Cambodia Country Report
On
Agriculture, Water and Food Security

Ministry of Agriculture, Forestry and Fisheries, Cambodia
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2. Current Situation on Agriculture, Water and Food Security
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1. COUNTRY OVERVIEW

- Land Area: 181,035 Km$^2$
  - Land border: 2,438 Km
  - Coastline: 435 Km
- 23 Provinces, 1 Municipality
- 193 Districts
- 1,621 Communes
- 14,073 Villages

- Population: 13.4 million (Census, March 2008)
  - Projected to increase to 14.7 million in 2013, Women: 51.4%
- Population growth: 1.54% per annum

Source of Map: Ministry of Tourism (http://www.tourismcambodia.org)
- Agrarian country: 80% of population live in rural areas:
  - Central lowland along Mekong River: 49%
  - Around Tonle Sap Lake: 33%
  - Around coastal zone: 7%
  - High land or plateau zone: 11%

- Climate: Monsoon
  - Wet season (May – Oct)
  - Dry season (Nov – April)
  - Aver. annual monsoon rain:
    Minimum: 1,441 mm
    Maximum: 1,968 mm
  - Aver. annual temperature:
    Minimum: 23.3 °C
    Maximum: 34.9 °C

- Employment in agriculture: approximately 70% of population
- Income per capita: USD 901 in 2011
- Economic growth: 6.9% in 2011, and is projected to grow annually at rate of more than 7% over medium term
- Poverty rate is estimated to be decreased at more than 1% per annum for 2012 and 2013

Dr. Chan Sarun, MAFF Minister, received FAO Award for achieving MDG Goal-1 (Italy, 16 June 2013)
2. CURRENT SITUATION ON AGRICULTURE, WATER AND FOOD SECURITY

2.1. Land Use

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture</td>
<td>24%</td>
</tr>
<tr>
<td>Forest covered</td>
<td>56%</td>
</tr>
<tr>
<td>Grass land</td>
<td>6%</td>
</tr>
<tr>
<td>Shrub land</td>
<td>10%</td>
</tr>
<tr>
<td>Soil-Rock</td>
<td>0.2%</td>
</tr>
<tr>
<td>Urban Built Up</td>
<td>0.1%</td>
</tr>
<tr>
<td>Water Body</td>
<td>3%</td>
</tr>
</tbody>
</table>
2.2. Cambodia Soil Map (Crocker, 1962)

- Tonle Sap Lake area: medium - high fertility
- Mekong River Basin: medium fertility
- Mountainous plateau area: low – medium fertility
2.3. Cambodia Rice Production Map (White et al., 1997)
2.4. Rice Production

In 2012

- Rice harvested areas (total): 2.98 million ha
- Average rice yield: 3.117 t/ha
- Rice production: 9.29 million tons
- Paddy surplus: 4.73 million tons
## Rice production in Cambodia, 2008-2012

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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cultivated Areas (Ha)</td>
<td>2,615,741</td>
<td>2,719,080</td>
<td>2,795,892</td>
<td>2,968,529</td>
<td>3,007,454</td>
<td>1.11%</td>
</tr>
<tr>
<td>Harvested Areas (Ha)</td>
<td>2,613,363</td>
<td>2,674,603</td>
<td>2,777,323</td>
<td>2,766,617</td>
<td>2,980,297</td>
<td>7.50%</td>
</tr>
<tr>
<td>Yield (T/Ha)</td>
<td>2.746</td>
<td>2.836</td>
<td>2.970</td>
<td>3.173</td>
<td>3.117</td>
<td>-1.54%</td>
</tr>
<tr>
<td>Production (MT)</td>
<td>7,175,473</td>
<td>7,585,870</td>
<td>8,249,452</td>
<td>8,779,365</td>
<td>9,290,940</td>
<td>5.84%</td>
</tr>
<tr>
<td>Rice Surplus (MT)</td>
<td>2,025,033</td>
<td>2,244,598</td>
<td>2,516,752</td>
<td>2,780,328</td>
<td>3,031,017</td>
<td>9.04%</td>
</tr>
<tr>
<td>Paddy Surplus (MT)</td>
<td>3,164,114</td>
<td>3,507,185</td>
<td>3,932,425</td>
<td>4,344,263</td>
<td>4,735,964</td>
<td>9.04%</td>
</tr>
</tbody>
</table>

