The Waterways Infrastructure Development in Cambodia
Presentation Outline

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I. National policy on Waterway-Maritime Transport and Port development

1. Develop ports infrastructure to serve ships operations in domestic and international waters
2. Promote the establishment of special economic zones in port areas
3. Develop Master Plan on Port to ensure sustainable port management and development
4. Develop, protect, and maintain waterway infrastructures, install and improve aids navigation in rivers and coastal for safety of navigations and transportations
5. Establish legislative documents related to maritime and inland waterway transport, and port
6. Promote the establishment of maritime education, training and develop capacity building programs for strengthening the government official capacity
7. Promote the participation of private sectors in development of shipping industry, ship building and maintenances, port facilities setup, development and operation
8. Develop port data and information management and sharing system and adopt other modern technologies to facilitate port’s shipping processes
9. Establish maritime management and operations centre and other necessary maritime infrastructures for safety of ship and naval operations
10. Establish national shipping line to ensure sustainable transportation.
II. The organization chart of Waterways Infrastructure and Port Construction Department
III. Role and responsibility of Waterways Infrastructure and Port Construction Department

- Conduct R&D on any works related waterways, navigation and ports development and operations
- Develop navigational map of inland waterways
- Construct the sign board and aid to navigation along all inland and marine waterways
- Conduct hydrology and hydrographic survey that support waterways infrastructure and operation of navigations
- Notify the ship's operators of any accidents that may occur
- Arrange all means of waterway transportation to berth in appropriate location
- Implement river bank erosion, protection and constructions
- Supervise and provide license for all river and marine time navigation channel dredging
- Supervise all international and domestic port constructions and ports facilities operation and management
In Cambodia there are two modes of waterways transportation:

- Inland waterways
- Coastal and Marine waterways (Maritime)
1- Inland waterways
- Mekong River System is the main area for inland waterways and ports development.
- The inland waterway in Cambodia is 1,750Km. However, ship can only be operated in 780Km of the inland waterways.
- The entire waterway in Cambodia, Mekong river makes up 30%, Tonle Sap and Bassac rivers make up 15% and 5% respectively, and all other rivers make up the remaining 50%.

2- Coastal and Marinetime waterways
- The coastline of Cambodia consists of 435Km long extends from Thailand to Vietnam boarder
# Maximum sizes of vessels currently operating on inland waterway

<table>
<thead>
<tr>
<th>Kind of ship</th>
<th>Mekong Mainstream up to Phnom Penh</th>
<th>Tonle Sap, Phnom Penh to Siem Reap</th>
<th>Mekong River, Phnom Penh to Kampong Cham</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petroleum</td>
<td>Tanker barges 1,000 DWT 4.0m draught</td>
<td>Tanker barges less than 1000 DWT 2.50m draught</td>
<td>Tanker barges less than 1000 DWT 2.50m draught</td>
</tr>
<tr>
<td>Containers</td>
<td>Barges/Vessels 1,900 DWT (120 TEU) 3.8m – 4.2m draught</td>
<td>Barges 1200DWT (120TEU) 3.2m draught</td>
<td></td>
</tr>
<tr>
<td>General Cargo</td>
<td>Barges/vessels 1,500-5,000 DWT 4.0m - 4.50m draught</td>
<td>Domestic boats less than 1000 DWT 2.50m</td>
<td></td>
</tr>
<tr>
<td>Tourist Cruise Vessels</td>
<td>50-120 passengers 1.5m draught</td>
<td>50-120 passengers 1.5m draught</td>
<td>50-120 passengers 1.5m draught</td>
</tr>
<tr>
<td>Speedboats</td>
<td>25 passengers shallow draught</td>
<td>25 passengers shallow draught</td>
<td></td>
</tr>
</tbody>
</table>
The fleet along this stretch is vessel of 1,500 DWT can navigate for whole year. However, the vessel of 2,000 DWT can navigate seasonal.

