coral Reef and Seagrass Management in Cambodia was prepared. The plan was enacted by the Ministry of Agriculture, Forestry and Fisheries and 200-300 copies will be published.
- The draft of the Prakas on Community Fisheries Guidelines has been passed in several inter-departmental meetings under MAFF, and sent to the Ministry of Permanent Members of MAFF for the final discussion. At this time, the Prakas have not yet been approved as there is a Sub-decree amendment to Community Fisheries Management which needs to be approved by the Government.

5.2.1- Inland Capture Fisheries

The total catch of inland fisheries in 2006 is 422,000 tons. The composition of the total inland capture fisheries are:

- The total catch from fishing lots and middle scale fisheries 2005 – 06 139,000 tons equal to 109.2% of 130,000 tons planned, an increase of 44,500 tons compared with last year.
- The total catch from the family fisheries is 181,000 tons equal to 106.47% of 170,000 tons planned, an increase of 43,300 tons compared with last year.
- The total catch from rice field fisheries is 102,000 tons equal to 102% of 100,000 tons planned, an increase of 10,300 tons compared with last year.

5.2.2- Marine Capture Fisheries

The total catch of marine fisheries in 2006 is 60,500 tonnes equal to 100.83% of 60,000 tonnes planned, an increase of 500 tonnes compared with last year.

5.3- Aquaculture

5.3.1- Aquaculture Production

- Fish and shrimp culture is 34,200 tonnes (Fish 34,160 tonnes, shrimp 40 tonnes) equal to 97.71% of 35,000 tonnes planned, an increase of 8,200 tonnes compared with last year.
- Seaweed culture is 6,810 tonnes equal to 34.05% of 20,000 tonnes planned, a decrease of 11,190 tonnes compared with last year.
- Crocodile farming is 137,642 heads equal to 172.05% of 80,000 heads planned, an increase of 17,642 heads compared with last year.
- Fish seed production is 21,335,000 fingerlings equal to 85.34% of 25,000,000 fingerlings planned, an increase of 2,602,000 fingerlings compared with last year.

5.3.2- Extension of Scientific and Technical Works

The related technical procedures documents were produced and extension is listed below:

- Prepared and published 1,200 manuals on Fisheries co-management in Cambodia. This document and publication was prepared by CFDO and supported by the MRC project. 750 copies of these manuals were distributed to CFDO staff and those involved in CFs for their work and reference.
- Prepared a video "spot" on the Sub-decree on community fisheries management, including a video titled "We collaborate to establish Community Fisheries ", supported by ADB.
- 3,780 CD-R, banning the cutting of flooded forest, were produced and 1,500 Posters (A1) on the process of organizing community fisheries, the duties and rights of CFs, were also produced. Support was provided by TSEMP project. 1,200 posters have been distributed, 3,500 CD-R have been given to all Provincial Fisheries offices, and CFs.
- Prepared 13 posters and signboards banning fishing in CF conservation areas, cutting flooded forests, and cutting mangroves; and 188 signboards indicating CF name were placed in CF areas. Support provided by UNDP/Cap 2015, Seila Program and JICA Project.

Apart from the above mentioned, the Fisheries Administration cooperated with ADB, MRC, UNDP, JICA and Seila Program etc. to disseminate the Law on Fisheries, Royal Decree on the Establishment of Community Fisheries, Sub decree on Management of Community Fisheries and related document procedures on 191 occasions to members of communities, community committees and village and commune authorities altogether to 15,022 people.

5.4- Preparations of Natural Fish Refuge Pond

- Joined in organizing "National Fish Day" on 01 July 2006 at O-okhna Heng reservoir, in O-okhna Heng commune, Khan Preynop, Sihanoukville. 50,000 fingerlings were transported and packaged for the event.
- H.E. Ph.D. Chan Sarun, Minister of Ministry of Agriculture, Forestry and Fisheries attended Fish Releasing Days in Takeo province 3 times in community fish refuge ponds, of which his first attendance was in Prey Khdouch Village, second in Tomnoub Thnaldach, and third at Tropaeng Sorm Takeo province. The types of released fishes were broodstocks in the following amounts: 240 Kg (snake head, Climbing purge, bronze featherback (*Notopterus notopterus*), marbled sleeper (*Oxyeleotris marmorata*), and 25,000 pieces of Silver barb fingerlings. Seven hundred and fifty (750) participants attended the fish releasing day in Tropaeng Som.
- Released broodstocks and 360 Kg of fingerlings of indigenous species such as Snake head, *Clarias* sp.; released 6,636 pieces of Climbing purge with ventral fin-cutting in the Fish Community Refuge Pond, namely Prey Kuy, Prey Veng province, and further releasing of 5,000 Silver barb fingerlings in Natural Fish Refuge Ponds of Kompot, Kompong Speu and Prey Veng provinces.

5.5- Fish Processing

- Freshwater fish processing, produced 50,000 tonnes equal to 166.67% of 30,000 tonnes planned, an increase of 26,500 tonnes compared with last year;
- Marine fish processing, produced 4,300 tonnes equal to 107.5% of 4,000 tonnes planned, a decrease of 370 tonnes compared with last year;
- Fish sauce processing, produced 18,553,000 litres equal to 74.21% of 25,000,000 litres planned, an increase of 7,293,6000 tonnes compared with last year.

5.6- Fish Export

Live and processed exports, produced 30,000 tonnes equal to 75% of 40,000 tonnes planned, a decrease of 6,150 tonnes compared with last year.

5.7- Community Fisheries Development

Up to now, 509 community fisheries (CFs) have been established. Within these 509 CFs, 447 are CFs and 62 are fish pond refuges. In total, there are 128,041 families who are members of CF with the total of 390,323 people. 469 CFs are located in fresh water provinces and 40 CFs are located in coastal/marine provinces.

