Report from WG4

Co-chaired by Vo Si Tuan (VIO), Andy Steven (CSIRO), and Ken Ando (JAMSTEC)
The GEO Oceans and Society: Blue Planet Initiative aims to advance and exploit synergies among the many observational programmes devoted to ocean, coastal, and islands waters. The Initiative also seeks to raise awareness of the societal benefits of ocean observations at the public and policy levels.

Under the AOGEOSS initiative, there are two ocean tasks related
• Task-4 (Ocean and Society) and
• Task-8 (Ocean and Island).
In this session, joint session by the two tasks was convened.
Aims

Since 2012, the Oceans and Society Task (Task 4) has been working to define, enhance and integrate the inventory of information exchanges of issues related to coastal data in the Asia-Pacific region, which spans multiple jurisdictional waters. This task aims to further evolve the current observation inventory system of in-situ ocean observations to better support the WESTPAC community and to meet the needs of SDGs 13 and 14 at our best capacity.

Under the recently established regional GEO initiative Asia-Oceania GEOSS (AOGEOSS), Task 8 Coasts and Islands, aims to provide an important regional mechanism to advance and exploit synergies among the many observational programmes devoted to islands, coasts and oceans to improve engagement with a variety of users for enhancing the timeliness, quality and range of services delivered; and to raise awareness of the societal benefits of ocean observations at the public and policy levels.
9:30-10:00  
Session-1: Introduction  
Introduction to today’s session (Ken Ando)  
Report on Blue Planet and AOGEOSS Initiatives of GEO (Andy Steven)

10:00-12:00  
Session-2. Updating the ocean data network system in the WESTPAC region (Chair by Prof. Tuan)  
2-1. Update of the Ocean data networking system since Jan 2017 (Ken Ando, JAMSTEC)  
2-2. Ocean data management update in Viet Nam (Nguyen Huu Huan, Institute of Oceanography, Vietnam Academy of Science and Technology, Vietnam)  
2-3. Ocean data management update in Thai (Kongkiat Kittiwattanawong, Phuket Marine Biological Centre, Thailand)  
2-4. Ocean data management update in Malaysia (Aidy Mohamed Bin M Muslim, Institute of Oceanography and Environment, Malaysia)  
2-5. Ocean data management update in Australia (Jonathan Hodge, CSIRO)  
2-6. JAMSTEC ocean data system (Remote, Hanafusa, JAMSTEC)  
2-7. Introduction of IODE/ODIS initiative (Ken Ando, read for Michida as co-chair of IODE)  
2-8. Discussion on the further development of data network system including possible updates of new parameters

End at 12:00
# Data Quality in Viet Nam National Ocean Data (in-situ)

The results of data quality control in VNOD are shown in the table below. The data quality is assessed based on various criteria, and the accepted values are indicated by a mark. The data show that more than 90% of the data are acceptable, indicating a reliable data source in VNOD.

### The results of data quality control in VNOD

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>8,883,567</td>
<td>4,916,837</td>
<td>243,943</td>
<td>55,169</td>
<td>41,694</td>
<td>23,204</td>
<td>57,490</td>
<td>4,281</td>
</tr>
<tr>
<td>1</td>
<td>358,914</td>
<td>259,528</td>
<td>4,263</td>
<td>969</td>
<td>1,072</td>
<td>349</td>
<td>1,110</td>
<td>67</td>
</tr>
<tr>
<td>2</td>
<td>9,559</td>
<td>15,015</td>
<td>11</td>
<td>392</td>
<td>333</td>
<td>164</td>
<td>253</td>
<td>11</td>
</tr>
<tr>
<td>3</td>
<td>23,618</td>
<td>3,648</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>4</td>
<td>2,294,931</td>
<td>263,262</td>
<td>X</td>
<td>1,257</td>
<td>X</td>
<td>2,201</td>
<td>105</td>
<td>X</td>
</tr>
<tr>
<td>5</td>
<td>331,453</td>
<td>6,031</td>
<td>X</td>
<td>504</td>
<td>X</td>
<td>515</td>
<td>2</td>
<td>X</td>
</tr>
<tr>
<td>6</td>
<td>35,590</td>
<td>10,886</td>
<td>X</td>
<td>60</td>
<td>X</td>
<td>257</td>
<td>63</td>
<td>X</td>
</tr>
<tr>
<td>7</td>
<td>40,122</td>
<td>137</td>
<td>X</td>
<td>4</td>
<td>X</td>
<td>4</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>11,977,754</td>
<td>5,475,344</td>
<td>248,217</td>
<td>58,353</td>
<td>43,099</td>
<td>26,694</td>
<td>59,024</td>
<td>4,359</td>
</tr>
</tbody>
</table>

