

**INTERNATIONAL HYDROGRAPHIC ORGANIZATION**  
**CAPACITY BUILDING COMMITTEE**



**EAHC TECHNICAL VISIT TO THE WATERWAYS DEPARTMENT**  
**MINISTRY OF PUBLIC WORKS AND TRANSPORT**  
**KINGDOM OF CAMBODIA**

**-REPORT-**

**DECEMBER / 2013**

# **INTERNATIONAL HYDROGRAPHIC ORGANIZATION CAPACITY BUILDING COMMITTEE**

## **SUMMARY SHEET**

Title of Activity: EAHC Technical Visit to Cambodia

Host Country: Kingdom of Cambodia

Venue and Date : Waterways Department, Ministry of Public Works and Transport, 05  
December 2013

Organized by: East Asia Hydrographic Commission and the Waterways Department of  
Cambodia

Funding source: IHO CBSC Fund

Number of participants: three (3)

Participating countries: Malaysia and Philippines

Cost: 2,605.67 Euros

---

### **Executive Summary**

The Waterways Department, under the Ministry of Public Works and Transport, is responsible for conducting hydrographic surveys and producing nautical charts of both Cambodian waterways and sea. Among their priorities for the period 2013-2016 is to produce Electronic Navigational Charts (ENC) in the Mekong River System. Technical assistance for the said project through the EAHC has been requested by the Waterways Department during the technical visit. The Cambodian authorities have also pointed out that they would be needing assistance in the preparation of Technical Guidelines for surveying and charting their waterways.

Members of the technical visit from Malaysia and the Philippines met with the Deputy Director and officials of the Waterways Department and the Director General of the General Department of Transport. Said officials have expressed interest in joining the IHO and hosting IHO Capacity Building Programs.

## **Contents**

1. Introduction

2. Technical Visit Program

3. General Assessment

4. Technical Visit Conclusions

5. Recommended Actions

Annex A – List of Participants (EAHC)

Annex B – List of Participants (Cambodia)

Annex C – List of officials to contact for coordination with Cambodia concerning  
IHO and EAHC matters

Annex D – Meeting Program

## 1. INTRODUCTION

The International Hydrographic Organization (IHO) and the East Asia Hydrographic Commission (EAHC) have been working together in encouraging non-member states in the East Asia region to join the IHO. So far, two (2) countries have already submitted their application to become IHO Member States (MSs), Brunei Darussalam and Vietnam. Both countries are now waiting to earn the required 52 approvals from MSs.

To further enhance the technical cooperation in the region and encourage non-MSs to become part of the Organization, the IHO has approved the Technical Visit to Cambodia as part of the 2013 Capacity Building Work Program (CBWP).

The Philippines, as the current EAHC Chairman, is the project leader for the Technical Visit. Due to the disaster brought about by typhoon Haiyan in the Philippines, Commodore Romeo I. Ho, the EAHC Chairman, was not able to head the Technical Visit team, and requested the EAHC Vice-Chairman, Rear Admiral Zaa'im bin Hasan, Director General of the National Hydrographic Centre, Royal Malaysian Navy to assume the head of delegation. Rear Admiral Zaa'im bin Hasan was joined by representatives from the Office of the EAHC Chairman, Commander Herbert L. Catapang and Lieutenant Junior Grade Jonathan T. Pason from the National Mapping and Resource Information Authority, Philippines.

The Waterways Department, under the Ministry of Public Works and Transport, is the authority with regards to the hydrographic and nautical charting activities in Cambodia. It is responsible for the 1,700 km (wet season) and 870 km (dry season) navigable routes in the inland waterways system of Cambodia consisting of the Mekong River, Bassac River and Tonlesap River (including Great Lake).

The navigational routes of the Cambodian waterways are classified as international navigation route and domestic navigation route. The international navigation route has a waterway channel depth of 5 m which are navigated by sea going vessels with tonnage of 5,000 DWT. 500 DWT (in wet season) and 70 DWT (in dry season) vessels navigate through the domestic navigation route with a waterway channel depth of 2 m to 2.5 m.