5.8- Suppression of illegal fishing to protect the fisheries resource

The illegal fishing activities have 3,371 cases (2,655 cases for inland and 716 cases in marine), a decrease of 1,087 cases compared with last year (inland 1,084 cases and Marine 3 cases). The result of confiscated fisheries are as follow:

• Electro fishing gear	11,986 sets
• Long tubular mosquito nets (Lu sbai mong)	17,435
• Mosquito barriers net	672,207 m
• Mosquito fishing net (Uon sbai mong)	3,620 sets
• Fry bag net (Dai kon trey pra)	19
• Dai trey linh (Fish bag net of thynnichthy thynnoides)	163

Release of illegal catches:

• Pangasius	500,000 heads
• Mixed fingerling	112,482,000 heads and 44,450 kg
• Fish	820 kg

5.9- Financing & Revenue from Fisheries

The revenue from all provincial fisheries offices totaled 7,617,763,300 Riel equal to 95.22% of the 8,000,000,000 Riel planned, and this income is made up as follows:

- Fishing lots fee	5,719,528,000 CR
- Deposit of fishing lots fee (2006-2007)	572,120,000 CR
- Marine fisheries domain fee	185,864,900 CR
- Confiscated goods and fine fee	439,695,000 CR
- Last year debt	66,673,000 CR
- Other revenue:	
. Rental building, factory,	273,060,000 CR
. Overlapping zone commission	267,605,000 CR
. Cities-province	93,217,400 CR

(Note: CR-Cambodian Riel)

B- SUPPORTING SERVICES & MANAGEMENT

1. POLICY PLANNING, AGRICULTURAL ECONOMICS AND INVESTMENT

In the context of free market economy, the productions and agri-business have been involved by the farmer, producers, private enterprises which are known as private sector. The role of public institutions (government institutions) is to implement the programmes and development projects in line with the Government policy platforms. The Government management and supporting services are based on two frameworks: Law and implementing procedures to ensure good governance and the other is a technical procedure to ensure also the natural environment, society and economic development in a sustainable manner. The achievements of the two frameworks above are an important key to solve the problems and difficulties. These required the strong monitoring and evaluation for the implementation as basic to re-adjustment for improving management. The evolutions and achievements of these supporting services are illustrated as follows:

1. Policy Planning, Agriculture Economics and Investment

1.1 Policy Planning

1.0 Strategic Policy

- ✓ The reports of agriculture, forestry and fisheries reports for whole country, 2005-2006 and action programmes 2006-2007 has been prepared.
- ✓ The evaluation report for the implementation of the Government Rectangular Strategy has also been prepared.
- ✓ Annual progress report 2006 for the implementation of National Strategic Development Plan, 2006-2010 has been established.
- ✓ Promotion and monitoring have been made to follow up the action plans of line departments under the program and sub-program structure to ensure that those are in line with the Agriculture Sector Strategic Development Plan, 2006-2010.
- ✓ Internal planning system and the preparation of programme budgeting have been carried out in line with the Ministry Strategic Budget Framework (MSBF) of Ministry of Agriculture Forestry and Fisheries.
- ✓ Preparation of the Agriculture and Water Strategy, 2006-2010 has been made in collaboration with the development partners under the Technical Working Group of Agriculture and Water.
- ✓ Training courses on budget planning and monitoring & evaluation have been conducted at the central level based on the M&E Manual.

2.0 Public Investment and Official Development Assistance

- Public Investment

The preparation of Public Investment Program (PIP), 2007-2009, for the Ministry of Agriculture Forestry and Fisheries (MAFF) was established and the details of the projects and programmes are shown as follows:

- + New project proposal: 18 projects
- + Improvement previous project: 03 projects
- + To requested to cancel previous project: 23 projects
- + In-improved Projects of 133 project proposals are shifting to implement in 2007-2009
- + Incorporated information of 12 on-going projects have been established.

- Official Development Assistance (ODA)

12 projects for implementation in 2007 were prepared to seek financing from official development assistance of Japanese government:

- | | |
|---|-------------|
| + Technical Cooperation Projects | 03 projects |
| + Technical Cooperation Projects (Expert) | 04 projects |
| + Technical Cooperation Projects (training) | 01 project |

- + Development Study 02 projects
- + Grant Aid for General Project 02 projects

- Preparation for High Priority Project:

10 project proposals which are using the budget of counterpart fund from the Japanese government have been proposed based on the request from Ministry of Economic and Finance. These are including:

- + Soil Crop Suitability Mapping in the Cambodia Mekong Delta and Northeastern Region (PIN-BDP-Mekong).
- + Integrated Livestock Development (PIN-BDP-Mekong)
- + Conservation of Fish Spawning Habit in the Tonle Sap Great Lake and in the upper Mekong in Cambodia (PIN-BDP-Mekong).
- + Integrated Watershed Management of the Prek Thnot River Basin (PIN-BDP-Mekong).
- + Enhancement of Agricultural Product.
- + Study of Forest in the Mekong Basin.
- + Livestock Trade/marketing Improvement.
- + Strengthening Agro-Food Processing Technology for Rural Household.
- + Strengthening Existing Agricultural Cooperatives in Cambodia.
- + Improving and Strengthening the Agricultural Training and Extension Service in Cambodia.

3.0 Private Investment

a- General Situation:

From 1993 to 2007 the total of economic land concessionaires are reported at 96 companies with the total area of around 1,272,007 hectares located at 16 provinces. This also reported that 30 companies have been canceled with the total area of 265,230 hectares (land concession of 123,680 hectares for 16 concessionaires were cancelled in 2000 and 141,550 hectares for 14 concessionaires were cancelled during 2004-2006). At the present, the economic land concessions are still valid only of 66 companies with the total concession areas of 1,006,777 hectares.

The 66 valid economic land concessionaires located at 16 provinces and the situation of the investment and business operations are as follows:

- + 57 companies have been signed contract with the total concession areas of 943,069 hectares.
- + 09 companies have been agreed in principle for investment by the Government, but the contracts are not signed yet, with the total land areas of 63,208 hectares.

b- Situation of Private Investments, 2006-2007

In 2006-2007, there have been 30 Economic Land Concession (ELC) companies with total areas of 240.071 ha located in 9 provinces, in which:

- 26 contracted ELC companies invested with total areas of 217.503 ha, where 05 companies located in Stung Treng, 07 companies located in Kratie, 01 company located in Kampong Cham, 02 companies located in Kampong Thom, 01 company located in Siem Reap-Otdor Meanchey, 02 companies located in Otdor Meanchey, 02 companies located in Siem Reap, 03

companies located in Rattanakiri, 01 company located in Mondulkiri, and 02 more companies located in Koh Kong.

