

## The Technical Committee on Data Exchange

The meeting of the Technical Committee on Data Exchange (hereafter TCODE) was held on from 18:00 to 19:15 on October 13 and 15:00 to 18:00 on October 16, 2013. One member from China stepped down after the last TCODE meeting. Three observers attended (*TCODE Endnote 1*). Mr. Graham Gillespie was appointed a rapporteur by Dr. Toru Suzuki, TCODE Chairman. Several changes were made to the draft agenda and the revised agenda was adopted (*TCODE Endnote 2*).

### AGENDA ITEM 3

#### **Review of Workshop on “Tools, approaches and challenges for accessing and integrating distributed datasets” (W4)**

Dr. Suzuki, who was also one of the co-convenors of the workshop co-sponsored by TCODE and IODE, explained that it had been cancelled because the other co-convenor, one of the invited speakers and contributed speakers, affected by U.S. government shutdown, were not allowed to travel on government business to attend the PICES Annual Meeting. He proposed to reorganize the same workshop at PICES- 2014, and all members agreed.

### AGENDA ITEM 4

#### **Review of procedure for Best Presentation award**

Dr. Suzuki explained that the TCODE judges could choose a recipient for Best Oral Presentation among four early career scientists in the FIS/TCODE-sponsored Topic Session on “*Banking on recruitment curves; returns on intellectual investment*” (S10) on October 17, and requested that the judges report their ranking to him using a score sheet as soon as the session was over. He also explained that TCODE did not need to select a Best Poster Presentation because no posters were submitted to S10.

### AGENDA ITEM 5

#### **Status of proposed topic sessions/workshops of PICES 2014, Yeosu, Korea**

Dr. Suzuki expressed regret that several members did not rank the proposed topic sessions and workshops for PICES-2014 before the TCODE meeting, and said he would send an email reminder to those members again for their complete ranking. The members acknowledged Dr. Suzuki’s proposal to discuss this agenda item again at the Day 2 meeting.

### AGENDA ITEM 6

#### **2013 POMA**

Dr. Suzuki reported the results of the 2013 PICES Ocean Monitoring Service Award (POMA) selection at the inter-sessional Science Board meeting in St. Petersburg, Russia, in May and expressed regret that several members did not rank nominations for the POMA until the deadline. He encouraged the members to submit a new nomination for the POMA because just one nomination remained at present. Mr. Jingkun Yang (China) explained that it is difficult to provide nominates from China at present. Dr. Suzuki presented members with a POMA description revised by the PICES Secretariat. All members agreed with the revised description which Dr. Suzuki will report at the Science Board meeting.

## **TCODE-2013**

### AGENDA ITEM 7

#### **Status of FUTURE and NPESR**

Dr. Suzuki, also a member of AP-COVE, stated that he could not stay for the entire AP-COVE meeting because he had to report on several items at the Section on *Carbon and Climate* meeting which was held at the same time as the AP-COVE meeting. Mr. Robin Brown, member of AP-SOFE, reported the status of North Pacific Ecosystem Status Report (NPESR) and requested everyone to attend a plenary session concerning a NPESR proposal on October 17 prior to the TCODE meeting on Day 2. Dr. Igor Shevchenko, also a member of AP-AICE, noted that few in any Committees understand how to move FUTURE forward to develop and combine products in the context of FUTURE goals, so he proposed establishing a website to document FUTURE products. He also pointed out that the roles of working groups were unclear and several working groups that were established simultaneously required products from each other. Each TCODE member who was also a member of a FUTURE Advisory Panels confirmed to continue his membership: Dr. Shevchenko (AP-AICE), Dr. Suzuki (AP-COVE) and Mr. Robing Brown (AP-SOFE).

### AGENDA ITEM 8

#### **Review revised TCODE Action Plan 2012–015**

Dr. Suzuki reported that Committee Action Plans had already been submitted to Science Board for review (at ISB-2013) but further revisions of the Action Plans were made by the Science Board Chairman and returned to each Committee Chairs to discuss with their members. For the 2012–2015 TCODE Action Plan, Dr. Suzuki showed where a minor change had been made in the paragraph on strategy and under Theme E, Goal 10, Action 10.1, where Tasks 10.1.1, 10.1.2 and 10.1.3 were added to emphasize communication between Committees and FUTURE Advisory Panels. The members had no objections and accepted the revisions.