- **Accepted value (%)**: 75 % for Temp., 90 % for Salinity, 98 % for Oxygen, 95 % for Phos., 97 % for Silicate, 87 % for Nitrate, 97 % for pH, and 98 % for Chlo.

### Comment

According to the results of data quality control, more than 90% of the data are good. This shows that the data source in VNOD is reliable. (From the presentation by Nguyen Huu Huan in VIO of VAST)
13:30-15:30
Session-3 AOGEOSS Oceans, Coasts and Islands Task
   3-1. Outline of Coasts and Islands task in AOGEOSS (Andy Steven, CSIRO)
   3-2 Application of EO and Datacube infrastructure for Coastal and Island applications (Alex Held, CSIRO)
   3-3. Remotely sensed information for environmental monitoring across terrestrial and coastal areas, experiences from the South Pacific (David Loubser, SPREP)
   3-4. Challenges of coordination and communication of ocean observations in the Pacific region (Alice McDonald, FFA)
   3-5. Asia-Oceania Coastal issues and priority needs (Vo Si Tuan, VIO).
   3-6. Collaboration in Space for International Global Maritime Awareness (Guy Thomas, C-SIGMA)
   3-7. Discussion of possible users needs and case studies and workings groups for AOGEOSS Oceans, Coasts and Islands Task

15:30-16:00 Coffee break

16:00-17:00
Session-4 Wrap-up (moderated by Ken Ando)
   - Discuss on our inputs to the Viet Nam Statement 2017
Coastal Change Detection

1988 Landsat 5  First Water Observation Anomaly

2013 Landsat 7  Last Water Observation Anomaly

Potential use for SDG #13; SDG #14:

(From the presentation by Alex Held in CSIRO)
Erosion with many questions related to natural processes and anthropogenic interventions

(From the presentation by Vo Si Tuan in Viet Nam Institute of Oceanography)
Land-based polution & coastal habitat degradation

(From the presentation by Vo Si Tuan in Institute of Oceanography of VAST)
The joint ocean session of Task 4 (Ocean and Society) and Task 8 (Ocean and Island) under AOGEOSS initiative recognized the importance of continuation of sharing ocean observation, regional cooperation, technology developments for actionable information for reporting on SDG13 and 14. National/institutional efforts by Australia, Japan, Malaysia, Thailand and Vietnam reported on progress and provided updates of their data and information systems, and identified further opportunities for collaboration and sharing. Pacific Island representatives highlighted the importance of sub-regional cooperation, whilst emphasizing capacity limitations. Applications of ocean observation were also demonstrated, such as monitoring mangrove, erosion, eutrophication, fisheries and maritime awareness to deliver on SDG 14 targets and indicators.
The joint session recognized the value of working jointly in future, and agreed to establish a joint Task, which shall cover ocean, coasts and islands, focusing on the utilization and integration of in-situ and remotely sensed data to deliver products that can assist with the realization of SDGs. Participants agreed to work together to identify solutions for metadata standardization, and common parameters to be shared. It was recognized there is a need for: (1) integrated use of remote sensed and in-situ data for societal needs (2) more data and information on the Pacific islands and oceanic areas including the high seas, and (3) integration across the land-ocean interface and the need to work with other GEO initiatives, to deliver accessible information which is used.