Cambodia has seven (7) main river ports (**Fig. 1**) located in Kg cham, Kratie, Stung Treng, Kg Chnnang, Battambang, Siemrap and one (1) domestic port in Phnom Penh. An international river port and four (4) oil terminals are also located in Phnom Penh.

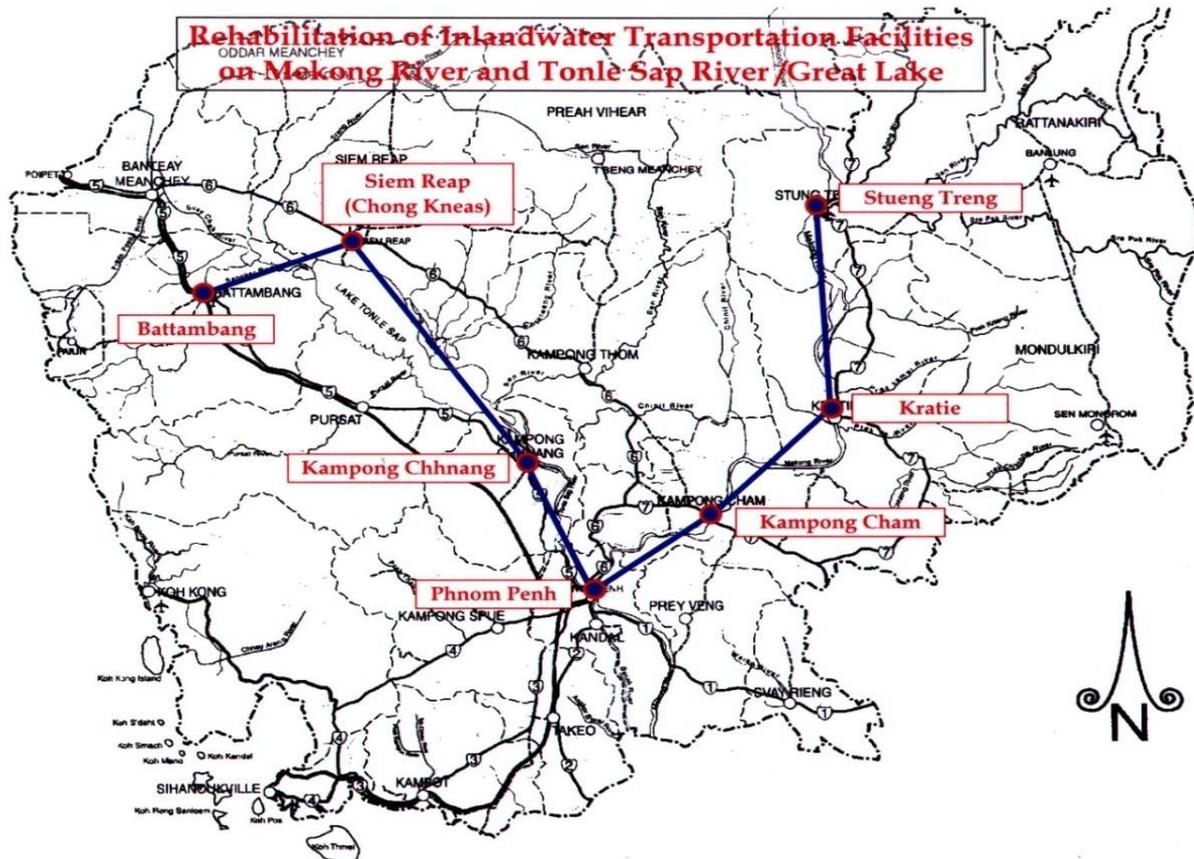


Figure 1. Cambodia's seven (7) main river ports (image source: presentation of Deputy Director Suon Vansar)