### AGENDA ITEM 9

#### **Relations with specific international organizations/programs**

Dr. Suzuki showed a list of international organizations and programs: AOOS, CenCOOS, IODE, NANOOS, NEAR-GOOS, SCCOOS which were suggested by PICES Secretariat and to be invited to attend the TCODE meeting. The members noted the list included programs proposed at previous meetings and included people who were also members in PICES. Dr. Suzuki, on behalf of IODE representatives, Mr. Tobias Spears and Dr. Sergey Belov, presented a brief summary of the IODE-XXII session held on March 11–15, 2013 in Ensenada, Mexico; and a WESTPAC-sponsored Symposium on “*A healthy ocean for prosperity in the Western Pacific: Scientific challenges and possible solutions*” will take place April 22–25, 2014, in Nha Trang, Vietnam. Dr. Suzuki explained the IODE Associate Data Unit (ADU) and IODE ADU application form which was forwarded to TCODE by the PICES Secretariat. Some members questioned cost implications for attendance at the IODE and related meetings, data exchange issues, benefits to join as ADU, and so on. The members agreed that more discussion was required before TCODE would join IODE as ADU; in the meantime, they will review ADU application form.

The meeting adjourned at 19:15 and resumed at 15:00 on October 16, just after the plenary meeting for NPESR.

### AGENDA ITEM 10

#### **Review of NPESR proposal**

TCODE members discussed NPESR following a plenary session outlining a proposal for a new process of reporting. TCODE was assured it would be called upon to comment on data management, not to develop the

NPESR. The members had a number of questions/comments regarding the proposal:

- What is the distinction between coastal and oceanic?
- There is a guideline for standard products of Ecosystem Time Series Observations which is modeled on Alaskan Ecosystems Considerations; lessons learned from the Alaskan standard will reduce time required to develop NPESR standard;
- time commitment to update time series, metadata and interpretation is underestimated;
- Annual cycle may be too frequent;
- Interpretation by contribution is as important as data;
- Will data be available for other processes or just for NPESR?
- Has F&A seen the budget proposal? The total cost of NPESR is larger than proposed budget when all inputs are considered, although costs for synthesis workshop and special publications are in the budget;
- Where will the data reside? – PICES does not have a data center; TCODE will need to provide advice;
- What are the roles of PICES Committees? The proposal is silent on expectations of the PICES Secretariat and their implications so there needs to be a better description;
- What is the process for nomination of time series? – A review of existing time series from previous NPESR (data sets, investigations/institutions/data centers), and additional nominations will likely come from various Committees, based on their familiarity with disciplines/regions;
- There are four options: reject proposal, make suggestions, request more detailed proposal that addresses concerns, or request more time to think about proposal;
  - Requesting clarification postpones the beginning of the project for at least one year;
  - Acknowledge shortfalls of the proposal, commit support to the process work through the details as the process unfolds;
  - Recommend general support for moving forward with the project: agreement in principal for the approach; recognition that further development of details is required inter-sessional. TCODE will have a role but this is not yet entirely clear, and there is some question surrounding utility of annual updates, but not serious enough to prevent recommendation to proceed.

The members recommend that TCODE would prefer to see an organization that focuses on large marine ecosystems as per NPESR II.

#### AGENDA ITEM 11

##### **Review of SCOR working group proposals**

The members discussed potential PICES member affiliation for three SCOR working group proposals: S-CC selection of a WG for Studying Ocean Acidification Effects on Continental Margin Ecosystem; BIO for a WG on Zooplankton Production Measurement Methodologies and Their Application and WG on standard protocols for the development of an atlas of marine plankton biogeography. The members also recognized that TCODE does not have an enough expertise for those proposed working groups.

#### AGENDA ITEM 12

##### **Review of ICES ASC 2014 theme sessions**

Top priority for TCODE co-sponsorship was the theme session “The big (ocean) data journey” followed by “HABs in aquaculture and fisheries ecosystems”. Some members questioned co-sponsoring the session “Arctic Biodiversity under climate change and other stressors” because the arctic is not in the PICES convention. Dr. Suzuki will request travel expenses if a TCODE co-convenor is required for either session.

