JCOMM/IODE EXPERT TEAM ON DATA MANAGEMENT PRACTICES (ETDMP)

FOURTH SESSION

IOC Project Office for IODE, Oostende, Belgium
23-26 June 2014

FINAL REPORT

2014

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1. OPENING OF THE SESSION

The Chair of the JCOMM/IODE Expert Team on Data Management Practices (ETDMP), Dr Sergey Belov, opened the Session on Monday 23 June 2014 at 09:03. He introduced the Provisional Agenda and Timetable. The Secretariat informed the Session of the working arrangements of the Meeting. The Chairman invited participants to introduce themselves. The list of participants is attached as Annex II. The Session adopted the Agenda (attached as Annex I).

2. ETDMP OVERALL PROGRESS REPORT 2012-2014

This Agenda Item was introduced by Dr Sergey Belov, Chair of the ETDMP.

2.1 DECISIONS OF THE IODE OFFICERS MEETING

The meeting was informed of the decisions and recommendations of the IODE Officers at their January 2014 meeting:

Regarding the IODE/JCOMM Standards process:

- The Officers noted that JCOMM still has the ODS activity under the ETDMP while IODE-XXII recommended to close the ODS Pilot Project. It was noted that the closing of that project does not imply that the ETDMP task team on ODS should also be closed.
- The Officers included $15,000 for the SG-ODSBP early 2015

Regarding the IODE Ocean Data Portal:

- The Offices noted that the representative of WMO strongly supported the development of the ODP, and is working closely with the IODE through the JCOMM-IODE ETDMP to achieve interoperability between the WIS and ODP. WMO offered to assist further in this process if required
- The Officers instructed the ODP project managers to establish collaboration with ICSU WDS towards providing data by ODP to ICSU WDS. Similarly the Officers instructed the ODP project managers to establish collaboration with GEO/GEOSS towards providing data by ODP to the GEOSS portal.
  - Status: Done

The Officers expressed their gratitude to the Russian Federation for hosting and supporting the Partnership Centre for the IODE Ocean Data Portal.

2.2 OUTCOMES OF THE IODE-XXII SESSION:

The Committee welcomed the progress of the JCOMM/IODE Expert Team on Data Management Practices while referring discussions on ODP and ODS to the relevant agenda items.

The Committee expressed appreciation for the work of ODP.
The Committee noted that, while an ODP project manager will be essential for the further development and management of ODP, it would be unlikely that such a position could be funded by UNESCO. The Committee invited Member States to consider a long-term secondment (either to the IODE Project Office or hosted nationally) to cover this requirement.

The Committee noted with great satisfaction the significant progress achieved in the establishment of Partnership Centre for IODE/ODP that will provide stable and sustainable support and further development of the IODE Ocean Data Portal, and expressed deep gratitude to the Roshydromet of Russian Federation for allocating the Partnership center in RIHMI-WDC (Obninsk) and funding its operations from 2013 onwards as an "in-kind" contribution of the Russian Federation to the IOC.

The Committee adopted Recommendation IODE-XXII.5: THE OCEAN DATA STANDARDS PILOT PROJECT (ODS)

The Committee adopted Recommendation IODE-XXII.7: REVISED TERMS OF REFERENCE OF THE IODE STEERING GROUP FOR THE IODE OCEAN DATA PORTAL (SG-ODP)

Recommendation IODE-XXII.8: TERMS OF REFERENCE OF THE STRUCTURAL ELEMENTS OF THE IODE OCEAN DATA PORTAL

Recommendation IODE-XXII.9: TERMS OF REFERENCE OF THE PARTNERSHIP CENTRE FOR THE IODE OCEAN DATA PORTAL

2.3 OUTCOMES OF THE DMCG-5 SESSION

Dr. Belov informed the meeting that the DMCG reviewed the ETDMP workplan for its intersessional period, and approved it. The Group indentified the importance of establishing broader cooperation with related activities such as WIS, GEOSS, GOOS, SeaDataNet. The Group highlighted the needs of adoption of internationally endorsed metadata standards i.e. ISO 19139 with relevance to other communities experience and expertise.