Cambodia's major sea port is the Sihanoukville Autonomous Port (Fig. 2) or the Port Autonome De Sihanoukville (PAS). It is the sole international and commercial deep seaport in Cambodia. It has a total operational land area of around 124.76 ha.<sup>1</sup>



Figure 2. The Sihanoukville Autonomous Port (image source: [www.pas.gov.kh](http://www.pas.gov.kh))

<sup>1</sup> [www.pas.gov.kh](http://www.pas.gov.kh)

## 2. TECHNICAL VISIT PROGRAM

Members of the EAHC Technical Visit arrived in Phnom Penh, Cambodia on 04 December 2013. On 05 December 2013, the EAHC delegates were met by Mr. Ros Sovannarith, Technical Officer from the Waterways Department, and were guided to the meeting venue. Director Ros Sophorna and Deputy Director Suon Vansar have made the arrangements for the meeting and the courtesy call to the Director General.

The morning meeting was held at the Waterways Department wherein the EAHC Technical Visit Team, led by Rear Admiral Zaaim bin Hasan, had an extensive discussion with the officials of the Waterways Department, led by Deputy Director Suon Vansar. Rear Admiral Hasan gave the opening message after which Deputy Director Vansar gave a presentation on the overview of the Waterways Department. Commander Herbert Catapang gave an introduction to the IHO, its organizational structure, benefits, membership procedures and the EAHC among others.

The afternoon meeting was held at the General Department of Transport. It was a courtesy call to the Director General Chan Dara.

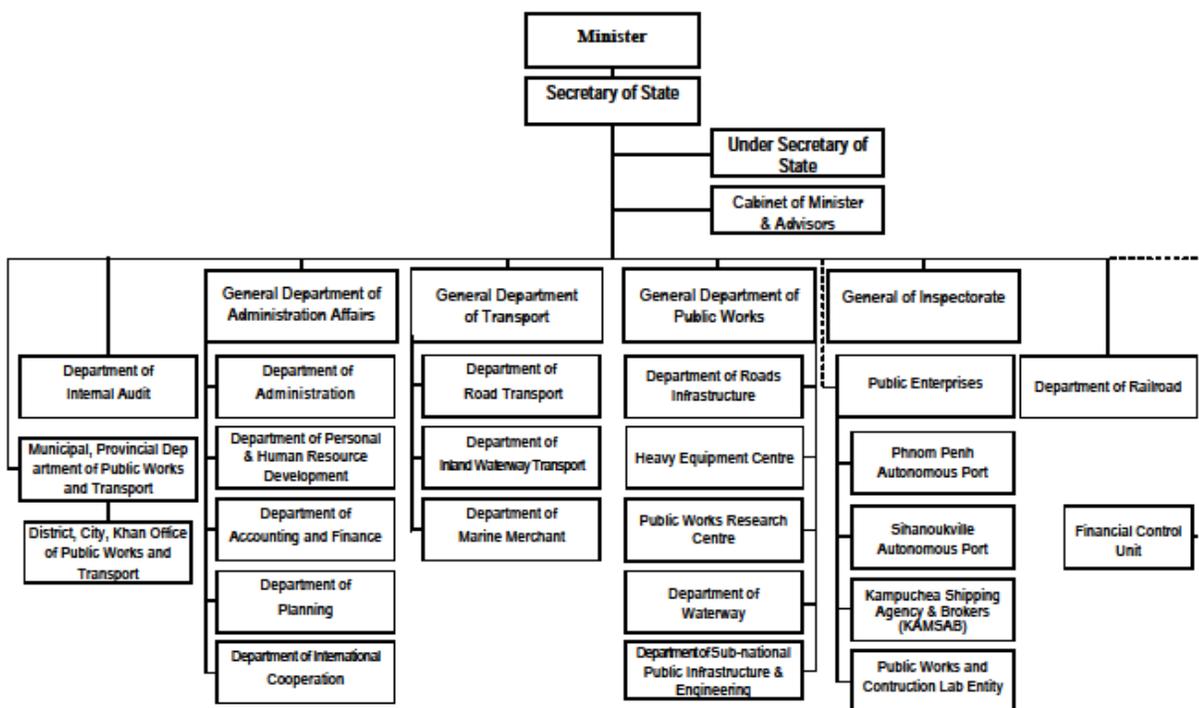
The names and contact details of the participants from the EAHC are listed in **Annex A** while the participants from Cambodia are listed in **Annex B**. Contact persons in Cambodia are listed in **Annex C** and the Technical Visit Program is attached as **Annex D**.