- 04 companies which agreed in principle by the RGC but they have not yet to sign contracts, the total areas of those are around 22.568 ha, of which 01 company located in Preah Vihea, 01 company located in Rattanakiri, 01 company located in Siem Reap, and 01 more located in Koh Kong.

There were 9 Economic Land Concession companies contracted with MAFF in 2005, so investment in ELC in 2006 increased 17 companies compared to 2005.

4.0 Assessment of Policy Planning:

In the past as well as nowadays, leaders of the ministry highly considered and paid more attentions, as well as other institutions concerned, particularly for the preparation of agricultural development strategic policy, planning and development programs. Most important trend is to accelerate the implementation of programmes and sub-programmes to follow by the agricultural strategic development plan 2006-2010, especially to promote to implementation of internal planning and budgeting process based on yearly program budgeting of Ministry Strategic Budget Framework (MSBF) of the Ministry of Agriculture Forestry and Fisheries as well as in line with the Agriculture and Water Strategy 2006-2010, which recently completed the preparation and these are considered that a close relationship between planning and budgeting is made.

It is believed that some of difficulties will be solved in the next year and the development of all sub-sectors will be progressed due to strong confidence from donor's communities in providing fund for implementing Public Investment Programmes (PIP) and (ODA). These programmes expected to increase by external funding and government budget allocation as well. At the same time, private investment on agriculture sector will have to be more improved the performance, if land conflicts would be solved and appropriately managed.

1.2 Project Coordination, Monitoring and Evaluation

In order to contribute to the development of agriculture sector in line with the National Strategic Development Plan 2006-2010 of the Royal Government of Cambodia, development projects/programmes for agriculture sector have been carried out. 29 projects have been implemented by line departments and technical units under the Ministry of Agriculture, Forestry and Fisheries (MAFF) with total budget of around 16 millions USD which including: research and experimental projects, training programmes for National School of Agriculture of Kampong Cham and School of Agriculture Prek Leap, agronomy projects, rubber development projects and fishery development projects .etc.

Many development partners have provided fund (grant and loan) with total budget of around 145,208,188 USD to support 35 projects for the development of agriculture sector:

- Australian Center for International Agriculture Research (ACIAR) has contributed mostly to the research works and experiments by implementation of 9 projects with total budget of 3,2 million USD.
- AusAID has supported on agricultural extension and improvement of agricultural production which including two large projects: Cambodia Australia Agriculture Extension Project, Phase II, started from 2001 and completion at early 2007 with budget estimation is around 15.2 million USD. Another project is Agriculture Quality Improvement Project (AQIP) started from 2000-2008 with total budget of 15.4 million USD.
- AFD has provided funding to support the agriculture sector. The fund amounting to 6.9 million USD for project implementation of 03 programmes which are including: (1) Development of Family Rubber Plantations, started from 2003-2007. (2) Conservation of

the Cardamon's Ecosystem Project, implementation at Pursat province from 2005-2009, and (3) Support to the Definition of Policy on Agricultural Sector Project main focused on policy formulation and agricultural planning, started from 2002 and completion in 2007.

- Asian Development Bank (ADB) has donated (Grant and TA) 06 projects with total budget 5.69 million USD.
- DANIDA has implemented 01 project focus on IPM program: "Integrated Pest Management (IMP) and Farmer Training Project, Phase II" with total budget of 1.65 million USD and started from 2003-2006.
- IFAD/Italy: Funding has been provided by IFAD to support poverty reduction program at rural areas and also agricultural development. Two large projects have been implemented:
- + Agricultural Development Support to Seila which has been implemented at northwest provinces from 1999-2006 with total budget of 8.6 million USD.
- + Rural Poverty Reduction Project: This project is managed by Seila Task Force Secretariat and the target areas are at Prey Veng and Svay Rieng provinces and this project started from 2004-2011 with total budget of 15.5 million USD.
- JICA has supported Battambang Agricultural Productivity Enhancement Project (BAPEP) with total budget of 3.2 million USD and this project has been started since 2003 and completed in 2006.
- EU has supported in both technical and financial assistance for two large projects to support the animal production and rural agriculture development with total budget of 30.25 million Euro at northwest provinces. These two projects including:
- + Smallholder Livestock Production Programme for 5 years (2005-2010) at 4 targeted provinces (Takeo, Kampong Speu, Pursat and Kampong Chhnang) with total budget of the project 5.25 million Euro.
- + Economic and Social Relaunch of Norwest Provinces (ECOSORN) has been implemented for 5 years (2005-2010) at 3 targeted provinces: Siem Reap, Battambang and Banteay Meanchey and the total budget of this project is 25 million Euro.
- CIDA has supported for agricultural marketing in Cambodia, (Cambodia Agricultural Market Information Project-CAMIP). This project started from 2006 and completion would be on 2009 with total budget of 4.47 million Canadian \$.

1.3 Agricultural Statistics

For the agricultural statistics, the capacity building of human resources, the techniques and survey methodology were improved as well as data collection and agricultural data distributions. Results for this activity are as follows:

1.3.1 Statistical Data Collection & Analysis

- Collection of information and reports from technical departments under the Ministry and provinces concerning with agricultural data system has been carried out.
- Field assessment of wet & dry season rice production, other crops and agro-industry crops has been conducted to estimate the planted areas, yields and annual production.
- Studied and assessed of climate condition of 24 provinces and towns.

- Reports on progressive crop cultivation and harvesting have been prepared including wet season rice for 2006 and dry season rice for 2006-2007.
- Data analysis has been done through computerized system in order to verify the areas and yields.
- Wet & dry season rice production was analyzed to assess food balance for each province and for the whole country.

Through the above activities, the weekly, monthly, quarterly, semester, yearly reports including other special reports relating to agriculture and yearly bulletin of Agricultural Statistics were published for all concerned institutions.

1.4 Survey Methodology, Agricultural Census and Publication

- Selection of sample villages and number of household and provinces has been done for conducting rice crop cutting survey in 2006.
- Preparation of village questionnaires has been carried out for conducting rice crop cutting survey.
- Preparation of the List of selected rice farming households, questionnaires was made for rice yield survey.
- Random sample via computerized system was carried out for conducting the survey on wet season and dry season rice in 2006 in provinces.
- Survey forms for agricultural statistics had been created and justified in electronic survey system for easier data entry and analysis.
- Statistical data & information has been distributed to the central institutions and provinces.