Regarding the IODE/JCOMM Standards process:

The Group proposed following recommended actions:

(i) Continue to develop standards/best practices for submitted proposals in the marine community through the IODE/JCOMM Standards Process as outlined by JCOMM-IV and IODE-XXII.
(ii) Ensure interoperability arrangements between data systems such as Ocean Data Portal (ODP), WMO Information Systems (WIS), Global Earth Observation System of Systems (GEOSS), Global Ocean Observing System (GOOS) and others respectively used standards and best practices.
(iii) Encourage, by preparing and distributing an invitation for submissions, experts in respective communities to propose standards and best practices to be submitted to the ODSBP
Publicize adopted standards and best practices in respective communities in order to promote their usage.

Regarding the **Metadata management**:

The Group proposed following recommended actions:

(i)  Continue to review and compare specific vocabularies and code lists used in other projects, programmes and initiatives (e.g. WIS, ODIP).
(ii)  Recommend standards and best practices for used vocabularies and code lists.
(iii)  Consider a creation of knowledgebase service that will inform users about existing controlled vocabularies and similar authority systems.

Regarding the **IODE Ocean Data Portal**:

The Group noted that IODE is participating in Ocean Data Interoperability Platform which has a significant number of different experts related to ETDMP activities. In light of the knowledge gained in the participation of ODP/ETDMP personnel in the Ocean Data Interoperability Platform (ODIP), a number of ongoing IODE activities should be re-evaluated with the goal of leveraging the international expertise that already exists and continues to be developed.

The Group proposed following recommended actions:

(i)  Continue to liaise and collaborate with external group of experts from different projects, programmes and initiatives (i.e. WIS, GEOSS, GOOS, ODIP, etc) in order to establish interoperability and data/services accessibility.
(ii)  Assess the deployment of the ODP nodes with assistance of the Partnership Centre for IODE ODP.
(iii)  Ensure implication of standards and best practices published via ODSBP.
(iv)  Identify and recommend standards and best practices to be proposed to the ODSBP.

### 2.4 ETDMP-III WORK PLAN

Chair recalled the ETDMP-III work plan and requested Task Team leaders to provide detailed status about the progress of each action.

#### 2.4.1 WORK PLAN FOR THE TASK TEAM ON ODS

<table>
<thead>
<tr>
<th>Action</th>
<th>Task</th>
<th>Deadline</th>
<th>Who</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Develop standards/best practices for submitted proposals in the marine community through the IODE/JCOMM Standards Process as outlined by</td>
<td>Continuous</td>
<td>YM, PO</td>
</tr>
<tr>
<td></td>
<td>JCOMM-IV and IODE-XXI</td>
<td></td>
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<td>-------------------------------------------------------------------------------------</td>
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<td>---</td>
</tr>
<tr>
<td>2</td>
<td>Examine further the candidates of standards for ‘Lat, Lon, Alt.’ (based on ISO 6709); and units (based on SI), and seek appropriate persons and/or organizations that make proposals.</td>
<td>March 2013</td>
<td>YM, PO, Greg Reed</td>
</tr>
<tr>
<td>3</td>
<td>Encourage SeaDataNet, GE-BICH, GTSPP, and MyOcean and other relevant bodies to submit their proposals to ODS. (prepare and distribute letters)</td>
<td>Continuous</td>
<td>YM, Secretariat</td>
</tr>
<tr>
<td>4a</td>
<td>Encourage, by preparing and distributing an invitation for submissions, JCOMM and IODE communities to submit proposals of standards for, i) Thematic codes like platform type, Geo-Area (IHB) and instrument type; Standard vocabularies for parameters, institutions, platforms/platform types and instruments; unique data tag, data exchange format, ii) Discovery metadata profile (e.g. MCP, CDI, WMO Core, NAP) which is ISO 19115/19139 compliant</td>
<td>Continuous</td>
<td>TT</td>
</tr>
<tr>
<td>4b</td>
<td>ii) Discovery metadata profile (e.g. MCP, CDI, WMO Core, NAP) which is ISO 19115/19139 compliant</td>
<td>Continuous</td>
<td>TT</td>
</tr>
<tr>
<td>4c</td>
<td>iii) Quality controls being implemented by QARTOD</td>
<td>March 2013</td>
<td>RC</td>
</tr>
<tr>
<td>5</td>
<td>Keep communication with ODP TT and Metadata TT respectively on standards process.</td>
<td>Continuous</td>
<td>YM</td>
</tr>
<tr>
<td>6</td>
<td>Submit draft recommendation for ODSBP with its ToR to IODE-22 and JCOMM MAN</td>
<td>March 2013 (IODE), February 2013 (MAN)</td>
<td>ETDMP Chair</td>
</tr>
<tr>
<td>7</td>
<td>Submit draft recommendation on standards that have passed review process to IODE-22 and JCOMM MAN.</td>
<td>March 2013, February 2013</td>
<td>ETDMP Chair</td>
</tr>
<tr>
<td>8a</td>
<td>Continue work to finalize the review of</td>
<td></td>
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</table>
the QC-flag proposal