## TCODE-2013

### AGENDA ITEM 13

#### Status of proposed topic sessions/workshops at PICES-2014, Yeosu, Korea

Dr. Suzuki announced that the top three scores ranked online by Committee members for topic sessions proposals at PICES-2014 were: “*Regional climate monitoring in the North Pacific*”, “*Recent assessments of climate change impacts on marine ecosystems*”, and “*Use of long time series of plankton to inform decisions in management and policy concerning climate, ecosystems and fisheries*”. Some members commented that the last two sessions were more closely aligned with TCODE’s mandate but all members agreed that TCODE should co-sponsor the three sessions. Dr. Suzuki recommended that \$5,000CDN travel support for invited speakers should be shared among the three sessions as needed. As discussed previously (see Agenda Item 3), the TCODE workshop that was cancelled at this Annual Meeting will be re-submitted for PICES 2014. Dr. Suzuki also agreed still act as co-convenor, and will confirm invited speakers for next year.

### AGENDA ITEM 14

#### Review progress of TCODE workplan 2012/2013

Below is a review of TCODE workplan (*TCODE Endnote 3*) accomplishments for 2012/2013

1. Support meetings, workshops, symposia and training course/education activities
  - 1-1 TCODE workshop (W4) cancelled.
  - 1-2 No topic session proposal but the cancelled workshop will be re-submitted for PICES-2014.
  - 1-3 Dr. Suzuki (SSC member) helped select attendees by March deadline for PICES-sponsored 2013 summer school on “*Ocean observing systems and ecosystem monitoring*”.
  - 1-4 Dr. Shevchenko reported that the current GeoSpatial Portal server has become unstable due to some problems so a clean installation will be required, and the service provider changed from AdHost. He pointed out that the current service provider don’t support any security services, back up or performance monitoring.
  - 1-5 There is no plan for supporting a training course or educational activities of international programmes/organizations.
2. Maintain a dialogue and collaborate with international organizations and scientific programs

Dr. Suzuki and Dr. Hernan Garcia attended a IODE GE-BICH workshop in February 2013 in Oostende, Belgium, and completed a proposal for a new quality flag scheme for oceanographic and marine meteorological data. Dr. Suzuki attended a NOWPAP DINRAC Focal Point Meeting in August 2013, in Beijing, China, as a PICES observer and provided comments for a biennial action plan and budget for DINRAC. Mr. Jinkun Yang reported on progress of ODINWESTPAC activities (see *TCODE Endnote 5*).
3. Strengthen communication and engagement with users of PICES scientific products

There was no new information for HAEDAT/S-HAB. S-CC is still maintaining PACIFICA. GLODAPv2, a global carbon data synthesis project, is being developed and PACIFICA will be included together with GLODAP, CARINA and new cruises into a global package. The PACIFICA website <http://cdiac.ornl.gov/oceans/PACIFICA/> is managed by CDIAC and S-CC.
4. Maintain and promote PICES TCODE GeoSpatial Portal
  - 4-1 The technical report of GeoSpatial Portal has not been updated yet.
  - 4-2, 4-3, 4-4 No progress on registration of metadata of WG 21 database, WG 23 products, or scientific products of PICES scientific and technical committees and expert groups.
  - 4-5, 4-6 Remote server contract will be taken care of and Dr. Shevchenko will continue to administer it
5. Promote to use of shared information tools.

Dr. Shevchenko reported that there was no progress for promotion of information tools.
6. Prepare to produce the North Pacific Ecosystem Status Report

Dr. Shevchenko pointed out that this work should change with the new process of reporting the next NPESR and other FUTURE projects. He also discussed deleting the PICES Wiki page due to a perceived conflict of interest.

## 7. Maintain TCODE website

Dr. Shevchenko will continue to maintain the TCODE website using Google Site and back up PDF files of PICES scientific and technical reports to the TCODE website.