In general, the capacity to conduct the agricultural surveys was improved. However, the surveys relating to the agriculture still have more to do due to several factors.

1.5 Agriculture Marketing

Marketing issues are the problems for Cambodian products. The below efforts are aiming to promote market access and ensure reasonable price for producers who are poor farmers, and to increase their incomes and reduce poverty.

- Market price information has been collected (retail and whole sales) at markets and followed up the fluctuation of agricultural prices.
- Market information obtained from various provinces have been entry into database to process and analyze for producing weekly, monthly & yearly price bulletins, and also disseminate through radio broadcasting.
- Monitoring activities for the strengthening market information services have been conducted at 11 provinces.
- The strategy for the improvement of agricultural market information was published and disseminated to line departments and entities of MAFF.
- Collaboration with the project "Open Paddy Market" at Svay Antor, Prey Veng province has been made and this project is aiming to provide technical and marketing services for farmers, traders who used this market facility to improve paddy trading.

- Collaboration with CIDA in the implementation of Cambodia Agricultural Market Information Project. At this stage, several activities have been carried out. In particular, the organization of stakeholder workshop, arrangement of the first and second steering committee meetings, preparation of PIP, and other activities in the project was implemented.
- Survey on agricultural market system and market potential in 12 provinces has been completely done through the financial support from JICA.
- Report of the survey on agricultural market system and market potential has been published and delivered to stakeholders concerned.

Activities which have been implemented and achievements stated above are the preliminary outputs that can be used in production and marketing improvement by producers as well as the policy makers.

1.6 Environmental Impact Assessment

- Participated in monitoring of social land concession companies in 2006.
- Comments were provided on several documents related to environmental management.
- Participated in the raining course of Preparation of Social land Concession Project at Kampong Cham province.
- Participated in the National's Day on Biodiversity Conservation.
- Participation in several activities has been carried out, such as study and evaluation process on environment for LASED project at Kampong Cham and Kratie.
- Collaboration with concerned departments has been made to collect data, economic land concession, and agricultural development projects for the purpose of reviewing on the impact of environment.
- Participated in the forum on Water Resources Management at CDC.

The activities relating to environmental impact assessment are still facing difficulties due to lack of staffs, capable human resources, and these would be improved and strengthened.

2. INTERNATIONAL COOPERATION

3. FINANCE AND ACCOUNTING AFFAIRS.

3.1 Management of State Property

- Advisory and interventions have been made to ensure the management of state property which is under the utilization of line departments of Ministry of Agriculture, Forestry and Fisheries (MAFF).
- Inventory lists have been generated to control the state property of MAFF.
- Cooperation with Ministry of Economy and Finance (MEF) to participate in the inspection of revenue and expenditure management as well as state property management for the year 2005 of Forest Administration and Fishery Administration.
- Request has been made to MEF for clearance of old round wood, 116.724m³, out of the inventory list of Forest Administration.

3.2. Public Enterprises

- Request has been made to MEF to transfer fund (partial profit 2004) amounting to 100,000,000 CR as investment capital to replanting rubber in Chamkar Andong Rubber Plantation and 60,000,000 CR in Beung Ket Rubber Plantation.

- Cooperation with MEF for inspection of the account in the year 2005 for 07 Rubber Estates, (Chub, Krek, Peam Cheang, Memut, Snoul, Beung Ket and Chamkar Andoung), KAMFIMEX, AIC and Cambodian Rubber Research Institute.
- Cooperation with MEF for inspecting the revenue, expenditures, inventory of state property (2004) for Royal University of Agriculture, Kampong Cham and Prek Leap Agricultural College.
- Review and comments to Annual Business Plan (2007) were made for 07 Rubber Estates and AIC and submitted those to MEF for approval.

3.3. Logistic and Supplies

- The office supplies for 2006 amounting to 281,656,000 CR have been procured and delivered to line departments.
- Equipment has also been distributed to line departments amounting to 272,370,000 CR (2006)
- Procurement and delivery of uniforms for Forest Administration, Department of Agronomy and Agricultural Land Improvement (DAALI), General Directorate of Rubber Plantation, Department of Animal Health and Production (DAHP), and Fishery Administration.
- Fuel and Lubricants:

For Administration:

Types	Beginning Stock	Purchase	Distribution	Ending Stock
1- Gasoline	33,361.90	600,000	21,457.50	12,504.40
2- Diesel	12,002.95	1,791.00	14,148.60	(354.65)
3- MO	1,831.00	50.00	0	1,881.00

Unit: Liter

For Intervention:

Types	Beginning Stock	Purchase	Distribution	Ending Stock
1- Gasoline				
2- Diesel	59,172.50	12,632.00	36,350.00	35,454.50
3- MO	2,135.00	0	605.00	1,530.00

Unit: Liter

3.4. Financial Management:

a) Government Expenditure:

- Total loan of MAFF = 36,544,417,511 CR
- Salary and wage (Chapter-10) = 7,032,299,014 CR
- Administration, supplies and minor repair (Chapter-11) = 9,936,253,404 CR
- Public administration (Chapter-12) = 8,261,496,400 CR
- Activities of programs (Chapter-13) = 9,636,374,630 CR
- Intervention in economic activities (Chapter-30) = 864,000,000 CR
- Intervention in social and culture activities (Chapter-31) = 90,949,715 CR
- Intervention in international affairs (Chapter-32) = 723,044,348 CR

b) Revenue of Central and Provincial Departments.

- Revenue of state property = 11,187,506,494 CR
 - Other income = 8,170,734,130 CR
- (Note: CR=Cambodian Riel)

3.5. Public Investment Management Office

- Line Departments under MAFF have more clearly understood to process of the public financial reform/PFM of the RGC which led by MEF and implemented by line Ministries.

- MTEF/MAFF supported in the budget preparation generated by line departments of MAFF through “Program Budgeting” for the implementation of 2007-2009. The Program Budgeting in 2007 for MAFF has been prepared and submitted to MEF for inclusion in the Budget Law 2007.