8b

<table>
<thead>
<tr>
<th>Action</th>
<th>Task</th>
<th>Deadline</th>
<th>Who</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>i) Report on the discussion on the proposal at ETDMP-III to the upcoming IODE QC Workshop in Oostende</td>
<td>October 2012</td>
<td>CS on behalf of YM</td>
</tr>
<tr>
<td></td>
<td>ii) Ask the authors to modify the proposal as suggested by the ad hoc ODS SG, and circulate the revised version (V1.3) to IODE Member States for comments</td>
<td>tbd</td>
<td>YM, PO</td>
</tr>
<tr>
<td>8c</td>
<td>iii) Publish and promote the recommended standards and best practices as appropriate</td>
<td>June 2013</td>
<td>TT, IODE Project Office</td>
</tr>
<tr>
<td>9</td>
<td>Review candidate standards submitted to ODSBP process</td>
<td>Continuous</td>
<td>TT</td>
</tr>
<tr>
<td>10</td>
<td>Implement the first <strong>meeting</strong> of the ODSBP Steering Group</td>
<td>Late 2013/early 2014, tbd by IODE-XXII</td>
<td>TT</td>
</tr>
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</table>

### 2.4.2 Work Plan for the Task Team on Metadata

<table>
<thead>
<tr>
<th>Action</th>
<th>Task</th>
<th>Deadline</th>
<th>Who</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Liaise with ODS and ODP Task Teams on a regular and repeating basis</td>
<td>Continuing</td>
<td>MD-TT, ODS-TT, ODP-TT, ETDMP Chair</td>
</tr>
<tr>
<td>2</td>
<td>Review and compare priority vocabularies</td>
<td>Continuing</td>
<td>MD-TT</td>
</tr>
<tr>
<td>2(i)</td>
<td>Review and compare EDMO/SDN organizations list and ODP organizations list table structure; identify common elements; recommend required elements for identifying organizations; compare list contents, if resources allow</td>
<td>Dec 2012</td>
<td>MD-TT</td>
</tr>
<tr>
<td>2(ii)</td>
<td>Identify specific concerns related to platforms identification management between SDN,</td>
<td>Dec 2012</td>
<td>Collins, Iona (for SDN), others as</td>
</tr>
<tr>
<td>Title</td>
<td>Text</td>
<td>Notes</td>
<td></td>
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<tr>
<td>ICES, and ODP.</td>
<td>needed</td>
<td>MD-TT</td>
<td></td>
</tr>
<tr>
<td>2(iii)</td>
<td>Review and compare EDMO/SDN platforms list and ODP platforms list table structure; identify common elements; recommend required elements for identifying platforms; compare list contents, if resources allow</td>
<td>MD-TT</td>
<td></td>
</tr>
<tr>
<td>2(iv)</td>
<td>Review and compare EDMO/SDN instruments list and ODP instruments list table structure; identify common elements; recommend required elements for identifying instruments; compare list contents, if resources allow</td>
<td>MD-TT</td>
<td></td>
</tr>
<tr>
<td>2(v)</td>
<td>Review and compare EDMO/SDN keywords list and ODP keywords list table structure; identify common elements; recommend required elements for identifying keywords; compare list contents, if resources allow</td>
<td>MD-TT</td>
<td></td>
</tr>
<tr>
<td>2(vi)</td>
<td>Review and compare EDMO/SDN projects list and ODP projects list table structure; identify common elements; recommend required elements for identifying projects; compare list contents, if resources allows</td>
<td>MD-TT</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Recommend ways to use XML-based vocabulary management tools (e.g., SKOS, MMI)</td>
<td>Continuing</td>
<td></td>
</tr>
<tr>
<td>3(i)</td>
<td>MD-TT members familiarize with functionality of SKOS, MMI and/or other xml-based frameworks.</td>
<td>Continuing</td>
<td></td>
</tr>
<tr>
<td>3(ii)</td>
<td>Identify which, if any, of priority vocabularies listed in 2 are represented using standard XML markup (in SKOS, OWL, etc.)</td>
<td>Concurrent with review for each vocabulary in 2.</td>
<td></td>
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</tbody>
</table>
### 2.4.3 Work Plan for the Task Team for the IODE Ocean Data Portal