## 8. POMA 2013 nomination and rank

8-1, 8-2 There were no new nominations for POMA in 2013, and ranking of POMA 2013 nominations was completed.

## AGENDA ITEM 15

**Discussion and adoption on TCODE workplan 2013/2014**

The members discussed TCODE workplan 2013/2014. Item 1-3 was revised to reflect opportunities to include metadata instruction units for PICES training courses and summer schools. Regarding collaboration with other data management groups, ICES DIG (Data and Information Group) replaced Dr. Georgiy Moiseenko with Dr. Suzuki, and new proposed SCOR working groups were added to item 2. Mr. Brown and Dr. Suzuki were added to collaborate with ocean surface nutrients monitoring by Canada–Japan. Item 6 changed to TCODE providing support on the development of the next NPESR. Responsibility for item 7 was changed from Dr. Shevchenko to all. After discussion the revised workplan was adopted (*TCODE Endnote 4*)

## AGENDA ITEM 16

**Country reports**

Dr. Suzuki expressed regret to not have time for presentations due to the late start of the meeting, and requested representatives of member countries to send their reports to him to be included in the meeting report (*TCODE Endnote 5*).

## AGENDA ITEM 17

**Election of chair and vice-chair**

Dr. Suzuki explained that the chair's and vice-chair's three-year term will expire after the meeting at PICES-2013 but they can be eligible for re-election for one consecutive term. Dr. Skip McKinnell, Deputy Executive Secretary, called the election. Dr. Suzuki was nominated, elected and accepted second term as Chairman and Dr. Garcia was nominated and elected for a second term as Vice-Chairman.

## AGENDA ITEM 18

**Other business**

Dr. Suzuki showed a poster of the third international symposium on the “effects of climate change on the world's oceans” co-sponsored IOC/ICES/PICES. Dr. Tony Koslow requested to add de-oxygenation as one of key words for the symposium.

## AGENDA ITEM 19

**Closing**

The meeting was closed at 18:00.

*TCODE Endnote 1*

**TCODE participation list**

Members

Robin Brown (Canada)  
Graham Gillespie (Canada)  
Tony Koslow (USA)  
Georgiy Moiseenko (Russia)  
Igor Shevchenko (Russia)  
Toru Suzuki (Japan, Chairman)  
Tomowo Watanabe (Japan)  
Jinkun Yang (China)

Observers

Yutaka Michida (IOC/WESTPAC, Day 1)  
Tom Royer (USA, past TCODE member, Day 2)  
Wu Shuangquan (China, Day 1)

*TCODE Endnote 2*

**TCODE meeting agenda**

*Day 1: 18:00-19:30, Sunday, October 13 (PST)*

1. Welcome and introduction of members
2. Adoption of agenda
3. Review of Workshop on “Tools, approaches and challenges for accessing and integrating distributed datasets” (W4) on October 11 (Suzuki)
4. Review of procedure for Best Presentation Award (Suzuki)
5. Status of proposed topic sessions/workshops of PICES 2014, Yeosu, Korea (Suzuki)
6. Report of POMA 2013 (Suzuki)
7. Status of FUTURE and NPESR (Brown, Shevchenko, Suzuki)
8. Review revised TCODE Action Plan 2012-2015 (All)
9. Relations with specific international organizations/programs  
AOOS, CenCOOS, IODE (Appendix III), NANOOS, NEAR-GOOS, SCCOOS

*Day 2: 14:30-18:00, Wednesday, October 16 (PST)*

10. Review of NPESR proposal (All)
11. Review of three SCOR Working Group proposals (All)
12. Review of ICES ASC 2014 theme sessions (All)
13. Status of proposed topic sessions/workshops of PICES 2014, Yeosu, Korea (Suzuki)
14. Tea break
15. Review progress of TCODE workplan 2012/2013 (All)
16. Discussion and adoption on TCODE workplan 2013/2014 (All)
17. Presentation of country reports (representative of member countries)
18. Election of chairperson and vice-chair
19. Other business
20. Closing