4. HUMAN RESOURCES AND DEVELOPMENT

a) *Human Resource Management*

For 2006, Ministry of Agriculture, Forestry and Fisheries consisted of 8,305 official staff who are working throughout the country, in which 1,311 staff is women, 15.78%.

- ✓ Central Departments : 4,192 staff, in which 684 staff is women, 16.31%.
- ✓ Provincial Departments : 4,050 staff, in which 614 staff is women, 15.16%.
- ✓ Financial Autonomous Institutions : 08 staff, in which 04 staff is women.
- ✓ Economic Public Enterprises : 55 staff, in which 09 staff is women.

It is noted that the number of MAFF staff in 2006 was decreased if compared to last year, 74 staff. This decrease is due to some of them were retired, given up the works, some were transferred to outside Ministry and several staff was died.

4.1. *Staff Management*

The Ministry released 31 Prakas (Declaration) for promotion of 225 staff, in which 27 staff is women.

- Central Departments: 73 staff was promoted (16 women). In this figure, the details are shown as follows:
 - ✓ 02 officials were promoted as Deputy Director;
 - ✓ 14 officials were promoted as Office Chief level, 01 official is woman; and
 - ✓ 41 staff were promoted as Deputy Chief of Office, 15 staff is women.
- Provincial Departments: 124 official staff was promoted, in which 11 staff is women.
 - ✓ 03 officials were promoted as Director;
 - ✓ 08 officials were promoted as Deputy Director, 02 officials are women;
 - ✓ 17 staff was promoted as office chief level and 39 staff as deputy chief of office, in which 06 staff is women; and
 - ✓ 15 staff was promoted as office chief at district level, 31 staff as deputy chief of office, in which 03 staff is women.
- 15 Prakas for staff elimination have been declared with the total number of 98 staff (48 staff has given up the job, 18 staff requested to stop working and 32 staff was died).
- 73 new staff appointed to work in MAFF and these allocated to work at line departments as well as at the provinces, except 04 staff were not presented.
- Generally, the salary and wages of MAFF civil servants have been increased around 15% on the basic salary in 2006 (Sub-Decree No. 151 dated 21 December 2006) and the RGC will increase salary and wages around 15% more in 2007.

b) *Human Resource Development*

- Local Training: 95 staff attended short training courses, 01 official attended higher level course and 02 officials attended medium level course at Royal University of Administration.
- External Training: 07 staff attended PhD and 226 staff attended short training courses.

c) **Organizational Affairs**

- Prakas No. 116 dated 20 March 2006 on the organization and functioning of the offices within the Internal Audit Department was promulgated.
- Decision No. 118 dated 21 March 2006 on the creation of Gender Unit of MAFF was made.
- The new structure on the organization and functioning the units under Fishery Administration has been finalized for submission to Minister for signing.

5. ADMINISTRATIVE AFFAIRS

The main activities of the administrative are: security, sanitation, guest service, meeting arrangement, supplying logistics, circulation of all related letters/ documents, reporting the MAFF activities and other special reports such as the fishery and forest crime reports and the reports on the implementation of small holder rubber development.

- Receipts of letters/ documents:
 - ✓ Receive from other institutions = 2,931 letters
 - ✓ Receive from line departments = 4,454 letters
 - ✓ Receive from provincial departments = 1,710 letters
- Sending letters/ documents:
 - ✓ 6,975 letters sent to other institutions, line departments and provincial departments.
 - ✓ 507 Decisions, Circulars and Prakas were sent.
 - ✓ 310 documents copied and sent to line departments.

6. AGRICULTURAL LEGISLATION

6.1 *Agricultural Input Management*

- Issuance of business permits for agricultural inputs business operation to 22 companies.
- Issuance of input/product registration to 18 companies which are including 33 kinds of fertilizer and manure, 35 kinds of livestock medicines and 30 kinds of animal feeds.
- During 2006 and January 2007, the revenue obtained from the services was collected amounting to 17,400,000 CR
- Import Permits for agricultural input were issued to 27 companies in 2006 and the details are shown as below:
 - ✓ Fertilizer and Manure = 123,258 tons
 - ✓ Chemical = 532 tons
 - ✓ Livestock Feeds = 19,232 tons
 - ✓ Livestock Medicines = 108 tons and 1,000 bottles
 - ✓ Seeds = 1,129 tons
- Export Permit for agricultural inputs was issued to **Phosphate Chemical Cambodia** to export “Phosphate” fertilizer of 200 tons to Thailand.

6.2 *Legislative Affairs*

- 38 legislative documents of MAFF were reviewed and discussed, including: 07 draft Decision, 16 draft Prakas, 01 draft Decision, 03 draft Circulars, 02 draft work plans and 09 other draft letters.

- Participation in the reviewing and discussing of 20 Laws and Regulations outside of MAFF, including 09 draft Laws, 02 draft Royal Decrees, 05 draft Sub-Decrees, 02 draft Plans and other 02 draft legislative documents.

6.3 Strengthening the Agricultural Input Management

- Inspection and extension works relating to the strengthening of agricultural input management were carried out to 21 provincial departments and also releasing 05 warning letters to 05 traders who sold the falsified quality inputs in Prey Veng province.
- Conduct the monitoring to the importation of agricultural input materials for 15 companies and inspected the business location of 20 companies that requested to trade agricultural input materials.
- Organizing the consultation workshop to find out the issues and solution in order to improve the management of agricultural input materials (21 June 2006).
- Presentation was carried out during 02 training courses on the Management of Agricultural Input Materials held in Svay Rieng province and 01 training course in Pailin.