<table>
<thead>
<tr>
<th>Action</th>
<th>Task</th>
<th>Deadline</th>
<th>Who</th>
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<tbody>
<tr>
<td><strong>Governance</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Review the ToR for SG-ODP and Partnership centre for IODE ODP</td>
<td>February 2013</td>
<td>ODP-TT, SG-ODP</td>
</tr>
<tr>
<td>2</td>
<td>Liaise and collaborate with other groups in order to establish strong links with existing regional and global initiatives</td>
<td>Continuous</td>
<td>ODP-TT</td>
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<tr>
<td><strong>ODP management</strong></td>
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<tr>
<td>3</td>
<td>Describe the profile (responsibilities, tasks and competences) of the ODP project manager, For consideration at IODE-XXII and IOC GA</td>
<td>December 2012</td>
<td>ODP-TT – SG-ODP – IODE PO</td>
</tr>
<tr>
<td>4</td>
<td>Monitor progress on the ODP 2012-2013 workplan and advice the SG-ODP on changes if necessary</td>
<td>Continuous</td>
<td>ODP-TT</td>
</tr>
<tr>
<td>5</td>
<td>Assess the deployment of the ODP nodes with assistance of the Partnership Centre for IODE ODP</td>
<td>1Q 2014</td>
<td>ODP-TT, IODE PO, Partnership Centre for IODE ODP</td>
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<tr>
<td><strong>Standards</strong></td>
<td></td>
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<tr>
<td>6</td>
<td>Liaise with ODS TT on standards and best practices related topics; identify, prioritize, and assign work activities resulting from discussions</td>
<td>Continuous, Quarterly webex calls</td>
<td>ODP-TT, ODS-TT</td>
</tr>
<tr>
<td><strong>Metadata</strong></td>
<td></td>
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<tr>
<td>7</td>
<td>Liaise with Metadata TT on vocabularies and metadata related topics; identify, prioritize, and assign work activities</td>
<td>Continuous, Quarterly webex calls</td>
<td>ODP-TT, MD-TT, Partnership Centre for IODE</td>
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## resulting from discussions

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<tr>
<td><strong>8</strong></td>
<td>Revise and distribute the document on interoperability and migration of the ODP metadata into the ISO 19139 encoding in coordination with ETDMP TT for Metadata</td>
</tr>
<tr>
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<td>January 2013</td>
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## Data providers