## 3. GENERAL ASSESSMENT

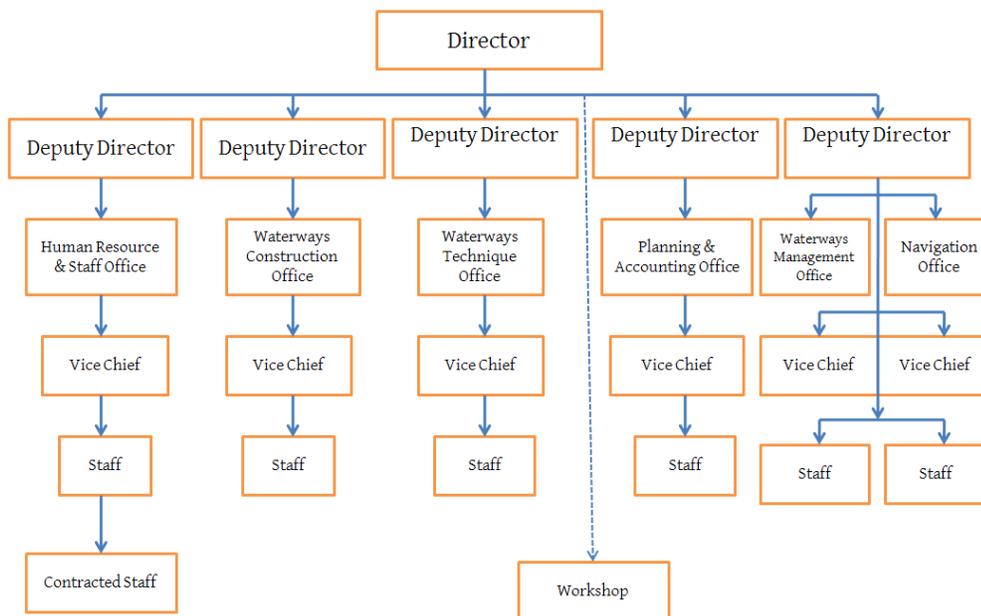
### 3.1 The Department of Waterways

The Department of Waterways is under the Ministry of Public Works and Transport (**Fig. 3**) and has the responsibility of conducting hydrographic surveys and producing nautical charts for both inland Cambodian waterways and sea. It is headed by a Director assisted by five (5) Deputy Directors (**Fig. 4**). Its roles and responsibilities include the following:

- a. to study and do all work concerning navigation along natural waterways
- b. to produce maps along rivers and narrow channels
- c. aids to navigation installation and maintenance
- d. to ensure that there are no obstacles for navigation and water currents
- e. to disseminate information on new obstacles to mariners/ skippers
- f. to ensure all waterways transport means and floating houses are in order
- g. to manage all constructions located in rivers
- h. bank protection
- i. rivers and channels dredging for navigation
- j. domestic ports construction
- k. to manage land reserved for waterways expansion
- l. to manage water usage
- m. to prepare taxes for all waterways transport means
- n. to do water level statistics



**Figure 3. Organizational structure of the Ministry of Public Works and Transport** (image source: presentation of Deputy Director Suon Vansar)



**Figure 4. Organizational structure of the Department of Waterways** (image source: presentation of Deputy Director Suon Vansar)