7. INSPECTION AND INTERNAL AUDITING

7.1 Inspection

7.1.1 Activities: Participated in solving and investigated on some issues for 24 times.

7.1.2 Work Achievements:

According to the results of the above investigations and solutions, MAFF mostly agreed to the requests as mentioned in the reports:

- According to the letter 2068 MAFF dated 26 April 2006, MAFF agreed with Fishery Administration to provide guideline to its Takeo Fishery Office to remove (brush park) barricade in fish lot no.5, and informed fish lot owner to define lot boundary.
- According to the letter 4794 MAFF dated 04 September, 2006, MAFF agreed with Animal Health and Production Department and office of animal health and production of municipal agriculture department to strengthen its duties and responsibilities to crack down on illegal animal slaughtered, transported, and frequently control slaughterhouses and markets.
- According to the letter 4399 MAFF dated 14 August, 2006, MAFF agreed not to allow Casotim Co.,Ltd to clear land for rubber, teak wood and polonia cultivation, due to there are some plants in those areas remained value and soil is typed with mixed sand. If land in that area is clear it would be impact to serious soil erosion.
- According to the letter 5386 MAFF dated 09 October 2006, MAFF requested to MLMUC for canceling 19 land titles where mangrove forest is existed and covered around 115.83 ha located at Prey Taol village, Sangkat Tuek Tla, Khan Prey Nup, Sihanouk Ville. It is noted that Sihanouk Ville Municipality agreed to issue improper intangible certificate on mangrove forest which is contrast to Article 3 and 9 of Fishery Law.

7.2 Internal Audit:

7.2.1 Comments: 07 documents have been reviewed and comments to MAFF.

7.2.2 Achievements of Auditing Activities

A- Audit Activities 2006:

Department of Internal Audit conducted the auditing works in several institutions, such as Choup, Peam Chaing, Krek, Snoul Plantations, Agricultural Input Company, Cambodia Rubber Research Institute, Cambodia Agricultural Research and Development, Royal University of Agriculture, Prek Leap National School of Agriculture, Kampong Cham National School of Agriculture, Fishery Administration,

Department of Animal Health and Production, Department of Agronomy and Agricultural Land Improvement, Department of Agriculture of Kandal, Kg. Spue, Kg. Chhnang, Kg. Cham, Takeo, and Sihanouk Ville. Department plans to conduct the auditing activities at Forest Administration earlier year 2007.

B- Audit by the Order:

In year 2006, according to the order of H.E minister, Internal Audit Department has conducted auditing on Fasciolosis project, and audited to Memot, Chmakar Angdong, and Beung Ket Plantations.

This audit was the first step that Internal Audit Department has audited in some institutions and provincial departments according to the order of H.E minister with focus on three targets, such as activities, state asset management, and financial management. It was found that, according to the audit, some advantages and disadvantages of the institutions together with recommendations were made in the report and submitted to the ministry for consideration.

Although, Internal Audit Department is newly created institution, it has some constraints and difficulties of human resource and finance, the Department made affordable achievements to accomplish the approved MAFF's Action Programmes.

8. AGRICULTURAL RESEARCH AND DEVELOPMENT

9. AGRICULTURAL EXTENSION

Department of Agricultural Extension carried out dissemination of knowledge, information and technology of agriculture in Cambodia including (i) participatory training and extension methodology, (ii) strengthening agricultural development community and farmer organization, (iii) agro-ecosystems analysis and farming systems, (iv) mass media and broadcasting of agricultural technology and (v) household food production and income generation.

9.1. Participatory training and extension

16 extension officers were sent to abroad including the Philippines, Japan, Malaysia and Thailand in extension methodologies, agricultural co-operative development and learn IT in rice. 14 Training of Trainers were conducted in Cambodia including participatory training and extension methodologies, farm management and farm business, and facilitation skills with 372 participants including 67 women.

9.2. Strengthening agricultural development community and farmer organization

Nine (09) agricultural development communities were established in 2006 and recently 70 Agricultural Cooperatives were established in Cambodia and existed 4,480 members and 6,651 shareholders with total cash capital of 493,380,000 Riels. Of 70 agricultural cooperatives have 348 members of board directors and 218 members of inspection committees.

Moreover, 13,037 farmer organizations also were established by other agencies such as programs/projects of Government agencies, NGOs and other rural development projects. A farmer organization composes by 15 to 30 farmers. These farmer organizations are rice seed production groups, rice production groups, cash crop production, livestock, aquaculture, small group enterprises, community micro-project and saving groups. These groups will be promoted to agricultural cooperatives when they capacity and fit to the cooperative procedures.

9.3. Farming System and Agro-Ecosystems Analysis (AEA)

in 2006, 76 AEA were conducted including 72 commune AEAs, 2 irrigation system Agro-Ecosystem Analysis (in Takeo and Bateay Mean Chey) and 2 Social Land Concession Agro-Ecosystems Analysis

(in Kratie and Kampong Cham). Recently a total of 454 AEA were conducted including 454 AEAs and these AEAs information and data have been kept in the Farming System Management Information System Data base (FSMIS) in Department of Agricultural Extension and Provincial Department of Agriculture (Agricultural Extension Office).

Based on AEA results and farmer need assessment 26 Technology Implementation Procedures (TIP) were developed for provincial and district agricultural staff, NGOs and other field agents to overcome many problems facing Cambodian farmers and to train knowledge, information and technology transfer to farmers and producers.

Field Demonstrations and pilot production plots in the integrated farming systems were also conducted in 24 provinces and municipalities including rice production, vegetables, cash crops and fruit trees, livestock (pigs, chicken and ducks) family aquaculture and rice-fish farming, agro-forestry (multi-purpose tree) and home garden.

The Coconut Hispine Beetle Biological Control. Agricultural Extension Department in collaboration with DAALI conducted survey and disseminating of biological control on Coconut Hispine Beetle to farmers in Kampot, Kg Thom, Takeo, and Siem Reap province.

Rice Knowledge Bank through Information Communication Technology (ICT) in Learn-IT project: DAE participated in the workshop on prioritizing and developed the content of technical information for extension through the system of the project in CARDI. Conducted the workshop on learn-IT in Kg Thom province. The project was developing the content and technical packages for extension to farmers.

9.4. Mass Media and Broadcasting Agricultural Technologies.

Mass-Media and broadcasting Agricultural Technology (MMBAT) is aimed to assist farming community to the quantity and quality of agricultural production through increasing awareness and access of agricultural knowledge, information and technology. We established an advisory panel and framework of MMBAT in Cambodia. We also developed and dissemination of extension materials including rice, vegetables, home garden, cash crops, livestock, fisheries, agro-forestry, and natural resources management (forestry and fisheries) and disseminated through radio station twice a week and TV station one a week. The program's purpose to improve/support to the farmers and farmer's association, in term of to increasing quantity and quality of agricultural products, through improving the knowledge, skill, information, and agricultural technologies. MMBAT also published about 80,000 booklets, leaflets and posters including rice, vegetables, cash crops, livestock, bird flu, Coconut Hispine beetle biological controls...etc for distributing to farmers and producers through extension workers, district agricultural office, field agents and farmer field schools. We also published quarterly agricultural magazines for the ministry of agriculture, forestry and fisheries.