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<tr>
<td><strong>9</strong></td>
<td>Identify and network with potential new data providers (projects, programmes and other communities)</td>
</tr>
<tr>
<td></td>
<td>Nov 2012, and continuous</td>
</tr>
<tr>
<td><strong>9(i)</strong></td>
<td>Identify and assess the contribution of the data from SeaDataNet</td>
</tr>
<tr>
<td></td>
<td>February 2013</td>
</tr>
<tr>
<td><strong>9(ii)</strong></td>
<td>Identify and assess the contribution of the data from EuroGOOS</td>
</tr>
<tr>
<td></td>
<td>February 2013</td>
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<tr>
<td><strong>9(iii)</strong></td>
<td>Identify and assess contributions from: NMDIS, NODC of Russia, US NODC, ISDM, IMOS, OBIS and other existing data providers</td>
</tr>
<tr>
<td></td>
<td>February 2013</td>
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<tr>
<td><strong>9(iv)</strong></td>
<td>Prepare a document “Technical specification on interaction with SeaDataNet, WIS, EuroGOOS, OBIS and ESIMO”. Distribute the document within IODE, JCOMM, SeaDataNet, WIS, EuroGOOS and ESIMO.</td>
</tr>
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<td>March 2013</td>
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## ODP Portal

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<tbody>
<tr>
<td><strong>10</strong></td>
<td>Identify and interact with the ODP user community (feedback/bug tracking)</td>
</tr>
<tr>
<td></td>
<td>Continuous</td>
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<tr>
<td><strong>11</strong></td>
<td>Provide specifications for the ODP portal interface (features, functionalities, appearance, and user-friendliness – manual on how to use the portal)</td>
</tr>
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<td></td>
<td>December 2012</td>
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## Capacity Building
3. TASK TEAM FOR ODS - PROGRESS REPORT FOR 2012 - 2014

Prof. Yutaka Michida, Task Team leader, provided a progress report made by Task Team for ODP during inter-sessional period.

3.1 IODE-XXII

He informed meeting that at the 22nd Session of the IOC Committee on International Oceanographic Data and Information Exchange (IODE-XXII) held in Ensenada, Mexico, March 2013, the IODE Committee adopted Recommendation IODE-XXII.5 on ‘Ocean Data Standard Pilot Project (ODS).’ The Committee recommended to adopt the following standards,

(i) Recommendation to adopt ISO 8601:2004 as the Standard for the Representation of Date and Time in Oceanographic Data Exchange,

(ii) Recommendation to adopt ISO 3166-1 and 3166-3 Country Codes as the Standard for Identifying Countries in Oceanographic Data Exchange,

(iii) Recommendation to adopt the Quality Flag Scheme for the Exchange of Oceanographic and Marine Meteorological Data.

It was recalled that at IODE-XXII, the Committee also adopted Recommendation IODE-XXII.6 on ‘The Ocean Data Standards and Best Practices Project (ODSBP).’ It recommends to close the JCOMM/IODE Ocean Data Standards Pilot Project and to establish the Ocean Data Standards and Best Practices Project as a joint initiative of JCOMM and IODE. The Recommendation has been approved at the 27th IOC Assembly in
June 2013, through its decision IOC-XXVII, Dec.5.3.4, which decided to take action in accordance with the Recommendations adopted at IODE-XXII.

3.2 ODSBP
Prof. Michida recalled that IOC and IODE decided to establish the ODSBP as the successive project of JCOMM/IODE ODS with the Terms of Reference as attached, and invited JCOMM to join ODSBP. In response to this invitation, JCOMM-MAN decided at its 10th Session, held in Paris, May 7-10, 2013, that JCOMM should participate in the Ocean Data Standards and Best Practices (ODSBP) project.

Meeting was informed that currently, there are no candidate standards that are under review by the ODSBP, there is need to encourage Members/Member States to submit acceptable standards to ODSBP for recommendation and adoption. There is also need to promote the adopted standards and follow-up on their implementation by Member States.

He noted that there would be need to convene the first meeting of the Steering Group of ODSBP probably in late 2014/early 2015 so that the project can commence their work.

Prof. Michida presented adopted version of the ToR of the ODSBP.

