

**INTERNATIONAL HYDROGRAPHIC  
ORGANIZATION CAPACITY BUILDING  
COMMITTEE**



**The recognized S5 (Hydro) Category B Marine  
Hydrographic Survey Programme**

**REPORT**

**December 2018**

**Korea Hydrographic and Oceanographic Agency**

# SUMMARY SHEET

**Title of the Activity:** The recognized S5 (Hydro) Category B Hydrographic Survey Programme

**Host Country:** Republic of Korea

**Venue / Date:** Korea Hydrographic and Oceanographic Agency, Busan, Republic of Korea / 12 July - 30 November, 2018

**Organized by:** Korea Hydrographic and Oceanographic Agency (KHOA)

**Supported by:** IHO

**No. of participants/countries:** 12 / 10 (7 person supported by IHO)

**Costs:** Euros

## 1. SUMMARY REPORT

IHO S5 Category “B” Hydrographic Survey Programme sponsored by the Republic of Korea will be delivered in 20weeks, and a total of 12 participants, including 3 participants sponsored by the IHO Capacity Building Fund and additional 2 participants supported by ROK.

S-5B Hydrographic Survey Programme which is one of the 2018 IHO Capacity Building programmes was taken place at Korea Hydrographic and Oceanographic Agency (KHOA), Busan, ROK, from 12 July to 30 November 2018.

Participants taking part in the programme learned computation for production script, marine environment physical & legal issues, remote sensing for hydrographers, positioning, nautical sciences, hydrographic survey and data processing with practical exercises. They also understood how to use tools and the contents of software for data processing and final products through practical exercises. In this way, they were trained to understand and basic theory for hydrographic survey and developed their ability to use hydrographic software.

## 2. VENUE, DATES AND PARTICIPANTS

The course was taken place at the training room of KHOA, 12<sup>th</sup> July – 30<sup>th</sup> November 2018.

12 participants attended the course, including 7 trainees from support of IHO CB, and 5 trainees from additional support from ROK. The list of participants appears as Annex 1.

## 3. PERFORMANCE DETAIL OF PHASE 2

Dates		Lessons
2018-07-12	2018-08-03	Introduction for hydrographic survey Computation for production script with python
2018-08-06	2018-08-17	Basic theory for horizontal and vertical positioning, Marine environment sciences, Law of the Sea

		<ul style="list-style-type: none"> <li>- History of Positioning, Geodesy, Cartography, GIS, GNSS (Horizontal and Vertical), Motion Sensors and Inertial Navigation Systems, Acoustic Positioning</li> </ul>
2018-08-20	2018-08-31	<p>Practical exercise for horizontal and vertical positioning Remote Sensing for hydrographer</p> <ul style="list-style-type: none"> <li>- Remote Sensing Principles, LiDAR Applications, Remotely Sensed Bathymetry, Shoreline Delineation</li> </ul>
2018-09-03	2018-09-14	<p>Basic theory and practical exercise for Nautical sciences</p> <ul style="list-style-type: none"> <li>- Cartographic Concepts, Charting, Navigation, Health and Safety, Boatmanship</li> </ul>
2018-09-17	2018-09-28	<p>Basic theory and practical exercise for hydrographic survey</p> <ul style="list-style-type: none"> <li>- Acoustics and Transducers, SBES and SBES Sounding Reduction, Uncertainty, Side Scan Sonar, Fundamentals, Application and Usage</li> </ul>
2018-10-01	2018-10-12	<p>Quality Assurance and control for hydrographic data Tide data Acquisition</p> <ul style="list-style-type: none"> <li>- Sources of Error, Data Coverage, Data Uncertainty, Quality Assurance with Qinsy and WinFrog, Quality Control with Caris HIPS&amp;SIPS and Fledermaus</li> <li>- Water Level Measurements, Water Level Reductions, Tidal Currents, Water Level Stations</li> </ul>
2018-10-15	2018-11-02	<p>Practical Exercise for hydrographic survey</p> <ul style="list-style-type: none"> <li>- Different Types of Survey, Planning &amp; Specifications, Survey Products, Data acquisition and control, Data processing and analysis, Data management and presentation</li> </ul>
2018-11-05	2018-11-30	<p>Final Project for 4 groups per 3 participants with empty boat</p> <ul style="list-style-type: none"> <li>- Planning, Installing survey equipment, Patch test, Data acquisition, Data processing, Quality Control, Production final report and poster</li> </ul>

#### 4. TOTAL COST

Items	Amount
	Euro
Flights(7 students)	17,440
Accommodation(7 students)	81,760
Meals	27,300

Lecturer fee Includes: - Training labor cost - Accommodation - Meals, visa and incidentals - Return airfare	115,500
Printing costs for training notes and rental fee for vessels for final project, etc	39,240
<b>Total</b>	<b>281,400 Euro</b>

## 5. ANY OTHER ACTIVITIES

KHOA provided opportunities for participants to go sightseeing not only to keep in shape during their long term training course in a foreign country but also to promote friendship between participants. Moreover, participants took part in various activities such as visiting Geoje Island to experience Korean culture, and the Busan Port to get an introduction on marine transportation work. Also KHOA planned and held many sports activities like soccer and basketball.

## ANNEX 1 – LIST OF PARTICIPANTS

### Students

NO.	Country	Name	Organization
1	Russia	Maksim Khanin	Department of Navigation and Oceanography, Ministry of Defence
2	Uruguay	Matias Coccaro Wilson	Service of Oceanography and Hydrography, Meteorology, Ministry of National Defence Navy General Command
3	Jamaica	Omar O'Neil Grey	National Land Agency
4	Georgia	Levani Kortava	State Hydrographic Service of Georgia
5	Colombia	Harold Rojas Macias	Centro de Investigaciones Oceanográficas e Hidrográficas (CIOH)
6	Cyprus	Chrysanthi Kleanthous	NATIONAL HYDROGRAPHIC COMMITTEE THE DEPARTMENT OF LANDS AND SURVEYS Ministry of the Interior
7	Tunisia	Housseem Sadki	CENTRE HYDROGRAPHIQUE ET OCEANOGRAPHIQUE DE LA MARINE NATIONALE
8*	Philippines	Geraldine Osorio Ronquillo	NATIONAL MAPPING AND RESOURCE INFORMATION AUTHORITY (NAMRIA)
9*	Philippines	Alvin Victa Abraham	NATIONAL MAPPING AND RESOURCE INFORMATION AUTHORITY (NAMRIA)
10*	Fiji	Elimi Kurusiga	REPUBLIC OF FIJI NAVY HYDROGRAPHIC OFFICE
11*	ROK	Sungyong Park	Korea Hydrographic and Oceanographic Agency
12*	ROK	Daehyun Kim	Korea Hydrographic and Research Assosiation

*\*Financial Supported by Republic of Korea*

## **Lecturer**

<b>NO.</b>	<b>Country</b>	<b>Name</b>	<b>Organization</b>
1	Canada	Veronique Jegat	IIC
2	Canada	Deborah Livingston	IIC
3	US	Gerd Glang	IIC
4	UK	Andre Fabik	IIC
5	US	Jeff Lower	IIC
6	US	Patrick Salembier	IIC
7	Canada	Amy Qu	IIC
8	ROK	Jooyoung Kim	KHOA
9	ROK	Hyunseok Park	KHOA