*TCODE Endnote 3***TCODE Workplan 2012/2013**

1. Support meetings, workshops, symposia and training course/education activities (AP Goals 1, 2, 6, 7 and 8)
  - 1-1 Support and co-convene topic session and workshop of PICES 2013 annual meeting in Nanaimo, Canada  
Responsibility – All
  - 1-2 Propose topic session and workshop at upcoming PICES annual meeting  
Responsibility – All
  - 1-3 Support PICES 2013 Summer School on “Ocean Observing Systems and Ecosystem Monitoring” co-sponsoring BIO/POC/MONITOR  
Responsibility – T. Suzuki (as one of member of SSC)
  - 1-4 Propose workshop or training course for GeoSpatial Portal data/metadata management, *etc.*  
Responsibility – All
  - 1-5 Support training course/education activities of international programmes/organizations  
Responsibility – All
2. Maintain a dialogue and collaborate with international organizations and scientific programs (AP Goal 4)  
Responsibility – T. Suzuki/ICES DIG
  - H. Garcia and T. Suzuki/IODE
  - H. Garcia/GEBICH
  - T. Suzuki/ODP, OBIS
  - J. S. Lee/ODP
  - J. Yang/ODINWESTPAC
3. Strengthen communication and engagement with users of PICES scientific products (AP Goals 4 and 5)  
Responsibility – I. Shevchenko and R. Brown for HAEDAT/S-HAB
  - T. Suzuki for PACIFICA/S-CC
  - I. Shevchenko for WG 21 and 29
4. Maintain and promote PICES TCODE GeoSpatial Portal (Goal 5)
  - 4-1 Update technical report
  - 4-2 Support to register metadata of database of WG-21 “Non-indigenous Aquatic Species”
  - 4-3 Support to register metadata of products of WG-23 “Comparative ecology of Krill in coastal and oceanic waters around the Pacific Rim”
  - 4-4 Support to register scientific products of PICES scientific and technical committees and expert groups
  - 4-5 Renew remote server contract
  - 4-6 Continue to administer AdHost server  
Responsibility – I. Shevchenko
5. Promote to use of shared information tools (Goal 5)  
Responsibility – I. Shevchenko
6. Prepare to produce the North Pacific Ecosystem Status Report (Goal 5)  
Responsibility– R. Brown
7. Maintain TCODE website  
Responsibility – I. Shevchenko
8. POMA 2013 nomination and rank
  - 8-1 Propose a recommendation of new nomination until February 2013
  - 8-2 Rank nominations in April 2013  
Responsibility – All

*TCODE Endnote 4*

**TCODE Workplan 2013/2014**

1. Support meetings, workshops, symposia and training course/education activities (AP Goals 1, 2, 6, 7, 8 and 9)
  - 1-1 Support and co-convene topic session and workshop of PICES 2014 Annual Meeting in Yeosu, Korea  
Responsibility – All
  - 1-2 Propose topic sessions/workshops at PICES 2015 Annual Meeting  
Responsibility – All
  - 1-3 Propose workshop or training course for GeoNetwork, data/metadata management, *etc.*  
Responsibility – All
  - 1-4 Support training course/education activities of international programme/organizations  
Responsibility – All
2. Maintain a dialogue and collaborate with international organizations and scientific programs (AP Goal 4)  
Responsibility – H. Garcia and T. Suzuki/IODE, GEBICH  
– T. Suzuki and J.S. Lee/ODP  
– T. Suzuki/OBIS  
– J. Yang/ODINWESTPAC  
– All/new proposed SCOR WGs  
R. Brown and T. Suzuki/ocean surface nutrients monitoring
3. Strengthen communication and engagement with users of PICES scientific products (AP Goals 4 and 5)  
Responsibility – I. Shevchenko and R. Brown for HAEDAT/S-HAB  
– T. Suzuki for PACIFICA/S-CC  
– I. Shevchenko for WG 21 and 29
4. Maintain and promote PICES TCODE GeoSpatial Portal (AP Goals 4, 6, 7 and 8)
  - a. Update technical report
  - b. Support to register metadata of database of WG 21 on *Non-indigenous Aquatic Species*
  - c. Support to register metadata of products of WG 23 on *Comparative ecology of krill in coastal and oceanic waters around the Pacific Rim*
  - d. Support to register scientific products of PICES scientific and technical committees and expert groups
  - e. Renew remote server contract
  - f. Continue to administer AdHost server  
Responsibility – I. Shevchenko
5. Promote to use of shared information tools (AP Goals 4 and 6)
  - a. Update FUTURE Wikipedia  
Responsibility – I. Shevchenko
  - b. Maintain S-CCME website  
Responsibility – T. Suzuki
6. Provide support to development of next North Pacific Ecosystem Status Report (AP Goals 3, 5 and 10)  
Responsibility – R. Brown
7. Maintain TCODE website  
Responsibility – All
8. POMA 2014 nomination and rank
  - a. Propose a recommendation of new nomination until February 2014
  - b. Rank nominations in April 2014  
Responsibility – All