General cargo export from the Tonle Bet port (2015-2017) mainly are animal feed, corn/maiz, feed wheat and soya bean meal. (Source: PPAP)
Tanker and feeder ships are on the Mekong River.
The river stretch (Tonle Sap) started from Phnom Penh Chaktomuk to Kampong Chhnang about 122 km.

The Tonle Sap river from Kampong Chhnag to Phnom Penh is passable for most of the vessels in full year (365 days).
There are two major international ports:

• Sihanoukville port is the only international sea port.
• Phnom Penh port is the only international river port is located about 332Km from the Mekong river estuary.
Most of the river ports are located Mekong River system, especially in the areas in and nearby Phnom Penh where the Mekong river, Bassac river, Tonle Sap river cross each other.
Stung Treng Port

Local boats for transportation such as ferry and tourist activities in Stung Treng

Source: Provincial Office, December 2017
- Tonle Bet port is located about 100km from Phnom Penh and it is the cooperation between PPAP and Mieng Ly Heng Investment (since 2012).

- To promote the export of agricultural products through inland waterway transportation.
Kompong Chhnang port
Chong Khneas port
V. Ports and ferry terminals development in Cambodia

There are 18 sea ports
VI. Progresses of waterways infrastructure development

There are three difference sources of fund to support waterways infrastructure development in Cambodia.

• National Annual Budget Allocation
• Other development partners fund support (Ex: JICA, Korea/KOICA)
• Private sectors
The achievement of Waterways infrastructure projects supported by Cambodian’s Government funds

In 2013

• Constructed Kdaing Ngear local port in Battambang Province
• Produced ENC of inland waterways from Phnom Penh to Kampong Cham province

In 2014

• Conducted hydrographic survey along the river at banks eroded areas in Kandal and Kampong Cham Province
In 2015

- Surveyed for construction the ferry terminal and navigation channel in Kampong Chhnang Municipality and Kampong Leng District of Kampong Chhnang Province
- Surveyed for port construction in Saang, Prek Kouy Commune, Saang District of Kandal Province
- Surveyed for port construction in Kampong Loung Commune, Angkor Borey District, Takeo Province
- Surveyed for aid navigation pole construction in Great Lake (from Chnouk Trou-Chong Kneas)
- Surveyed the ENC in Stoeung Hav coastal area of Sihanoukville
- Hydrography surveyed along Bassac River (Phnom Penh-Chhray Thom)
- Surveyed on river bank collapses and prepared technical report for bank protection construction
- Dredged navigation channel from Kampong Chhnange Municipality to Kampong Leng District
The achievement of Waterways infrastructure projects supported by Cambodia Government funds

In 2016
- Studied the ENC in Stoeung Hav coastal area of Sihanoukville
- Studied on river bank collapsed for 8,000m and prepared technical report for bank protection construction along national road #6 in Prek Dambang Commune, Mokampol District, Kandal Province

In 2017
- Studied for river port construction in Sambo Commune, Sambo District, Kratie Province
- Studied for coastal tourist port construction in Kep Province
- Studied for port construction and dredging navigation channel in Vay Ko river in Svay Rieng Province
- Studied the ENC in coastal area (O Tres- Ream) of Sihanoukville
- Constructed Pontoon port in Angkor Borey District, Takeo Province
The achievement of Waterways infrastructure projects supported by Cambodia Government funds

In 2018

• Studied the ENC in Ream-Koh Thmey coastal area of Sihanoukville
• Technical studied on the air clearance for aid navigation channel
• Studied the ENC in Lower Mekong River from Phnom Penh to Kaam Somnor
• Technical studied on small scale ferry terminal construction along the Mekong river system
• Technical studied on aid navigation within the geographical waterways of Cambodia
• Technical studied on river morphological variation from Kratie to Kaam Somnor
• Construction the passenger ports and taxi boat operation from Phnom Penh to Takmao, Kandal Province
• Construction local ferry terminal in Kampong Chhnang Municipality
• Construction pontoon port in Vay Ko river, Svay Rieng Province
The achievement of Waterways infrastructure projects supported by Development Partners funds