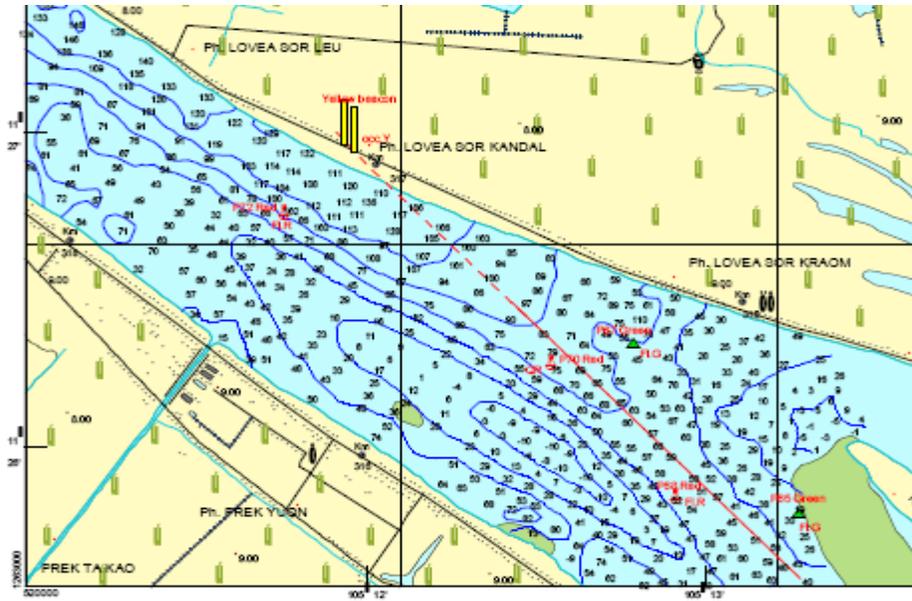
### 3.2 Status of Hydrographic Surveys

Most of the hydrographic survey activities in Cambodia were done/ concentrated in the inland waterways as these are the main channels of both international and domestic shipping vessels.

The Department of Waterways has provided the following information regarding the current status of hydrographic surveys in Cambodia:

- a. Area adequately surveyed (<200m)
  - Mekong River from upstream to downstream
  - Bassac River
  - Tonle Sap River
- b. Area adequately surveyed (>200m)
  - Never
- c. Area requiring resurvey at larger scale or to modern standards (<200m)
  - Tonle Sap River and Mekong River (from Phnom Penh to Kampong Cham)
- d. Area requiring resurvey at larger scale or to modern standards (>200m)
  - Never
- e. Area which has never been systematically surveyed (<200m)
  - Never
- f. Area which has never been systematically surveyed (>200m)
  - Never

The platform that they use for conducting hydrographic surveys is named as “Molla” which was launched in 1997. It is equipped with 2 sets of Hemisphere DGPS, 2 sets of radio, Echotrac CV100 and an Acoustic Doppler Current Profiler (ADCP). They use Hypack as their data acquisition software. **Figure 5** shows an output from their hydrographic survey operations.



**Figure 5. A sample output of the hydrographic survey operations of the Waterways Department** (*image source: presentation of Deputy Director Suon Vansar*)

### 3.3 Status of Nautical Charting

As of the time of the Technical Visit, the Department of Waterways has not published paper charts and Electronic Navigational Charts. Nautical Publications such as Notice to Mariners, Coast Pilot Book, Tide and Current Tables and List of Lights are not yet available. Foreign hydrographic organizations produce the nautical charts that are being used in their sea ports.

### 3.4 Status of Hydrographic and Cartographic Capacity Building

Five (5) technical staff from the Department of Waterways have already been sent to Japan, with the support of Japan International Cooperation Agency (JICA), to undergo a training course on ENC Production. This is in-line with the on-going JICA Development Research Type Technical Cooperation Project in Cambodia.