Terms of Reference of the Ocean Data Standards and Best Practices Project (ODSBP):

Objectives of the Project
The objective of the Ocean Data Standards and Best Practices Project (ODSBP) is to achieve broad agreement and commitment to adopt a number of standards and best practices related to ocean data management and exchange. This will include the following main tasks:

(i) develop and manage a process for the reception, reviewing and recommending of standards and best practices, based upon the process developed by the Ocean Data Standards Pilot Project;

(ii) actively liaise with all relevant communities, programmes and projects such as Ocean Data Portal, ETDMP Metadata Task Team, SeaDataNet Technical Task Team, GE-BICH, GE-MIM, SG-OBIS, GTSPP, ICSU WDS, GEO/GEOSS, ICES;

(iii) promote and monitor the usage of recommended standards and practices in the relevant communities, including those mentioned under (ii);

(iv) regularly review and revise recommended standards and best practices based upon feedback from the relevant communities, including those mentioned under (ii);

(iv) maintain an online catalogue of best practices, enabling easy discovery and downloading of these documents by users (e.g. JCOMM Catalogue of practices and standards).

3.3 Management
Prof. Michida informed the meeting that Project will be managed by a Steering Group with the following Terms of Reference:

(i) advise the IODE Committee on the vision, strategy and implementation of the Ocean Data Standards and Best Practices Project (ODSBP);

(ii) report to the IODE Committee (and ETDMP, as appropriate) on the progress of submission, recommendation, publishing and revision of standards and best practices recommended through the Project;

(iii) develop a document on, and maintain the process for evaluating proposals for standards and best practices.

The Steering Group will be composed, initially, of the former members of the JCOMM/IODE ETDMP Task Team for the Ocean Data Standards Pilot Project, experts from relevant JCOMM bodies, and representatives of IODE NODCs with a special interest in data standards. In addition representatives of major international oceanographic data management projects will be invited as relevant to the agenda (e.g. GTSPP, Argo, SeaDataNet, MyOcean, OceanSITES, IMOS, etc.), as well as other experts as deemed necessary by the Steering Group. The Steering Group will designate its own Chair(s). For the first Session the former members of the JCOMM/IODE ETDMP Task Team for the Ocean Data Standards Pilot Project will Chair the meeting.

3.4 Meetings of the Steering Group

Regarding the model of the Expert Team was informed that the Steering Group will work largely by email. One Steering Group meeting will be organized annually (this can be in person or by video conferencing or mixed). Cost of participation will be met preferably by the experts.

3.5 Progress Report for 2012 – 2014

Prof. Yutaka informed the Expert Team about the progress made by Task Team during the inter-sessional period.