**By JICA**

- **In 2008**: Local port construction in upper Mekong river in Thala Borivath District, Streung Traing Province

- **In 2011**: Local port construction (Anlong Morokorth), O Svay Commune, Thala Borivath District, Streung Traing Province

- **In 2012**: Ta Ches port construction in Ta Ches Commune, Kampong Tralach District, Kampong Chhnang Province

- **In 2013**: Kampong Hav port construction in Kampong Hav Commune, Kampong Leng District, Kampong Chhnange Province

- **In 2014**: Port construction in Kampong Sralaw Commune, Chheb District, Previhear Province

- **In 2016**: Studied and data collection for producing ENC in coastal areas (Sihanoukville, Kampot, and Koh Kong)
The achievement of Waterways infrastructure projects supported by Development Partners funds

By USAID

• **In 2015:** The Mekong river infrastructure smart project/Cambodia Workshop on Cambodian Navigation Channel Management

By KOICA

• **In 2016:** Project for Feasibility Study on Waterway Improvement for Port Logistics Development in Cambodia
VII. Future Waterways Development Plans

• Seek financial support for development partners to develop the technical standard for port development and operation in Cambodia.

• Cooperate with other regional and international partners on capacity development and strengthening for our staff on waterways infrastructure and port development.

• Cooperate with development partners and private sector as well as utilization of the national budget to continue the Implementation of the Rehabilitation Plan of waterways infrastructure and ports.

• Conduct waterways dredging for improvement the Mekong river system to revitalize inland waterways transportation and port logistics.

• Preparation the waterway classification based on vessel classification and current situation of river stretch.
The list of anticipated project priority for the future implementation

- Construct Tonlesap River port in Kampong Tralach Commune, Kampong Tralach District of Kampong Chhnang Province
- Construct Tonlesap River port in Choukiri District of Kampong Chhnange Province
- Install and maintain aid navigation along inland waterways
- Study on hydrography and produce ENC
- Study and construct the coastal tourist port in Dang Tong Commune of Koh Kong Province
- Study and construct the Mekong river local port in Chhlong District of Kratie Province
- Study and construct the Mekong river local port in Pres Bath Commune, Strung Treng Municipality of Stung Treng Province
- Study and construct tourist port in Tonlesap Great Lake in Kampong Pluk Commune of Siem Reap Province
- Study and construct the tourist port in Sangke Stream in Koh Chivaing Commune of Battambang Province
VIII. Issues and challenges

- Many of significant inland waterways navigation channels are shallower. Mostly the navigation can be operated smoothly only in rainy season.
- The utilization of waterways transportation in Cambodia is still limited and at minimum level, it is due to insufficient investment on facilities for waterways infrastructure development.
- Limited of national funding for investment on waterway infrastructures and port development
- Lack of law, regulation, and technical guidelines to support on waterways infrastructure management and operations.
- Limited of resources persons, skills, knowledge, and experiences on waterways infrastructure management and development.
- Limited of financial support for waterways development and operations.
For private ports management

- Lack of technical guideline (or standard) for guiding the private port construction and operation. Currently, the private port construction and operation are implemented basing on their own concept, available funding and resources of each port owner.
- Many private ports (esp. River port) are operating without using turning basin area ‘s map within the port operation area.
- Many of the private ports are still operated without official registration (or permission) from MPWT.
IX. Proposed for future Cooperation

• Provide Capacity building programs for our staff on Port operations and facilities installation and management
• Provision of the visiting technical experts from Japan for development of port standard technical guideline operation manual for river and sea ports
• Provision of Technical experts from Japan for conducting the technical review and assessment of the waterway infrastructures and port facilities for inland and marine-time transportation in Cambodia toward the development of National waterway and navigation infrastructure development master plan.
Thank you for your attention!