### 3.5 Future Plans

The following are the Department of Waterways plan for 2013-2016:

- a. Channel dredging from Phnom Penh to Kratie (Upper Mekong)
- b. Hydrological survey in areas that are vulnerable for bank erosion
- c. Water level statistics along Mekong River
- d. ENC production in the Mekong River System
- e. Install fifty (50) buoys in the river and the sea

- f. Prepare Technical Guidelines for Waterways Technique
- g. Install landmarks and buoys from Kampong Cham to Stung Treng which has a total length of 243 km
- h. Install landmarks and buoys in Tonle Sap River which has a total length of 107 km
- i. Survey water level in the area surrounding Sihanoukville Autonomous Port
- j. Survey water level in Tonle Sap River
- k. Construct six (6) floating piers in six (6) provinces

#### **4. CONCLUSION**

The officials from the Department of Waterways and the Director General of the General Department of Transport have expressed enthusiasm in taking part with IHO activities. In particular, they are interested in hosting an EAHC capacity building program.

The EAHC Vice Chairman, Rear Admiral Zaim Bin Hasan, invited the Cambodian officials to participate as observers in the coming EAHC Steering Committee Meeting in Kuala Lumpur, Malaysia on February 2014. The Cambodians showed interest and reminded the EAHC delegates that the official invitation should at least be given to them a month before the meeting in order to prepare the necessary travel arrangements and authority from the Minister of Public Works and Transport.

The Director General, Mr. Chan Dara, of the General Department of Transport is an active representative of Cambodia to the IMO. He said that they will conduct a study for the possibility of joining the IHO.

#### **5. RECOMMENDATIONS**

The Technical Visit Team recommends that:

- a. Cambodia be invited in future EAHC and IHO Meetings as an observer in order for them to better understand and be more aware of the activities and works of these organizations which will eventually encourage them further to join the IHO.
- b. Cambodia be invited in capacity building programs specifically in programs that aims to develop capacities in spatial modeling/ 3D modeling, bank erosion calculation, ENC production, and using Arc GIS software.
- c. Provide technical support in preparing their technical guidelines for surveying and charting their waterways.
- d. Provide technical support to projects as stated under item 3.5 of this report, Future Plans.

## 6. PHOTO DOCUMENTATION



**(Top left) Rear Admiral Zaa'im bin Hasan delivers the opening message. (Top right) Deputy Director Suon Vansar gives an overview of the Waterways Department. (Bottom left) Commander Herbert Catapang gives an introduction to the IHO and the EAHC. (Bottom right) Discussions between the Waterways Department officials and the EAHC Technical Visit Team.**



**(Left) EAHC Vice Chairman, Rear Admiral Zaa'im bin Hasan and representative of the EAHC Chairman, Commander Herbert L. Catapang in front of the lobby of the Waterways Department building. (Right) Officials of the Waterways Department and the members of the EAHC Technical Visit Team.**



**(Left) EAHC Vice Chairman, Rear Admiral Zaaim bin Hasan presents the EAHC Plaque of Appreciation to Director General Chan Dara of the General Department of Transport. (Right) EAHC Technical Visit Team meets with Director General Chan Dara.**

**ANNEX A – LIST OF PARTICIPANTS (EAHC)**

<b>Country</b>	<b>Agency</b>	<b>Name</b>	<b>Position</b>	<b>Contact No.</b>	<b>Email</b>
<b>Malaysia</b>	National Hydrographic Centre, Royal Malaysian Navy	Rear Admiral Zaim Bin Hasan	Director General  EAHC Vice-Chairman	Tel: (603) 3169 4444  (6019) 243 6846  Fax: (603) 3101 3111	<a href="mailto:zaim@hydro.gov.my">zaim@hydro.gov.my</a>  <a href="mailto:zaim_hasan@yahoo.com">zaim_hasan@yahoo.com</a>
<b>Philippines</b>	Hydrography Branch, National Mapping and Resource Information Authority	Commander Herbert L. Catapang	Chief, Nautical Charting Division  EAHC Chairman's Office	Tel: (632) 245 9501  Fax: (632) 242 2090	<a href="mailto:h_catapang@yahoo.com">h_catapang@yahoo.com</a>
<b>Philippines</b>	Hydrography Branch, National Mapping and Resource Information Authority	Lieutenant Junior Grade Jonathan T. Pason	Attached to the Hydrographic Data Section, Survey Support Division  EAHC Chairman's Office	Tel: (632) 245 9502  Fax: (632) 242 2090	<a href="mailto:jettpason@yahoo.com">jettpason@yahoo.com</a>