9.5. Family food production and income generation

In collaboration with programs/projects, NGOs and other field agents such as with CAAEP II, FAO and NGOs, DAE promoted and carried out family food production and income generation in Cambodia for improving household food security and income generation through increasing agricultural productivity and diversification such as crops (especially rice), livestock, fisheries and water controls, improving nutrition and health awareness, empowering of local farmer community (saving groups), and promoting community micro-projects.

9.6. Problems and Challenges

During 2006 agricultural extension activities faced problems including:

- Limited budget and delays in budget disbursement for agricultural extension activities, especially at field level.
- Inadequate of extension mechanism and systems and lack of coordination and cooperation, participation of technical department, field agents and NGOs.

- Lack of staff and skill staff, and extension facilities and at district levels and field levels.
- Technology transfer is weak and farmers and extension workers have a low level of knowledge, access to technology, and skills
- High cost of dissemination and broadcasting extension materials and agricultural technology by mass media stations, especially through private mass-medias.
- Market change of agricultural products and highly competitive markets.
- Agricultural production and agri-business of farmers faced natural disasters such as floods, drought, pest and disease damages and effect of Avian Fluana disease.

9.10. Actions to be taken and recommendations

- Improve and enforce budget disbursement for agricultural extension services and activities.
- Mobilize extension workers and subject matter specialist staff (SMS) to work at district agricultural office and allocate resources and facilities for working at district levels.
- Strengthening coordination and mechanism between concerned departments and agencies, field operation agencies (NGOs) on agricultural extension activities.
- Establish agricultural extension training centers in the region and provinces in Cambodia.
- Strengthening and establishing of institution structures and capacity agricultural cooperative and farmer organizations by provision of management, leadership, business, planning training.
- Promoting development legal and strategy frameworks to ensure the protection the property rights, enforcing contractual obligation to foster competition, and provision of public goods such as agricultural technology, information and infrastructures for agricultural cooperative and farmer organizations.
- Strengthening and improving provision of public's services and goods such as agricultural extension of technology, irrigation facilities, credits, infrastructures and market information to farmer cooperatives and
- Continue facilitating and promoting farmer organization to agricultural cooperatives.

10. AGRICULTURAL MECHANIZATION

With aiming to promote agricultural productivity to ensure better quality and marketing, the advanced technology for mechanization into household agricultural production is considerably increased in the whole country. Presently, the supporting services in this area have been carried out through conducting training, research, trial, and demonstration which are aiming to assist production at local level, especially at farmer's levels. Performances achieved in year 2006 are detailed as follows:

10.1 Training

Local Training:

- ✓ Conduct 12 technical trainings on utilization, maintenance, and reparation of machineries to farmers at Battambang, Kg.Spue, Prey Veng, Phnom Tamao Cattle Breeding Station, and Department of Agricultural Machinery with total 230 participants attended.
- ✓ Conducted plowing demonstration, techniques of machinery utilization with tractors equipped with 7 disks and 3 disks to people at Battambang, Kg. Cham, Kg.Thom, Prey Veng, Kandal, and Kampot with total 1.026 participants attended.
- ✓ Conduct stakeholder workshops on utilization of agricultural machinery and equipment with 21 participants from line offices of the department.

Oversea Training: 08 staff has been sent to oversee training.

10.2 Research and Experimentation

- Studied, researched, and collected technical documents related to the development of agricultural machinery.

- Conduct field trial with tool utilization.
- Produced and trial agricultural machinery.

11. AGRO-INDUSTRY

Under supervision of the Ministry of Agriculture, Forestry and Fisheries (MAFF), the Department of Agro-Industry (DAI) performs its daily tasks and duties in close cooperation with line public institutions and relevant development partners.

Agro-processing is to add value to agricultural commodities through processing activities and transforming means. Agri-business includes all operational activities from transport, storage to distribution of agricultural products. Nevertheless, private sector plays major roles as a driving force to enhance agro-industrial development.

11.1- Training:

- DAI has sent abroad 04 staffs to attend Master Degree courses and other 19 officials to participate in short training courses related to agro-industrial development.
- The officials from DAI have been attended several local workshops and trainings based on official appointments from the Ministry.

11.2- Planning:

- Formulated the public investment programmes, priority programmes, Department budget planning and agro-industrial research planning.
- Carried out literature reviews related to agro-industrial development and compile training materials for delivering to farmers and rural agro-processors.
- Prepared relevant regulations and recorded statistics of small and medium agro-industrial enterprises.
- Prepared the report of Agriculture and Agro-industry Task Force submitting to Government Forum and private sector.
- Conducted feasibility studies on post harvest, agro-processing and marketing in several provinces.

11.3- Constraints:

- Lack of human resources, because DAI is a new establishment in the history of MAFF.
- There is no laboratory for testing safety and quality of agricultural products and agri foods.
- Lack of transportation means to perform its mandates, in particular in distance provinces or rural areas.
- Lack of financial support to operate the Department's daily tasks and duties.

12. AGRICULTURAL INPUT SUPPLIES

12.1 Business Operation for AIC

Agricultural Input Company (AIC) signed 02 contracts with Green Mount Co., Ltd in 2006 to import 5,000 tons of Urea for the first contract (10,000 tons import planning) and 4,000 tons for the second importation, but Green Mount Co., Ltd was not fulfilled the obligation in the importation and therefore, the contracts were cancelled.

- **Inventories in Phnom Penh warehouses as of 18-12-2006**

No.	Fertilizer	Unit	Beginning Stock	Inflow	Outflow	Ending Stock
1-	16-20-0	Ton	2,831.751	0	784.150	2,047.601
2-	18-46-0	Ton	955.089	0	387.600	567.489
3-	15-15-15	Ton	1,483.684	0	209.600	1,274.084
	TOTAL		5,270.524	0	1,381.350	3,889.174

12.2 Marketing for AIC

Market surveys have been conducted for fertilizer demand and supplies as well as the pricing fluctuation in order to improve the AIC business operation. AIC was also collaborating with 77 fertilizer trades in various provinces including 05 Agricultural Development Communities.