### Rice Cultivated Area by types in Wet Season, 2012

- **Late**: 21%
- **Medium**: 47%
- **Early rice**: 27%
- **Upland**: 2%
- **Floating**: 3%

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**Notes:**
- Cultivated areas increased by 1.11% from 2011 to 2012.
- Harvested areas increased by 7.50% from 2011 to 2012.
- Production of rice increased by 5.84% from 2011 to 2012.
- Rice surplus increased by 9.04% from 2011 to 2012.
- Paddy surplus increased by 9.04% from 2011 to 2012.
Cultivated and Harvested Area for Rice, 2003-2012

Rice Production 2003-2012

Wet Seas on Dry Season

Total Rice Production
2.5. Crop Production

Areas Under all crops

<table>
<thead>
<tr>
<th>Areas Under all crops</th>
<th>2012</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rice production Areas</td>
<td>3,007,545</td>
<td>Wet &amp; dry rice crops</td>
</tr>
<tr>
<td>Areas for subsidiary and industrial crops</td>
<td>912,883</td>
<td>Maize, cassava, sweet potatoes, vegetables, all kinds of bean, sesame, sugar cane, tobacco etc.</td>
</tr>
<tr>
<td>Areas for permanent crops</td>
<td>193,751</td>
<td>Cashew, banana, oil palm, coconut, mangoes, coffee, durian, pepper, orange, and other fruit etc.</td>
</tr>
<tr>
<td>Areas for rubber plantation</td>
<td>280,355</td>
<td></td>
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<tr>
<td>Total Areas (ha)</td>
<td>4,394,534</td>
<td></td>
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2.6. Livestock Production

**Family Livestock Production 2008-2012**

- **2008**: 3,457,787 Cows, 746,207 Buffalo, 2,215,641 Pigs
- **2009**: 3,579,882 Cows, 739,646 Buffalo, 2,126,304 Pigs
- **2010**: 3,458,481 Cows, 1,844,310 Buffalo, 2,057,431 Pigs
- **2011**: 3,405,972 Cows, 669,829 Buffalo, 2,099,332 Pigs
- **2012**: 3,376,805 Cows, 656,975 Buffalo, 2,208,611 Pigs

**Family Poultry (Duck & Chicken) Production 2008-2012**

- **2008**: 16,928,075 Poultry
- **2009**: 20,192,811 Poultry
- **2010**: 20,677,397 Poultry
- **2011**: 22,036,755 Poultry
- **2012**: 23,098,809 Poultry
2.7. Fisheries Production

- Fisheries (Fresh and Processed): 26,000 tons in 2012
- Rubber (Dry): 44,969 tons in 2012

2.8. Export of Agricultural Commodities
3 Main Types of Farming Practice in Cambodia:

1. Floodplain Farming: Broadcast rice is grown and watered by natural flooding in floodplain of Mekong River and Tonle Sap Corridor

2. Bunded Field Farming: Lowland areas are reclaimed into small bunded fields to retain and retard water during wet season or flood

3. Flood Recession Farming: In floodplain of many parts of the country, particularly around Tonle Sap Lake. Water from receding flood and tributaries is retarded and spread by small dams, dikes, ditches and/or reservoirs
- **Mekong River**: 486 Km
  86% of country’s land areas drains to Mekong River Basin. 14% drains directly to sea. Mekong River provides 60% of water to Tonle Sap Plains.

- **Tonle Sap Lake**: connects to Mekong River through Tonle Sap River (110 Km)
  Wet season (May – Oct) water surface area: 15,000 Km$^2$
  Dry season (Nov – Apr) water surface area: 3,000 Km$^2$

- 1% of country’s water is used, and agriculture consumes 60% of 1%. 