**ANNEX B – LIST OF PARTICIPANTS (CAMBODIA)**

<b>Name</b>	<b>Position</b>	<b>Contact No.</b>	<b>Postal Address</b>	<b>Email Address</b>
Chan Dara	Director General	Tel: (855) 12 271 327/90 271 327  (855) 97 7 271 327	General Department of Transport, St. 598, Chhrang Chamres II, Russey Keo, Phnom Penh, Cambodia	<a href="mailto:chan_dara@online.com.kh">chan_dara@online.com.kh</a>  <a href="mailto:chandara1704@gmail.com">chandara1704@gmail.com</a>
Suon Vansar	Deputy Director	Tel: 088 7878 777	Waterways Department, Norodom Bvl., Daunpenh District, Phnom Penh City, Cambodia	<a href="mailto:suonvansar@gmail.com">suonvansar@gmail.com</a>
Ean Chhuth	Deputy Director		Waterways Department, Norodom Bvl., Daunpenh District, Phnom Penh City, Cambodia	
Sophak Ly	Chief, Bureau of Navigation Channel	Tel: (855) 12 899 116  (855) 69 899 116	Waterways Department, Norodom Bvl., Daunpenh District, Phnom Penh City, Cambodia	<a href="mailto:lysophak1@yahoo.com">lysophak1@yahoo.com</a>
Ros Sovannarith	Technical Officer	Tel: 012899116	Waterways Department, Norodom Bvl., Daunpenh District, Phnom Penh City, Cambodia	

**ANNEX C – LIST OF OFFICIALS TO CONTACT FOR COORDINATION WITH CAMBODIA  
CONCERNING IHO AND EAHC MATTERS**

<b>Name</b>	<b>Position</b>	<b>Contact No.</b>	<b>Postal Address</b>	<b>Email Address</b>
Ros Sophornna	Director	Tel: (855) 23 864 361  (855) 12 628 356  Fax: (855) 23 864 361	Waterways Department, Norodom Bvl., Daunpenh District, Phnom Penh City, Cambodia	<a href="mailto:sophornna_r@yahoo.com.uk">sophornna_r@yahoo.com.uk</a>
Mak Sideth	Director	Tel: 012 835 867	Merchant Marine Department	<a href="mailto:maksideth@online.com.kh">maksideth@online.com.kh</a>
Bong Vuthy	Director	Tel: 012 875 240	Inland Waterways Transport Department	<a href="mailto:vuthy.bong@yahoo.com">vuthy.bong@yahoo.com</a>
Suon Vansar	Deputy Director	Tel: 088 7878 777	Waterways Department, Norodom Bvl., Daunpenh District, Phnom Penh City, Cambodia	<a href="mailto:suonvansar@gmail.com">suonvansar@gmail.com</a>

## ANNEX D – MEETING PROGRAM

### **WORK SCHEDULE** **East Asia Hydrographic Commission (EAHC)** **Technical Visit to the Department of Waterways, Kingdom of Cambodia** **05 December 2013**

<b>Date/ Time</b>	<b>Activity</b>	<b>Responsible</b>
04 December 2013	Arrival at Phnom Penh, Cambodia	Malaysia, Philippines
05 December 2013	Visit to the Department of Waterways	
0900	- Welcome and Introduction - Message from the Vice Chairman, EAHC	Cambodia Vice-Chairman, EAHC (Malaysia)
0920	- Overview of the Department of Waterways	Cambodia
1000	- Presentation on IHO and EAHC	Philippines
1045	- Other matters/ conclusion	All
1100	- Closing Remarks	Cambodia
1500	Courtesy call to the Director General, General Department of Transport	All
06 December 2013	Departure from Phnom Penh, Cambodia	Malaysia, Philippines