Product advertisements were done through the radio, TV and posters to promote AIC fertilizers as well as other input materials. AIC pays more attention to the types of input materials, especially fertilizers which farmers really needed.

12.2 Sale Revenue for AIC

-	Fertilizer 16-20-0	212,045.90 US\$
-	Fertilizer 18-46-0	142,414.40 US\$
-	Fertilizer 15-15-15	66,026.70 US\$
	TOTAL SALE	<u>421,487.00 US\$</u>
-	Total Debts	388,894.75 US\$
-	Total Receivables	209,680.75 US\$

13. GENDER ACTIVITIES

13.1 Gender Activities' Planning

Five-years Action Plan, three-years Action Plan (2006-2008) and the budgeting plan for the implementation in 2006-2007 have been prepared for supporting gender activities. The efforts has been made to mainstream the gender issues & actions in the Strategic Plan 2006-2010 as well as in the ASDP. The draft Guideline on the implementation and gender mainstreaming in agriculture has also been established.

13.2 Gender Training Activities

- 35 staff, 10 women attended a consultation workshop to identify the services for supporting small enterprises engaged in agriculture.
- 25 staff, 5 women attended to the workshop on selection and promotion procedures for women who are working in MAFF.
- A workshop on Gender Mainstreaming in Agriculture was organized for newer staff and 65 staff, 26 women attended.
- English training courses, conversation and primary English class were organized with the financial support from H.E Chan Sarun, Minister of MAFF and these classes attended by all 68 women.

13.1 Gender Activities' Extension Works

The study on gender issues and needs engaged in agriculture small enterprises as well as the required extension services has been conducted in the provinces of Takeo, Kampot, Kampong Speu and Kampong Cham.

The extension activities relating to the gender mainstreaming in agro system under the CAAEP-II have been carried out in Mondul Kiri and Kratie province.

III- CONCLUSION AND RECOMMENDATIONS

1. STRENGTHS

- 1) Agriculture considerably remained as important sector as well as a priority activity set in the Government Policy and it has been fully supported by the RGC, especially Samdach HUN SEN, Prime Minister of the Royal Government of Cambodia. In this connection, the agriculture & rural sector has been assessed as the main source of sustainable growth for socio-economy which led to all development partners fully participated in technical as well as financial supports.
- 2) The Royal Government of Cambodia also strongly concentrated in the development and management of irrigation system in order to increase the irrigated areas for accelerating the agricultural production.
- 3) The Royal Government of Cambodia pays much attention to reduce the vulnerable incidents occurred by natural calamity which seriously affected to the rural people and the full dependency of natural condition would be reduced.
- 4) The Royal Government of Cambodia increased the utilization of domestic resources to implementation of the diversification and intensification system to accelerate agricultural productivities for economic growth, employment and increase income for the rural population.
- 5) The Royal Government of Cambodia accelerated the private sector participation for fostering the agricultural growth through the participation of land titling provisions to the rural people in the framework of social land concession process.
- 6) Ministry of Agriculture, Forestry and Fisheries, concerned institutions, local authorities, national & international communities and Cambodian people, especially farmers take full consideration on the development of agriculture sector.
- 7) Ministry of Agriculture, Forestry and Fisheries pays much attention in the acceleration of the agricultural productivity improvement by providing the supporting services such as research and extension works, marketing development as well as distribution of agricultural materials etc.
- 8) Laws and related regulations were established and reinforced for better implementation.
- 9) The management for economic development as well as the agricultural economic management within the institution under the Ministry has been improved to response to the reform programmes of the Government and the regional integration in line with market competition in the world.
- 10) The policy, strategies and action programmes have been developed with the priority setting to meet the development requirement and budgeting availability.
- 11) Emergency interventions have been carried out to tackle with the natural disaster in terms of the preparation and responsiveness.
- 12) Natural management, forestry, wildlife, fisheries and land has been gradually improved based on the laws and regulation in place as well as the ability to implement those for sustainability with the full supports from the Government, concerned institutions, local authorities and national & international communities.

2. WEAKNESS

- i) Even the Government provided huge investment on irrigation, but the agricultural production is still remained independency of the natural condition which consisted the irregularity.
- ii) The concept for the strategy or policy formulation is not fully made with consensus manner that led to difficulty in the process and spend more time.
- iii) Law reinforcement is considered to be in difficulty and limited. The offences and abuses are still occurred.

- iv) The management, leadership as well as the responsibilities of the staff are limited and the salary and wages of staff are low resulted in difficulty on the management and implementation of development activities.

3. CONCLUSION AND RECOMMENDATION

- 1) Generally, the progress in agriculture sector development was considerably made for the year 2006-2007 if compared with previous years. These are because of the efforts and confrontation of some difficulties carried out by the farmers under the strong leadership of the Government, Samdach HUN SEN and also endeavors made from the Ministry of Agriculture, Forestry and Fisheries with the participation and assistance from concerned institutions, authorities and supports from donor communities as well as the Cambodian people.
- 2) Even the agricultural production in 2006 has been achieved great results, but some difficulties, especially drought and flood occurred in some parts of the provinces.
- 3) Cambodian agriculture shall be influent under the natural conditions in long term period. Therefore, the construction and restoration of irrigation systems continued to be a high priority action to cope with water issue. The policy and strategies for the development of agriculture sector shall be promoted to realize those for the actual implementation and the technical measures will be taken into consideration and implementation to enhance the agricultural productivities.
- 4) Concept for setting the policy/strategies, action programmes has to be in a consensus to foster the formulation process. The actual measures for reform programme that are concentrating to the management have to be implemented and the supporting services have to be carried out with available resources to cope with the main issues. These are the keys for effectiveness of management.
- 5) The systematic activities within the value chain, production, processing & market shall be considered to implement in the whole process for successful achievements in socio-economic development and sustainable resource utilization.
- 6) The improvement of law and regulation enforcement is a key to accelerate the agricultural development.
- 7) The qualified human resources, availability in research works are the important means to reach the development targets.