*TCODE Endnote 5***Country Report of China**

submitted by

Jinkun Yang, NMDIS/SOA

**1. Working Progress Related to TCODE “PICES Metadata Federation Project”**

Metadata records of former PICES-NMDIS node have been moved to the AdHost server, to become one metadata source of GeoNetwork portal. All the metadata records (see the table below for details) have already been submitted to the directory distributed for former PICES-NMDIS node on AdHost server; 21 metadata were updated during the past year, including 6 monthly sea level metadata for China oceanographic stations, 2 hourly sea level metadata, and 13 metadata for marine meteorology wave, temperature and salinity.

Metadata	Station	Time period	No. of records
Metadata of temperature and salinity data from China coastal stations	Laohutan, Tanggu, Qinhuangd, Yantai, Haikou, Dongfang, Beihai, Lianyungang	1959–1976 1988–2001	8
Metadata of ocean tide forecasting product	32 major coastal ports in Southeast Asian coastal areas	Monthly	32
	10 major ports along Chinese coastal line, such as Dalian, Qingdao, Wusong, Zhenhai, Xiamen, Guangzhou, Beihai, Haikou, and Gaoxiong.	Monthly	10
Metadata of monthly mean sea level from China oceanographic stations	Dalian, Kanmen, Lvsi, Zhao, Naha and Xisha.	2009–2013	6
Hourly sea level metadata from China coastal stations	Lianyungang and Dalian	2008–2012	2
Metadata of meteorological, wave, temperature and salinity data from 13 China coastal stations	Dalian, Xiaochangshan, Yantai, Xiaomaidao, Lianyungang, Lvsi, Shengshan, Zhenhai, Dachen, Nanji, Beishuang, Dongshan, and Zhelang	2012	13

**2. Data Exchange and Cooperation with Other Related International or Regional Programs****2.1 Ocean Data and Information Network for the Western Pacific Region (ODINWESTPAC)**

ODINWESTPAC is a regional project of WESTPAC initiated by IODE to primarily provide an effective capacity building framework, to promote regional collaboration in marine data and information and product sharing, to develop cooperation with other ODINs and international and regional projects/programs, and to provide data and information services mainly for the WESTPAC member states and other users. The project has 21 member states: Australia, China P. R., Fiji, France, Indonesia, Japan, Korea, D.P.R., Korea, R., Malaysia, New Zealand, Philippines, Russian Federation, Samoa, Singapore, Solomon Islands, Thailand, Tonga, United Kingdom, United States of America, and Vietnam.

NMDIS has been coordinating the ODINWESTPAC project since 2008. Through the collection, exchange, and share platform of marine data and information (ODINWESTPAC, hosted by NMDIS, website: <http://www.odinwestpac.org.cn/>), it maintains and operationally updates publicly released marine data and information of China and those collected from the international programs/projects, and promotes data and information exchange and collaboration between WESTPAC member states, and with other international and regional data projects.