Ministry of Water Resources and Meteorology was established in 1999 which is fully responsible for development and management of water sector in the country.

Legal and Policy Frameworks for water sector have been formulated:
1. National Water Resources Policy, 2004
2. Law on Water Resources Management, 2007
3. Sub-degree on Basin Management
4. Sub-degree on Water Allocation and Licensing
5. Sub-degree on Farmer Water Users Communities (FWUCs)
6. Sub-degree on Water Quality

Prakas № 306 (Declaration) in 2006 delegates the responsibilities for the operation and maintenance of irrigation schemes to Farmer Water User Communities (FWUCs).
FWUC’s Functions:
• Manage irrigation schemes;
• Collect Irrigation Service Fee (ISF) to cover the cost of service delivery, and operation and maintenance;
• Bring together farmers who have farming land in an irrigated area and form a group to facilitate the supply of irrigation water to them;
• Supply adequate water for irrigation to the members;
• Acquire knowledge of management, operation and maintenance of the irrigation system and financial affairs;
• Increase the yields and seasonal cropping, and
• Facilitate the support from the government.

FWUC’S Responsibilities:
• Collect the ISF as determined by the FWUC;
• Prepare a work plan for the FWUC;
• Formulate statutes (constitution), contracts and internal regulations of the community;
• Maintain the irrigation system in good condition to enable the provision of irrigation for the whole season;
• Manage and distribute water to all members;
• Strengthen the use, management and improvement of the irrigation system in an efficient manner, and
• Resolve problems occurring within the community.
Approximately 200 FWUCs have been registered with MOWRAM or at districts or communes. FWUCs’ capacity is weak and the technical and financial support from the state is also limited.

The FWUCs are led by the Committee which is elected by the members of the Farmer Water User Community, and consists of the following members:

• Chairperson who is in charge of general supervision;
• First vice chairperson who is in charge of maintenance and repairing;
• Second vice chairperson who is in charge of water supply distribution and record keeping
• One treasurer who is in charge of the finance.
3. ISSUES OR PROBLEMS ON FOOD SECURITY

- Limited resources, stakeholders’ participation and investment for enhancement of agricultural productivity and diversification.
- Expansion of irrigation schemes and irrigated areas for agriculture development.
- Limited improvement of post-harvest management, post-harvest processing and quality standards of products.
- Limited investment from private sector in agricultural development and food production.
- Watershed management
- Soil fertility
- Research and Development, extension
- Climate Change (flood and drought)
- Farmer Organization/Cooperatives (Capacity, resources)
4. KEY CHALLENGES

- Prioritize the use of government’s resources and expertise and donors to enhance and diversify agricultural sector.
- Clear policies, strategies and incentives for private investment in agriculture and irrigation development.
- Sort-team and long-term actions for incentivizing producers and consumers and improving competitiveness in the regional and international arena.
- Improve agricultural productivity and diversification through increasing crop production growth by 10%, livestock production by 3% per year.
- Manage and protect both public and communities’ fishing ground for increasing fisheries production, and make a great effort to increase aquaculture production at least 15% per year.
5. EXPECTATION FROM ASEAN-JAPAN CB PROJECT

Ministry of Agriculture, Forestry and Fisheries of Cambodia expects to get more supports for pilot projects and capacity development of its staffs and cooperative members in the following areas:

- Seed development, Seed reservation (Plant and animal);
- Agricultural inputs application to improve productivity;
- Management of agro-chemical and fertilizer;
- Strengthen capacity of Research and Development for crop production, livestock and aquaculture;
- Agricultural extension services;
- Agricultural land use zoning and mapping;
- Agricultural land use and management;
- Contract Farming System;
- Plant Protection and Plant Quarantine, and Sanitary and Phyto-Sanitary for animal and fish;
- Processing technologies;
- Post-harvest technologies, and
- Agricultural market information.
THANK YOU FOR YOUR ATTENTION