Currently, multiple marine data and products are disseminated through the website:

- a. Chinese Coastal Station data which include:
  - Monthly mean sea level data of six Chinese coastal stations;
  - Real-time meteorological, wave, temperature and salinity data of 13 stations;
- b. Chinese section survey profile data which involve meteorology, temperature, salinity in areas of the South China Sea and the East China Sea.
- c. Other regional and international cooperation programs and projects data:
  - NEAR-GOOS data collected from Real-Time database and delay mode database of NEAR-GOOS;
  - Argo data includes Chinese deployed Argo data and data collected from Global Argo Data Centers;
  - GTSP data have been collected in near real-time and delay mode from China joined GTSP projects and will be collected continuously.
- d. Marine data products:
  - China has been providing marine hydrological data products of the northwestern Pacific Region, which includes temperature, salinity, one-degree square area air temperature, air pressure, wind, wave, etc., and monthly statistical analysis product between 1950–2002;
  - China Marine Environment Quality Bulletin, China Marine Economic Statistics Bulletin, Sea Area Use Management Bulletin, China Marine Satellite Application Report, China Oceanic Hazards Bulletin, China Sea Level Bulletin, Marine Law Enforcement and Supervision Bulletin, Monthly Report on National Ocean Dumping Management, El Niño Monitoring and Prediction;
  - Global monthly-mean current distribution maps and the multiyear monthly-mean (1996–2013) current maps with two different resolutions (2 degrees and 5 degrees) at different depths (surface, 1000m, 1500m, and 2000m), derived from Argo trajectory data;
  - More marine data products will come from member states.

As the host center for ODINWESTPAC, NMDIS is planning to organize an WESTPAC-IODE workshop on “Mapping the Capacity Building Needs for Oceanographic Data & Information Management towards the Sustainability of Marine and Coastal Resources” in February 2014 Tianjin, China, together with the IOC WESTPAC Office.

To implement the IODE capacity development strategy and to review the present deficiencies of ODINWESTPAC, the objectives of this workshop are to:

- Further collect and understand the capacity building needs from WESTPAC member states and capacity building requirements for ODINWESTPAC cooperation at a regional level, and establish an effective implementation plan to satisfy these needs.

We are planning to acquire the information on:

- ✓ The capacity building efforts ongoing in each member state,
- ✓ The ever-growing demand of capacity building needs at national and regional levels.
- Map the capacity building needs for oceanographic data & information management and service, and develop a Framework for ODINWESTPAC Capacity Building, which will provide coordination and guidance for the future development of ODINWESTPAC project.

We will mainly discuss:

- ✓ How to collect and process oceanographic data,
- ✓ What kind of quality control procedure should be carried out,
- ✓ The needs for oceanographic data and information products,
- ✓ Scientific management and service,
- ✓ The future development of ODIWESTPAC.

## 2.2 JCOMM CMOC China node on the trial basis

The proposal for the establishment of WMO-IOC Centres for Marine Meteorological and Oceanographic Climate Data (CMOCs) was made at the Third Session of JCOMM ETMC (ETMC-III, Melbourne, Australia, 8–12 February 2010), and was approved at the Fourth Session of JCOMM (JCOMM-IV, Yeosu, Korea, 23–31 May 2012). CMOCs will endeavor to achieve the integrating collection, rescue, quality control, formatting, archiving, exchange, and access—for marine-meteorological and oceanographic real-time and delayed-mode data and associated metadata of known quality, and products that satisfy the needs of WMO and IOC applications. The National Marine Data and Information Service (NMDIS) of China had already submitted statements of capability and commitment to host CMOCs in Tianjin in February 2012. NMDIS committed to undertake the following tasks by:

- a. Strengthening and streamlining the former JCOMM/ODASMS and improving its operational services to achieve direct access to all global marine–meteorological and oceanographic climate data, metadata, and related products via the DACs, GDACs and CMOC network;
- b. Actively undertaking the standardization, and quality control of MCDS data;
- c. Actively participating in the research and development of oceanographic and marine–meteorological products, and their related services;
- d. Providing technical training, and carrying out capacity building activities for countries in the region at JCOMM-IV, the Commission decided that China could begin filling the role of CMOCs on a trial basis immediately. Currently, the establishment work is actively on-going. The CMOC China Steering Group had been set up with the Director-General of NMDIS as the Chairman to provide guidance and coordination of the CMOC China project with the center. The function of the former JCOMM ODAS Metadata Service will be incorporated in CMOC China. The official website of CMOC China ([www.cmoc-china.cn](http://www.cmoc-china.cn)) has been established to distribute domestic and international oceanographic and meteorological data and products, as well as release related information.