<table>
<thead>
<tr>
<th>Action</th>
<th>Task</th>
<th>Deadline</th>
<th>Who</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Develop standards/best practices for submitted proposals in the marine community through the IODE/JCOMM Standards Process as outlined by JCOMM-IV and IODE-XXI</td>
<td>Continuous</td>
<td>YM, PO</td>
<td>Continuous</td>
</tr>
<tr>
<td></td>
<td>Description</td>
<td>Responsible</td>
<td>Status</td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>-----------------------------------------------------------------------------</td>
<td>---------------</td>
<td>-------------</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Examine further the candidates of standards for ‘Lat, Lon, Alt.’ (based on ISO 6709); and units (based on SI), and seek appropriate persons and/or organizations that make proposals.</td>
<td>YM, PO, Greg Reed</td>
<td>NOT DONE</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Encourage SeaDataNet, GE-BICH, GTSPP, and MyOcean and other relevant bodies to submit their proposals to ODS. (prepare and distribute letters)</td>
<td>YM, Secretariat</td>
<td>NOT DONE</td>
<td></td>
</tr>
<tr>
<td>4a</td>
<td>Encourage, by preparing and distributing an invitation for submissions, JCOMM and IODE communities to submit proposals of standards for,</td>
<td>TT</td>
<td>NOT DONE</td>
<td></td>
</tr>
<tr>
<td></td>
<td>i) Thematic codes like platform type, Geo-Area (IHB) and instrument type; Standard vocabularies for parameters, institutions, platforms/platform types and instruments; unique data tag, data exchange format,</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4b</td>
<td>ii) Discovery metadata profile (e.g. MCP, CDI, WMO Core, NAP) which is ISO 19115/19139 compliant</td>
<td>TT</td>
<td>NOT DONE</td>
<td></td>
</tr>
<tr>
<td>4c</td>
<td>iii) Quality controls being implemented by QARTOD</td>
<td>RC</td>
<td>NOT DONE</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Keep communication with ODP TT and Metadata TT respectively on standards process.</td>
<td>YM</td>
<td>Continuous</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Submit draft recommendation for ODSBP with its ToR to IODE-22 and JCOMM MAN</td>
<td>ETDMP Chair</td>
<td>DONE</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Submit draft recommendation on standards that have passed review process to IODE-22 and JCOMM MAN.</td>
<td>March 2013, February 2013</td>
<td>ETDMP Chair</td>
<td>DONE</td>
</tr>
<tr>
<td>----</td>
<td>-------------------------------------------------------------------------------------------------</td>
<td>--------------------------</td>
<td>-------------</td>
<td>------</td>
</tr>
<tr>
<td>8a</td>
<td>Continue work to finalize the review of the QC-flag proposal</td>
<td></td>
<td></td>
<td>DONE</td>
</tr>
<tr>
<td></td>
<td>i) Report on the discussion on the proposal at ETDMP-III to the upcoming IODE QC Workshop in Oostende</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>okt.12</td>
<td>CS on behalf of YM</td>
<td></td>
</tr>
<tr>
<td>8b</td>
<td>ii) Ask the authors to modify the proposal as suggested by the ad hoc ODS SG, and circulate the revised version (V1.3) to IODE Member States for comments</td>
<td>tbd</td>
<td>YM, PO</td>
<td>DONE</td>
</tr>
<tr>
<td></td>
<td>iii) Publish and promote the recommended standards and best practices as appropriate</td>
<td>июн.13</td>
<td>TT, IODE Project Office</td>
<td>DONE</td>
</tr>
<tr>
<td>9</td>
<td>Review candidate standards submitted to ODSBP process</td>
<td>Continuous</td>
<td>TT</td>
<td>Continuous</td>
</tr>
<tr>
<td>10</td>
<td>Implement the first <strong>meeting</strong> of the ODSBP Steering Group</td>
<td>Late 2013/early 2014, tbd by IODE-XXII</td>
<td>TT</td>
<td>NOT DONE</td>
</tr>
</tbody>
</table>
### 11 Update ODSBP and Steering Group Terms of Reference:

**Examples:**
- Generalize references to IODE and other groups/projects
- Ensure clear definitions of standard and best practice are included,
- Propose model for managing group membership (e.g. When changes are required between ODP/JCOMM meetings)
- Verify/revise terms of reference for members (technical and steering group members)

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1st version - Dec 2014</td>
<td>2nd version - March 2015</td>
<td>ODSBP-TT</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Not Done</td>
</tr>
</tbody>
</table>

The Expert Team discussed the progress report and made some decisions on how the actions that we not done should be reconsidered.

### 3.5.1 Candidates of standards and best practices

Regarding the action 2 the Expert Team requested TT to identify and submit standards and best practices through the revised OSDBP process.

Issues and following sub-actions to be undertaken to solve them were reviewed by ET regarding the action 2.

Sub-action 2.1: ODS-TT to develop draft request for groups to submit standards and best practices (and request IODE-XXIII for approval to update QMF process to include request submissions of standards/best practices)

The ET raised an issue that specific mechanism for soliciting requests from groups to be resolved.

The Expert Team also agreed that groups may not be aware of how simple the process is and expected turnaround timeframes.

Sub-action 2.2: Group e-mail for ETDMP to receive requests and also to add additional experts to the review team(s).

**General Action:** IODE to establish collaboration for internal use on projects (IODE and non-IODE web site supported).

### 3.5.2 Encouraging the submissions of new standards and best practices

Expert Team agreed that action items 3 and 4, that were not done, should be merged with action item 2 and implemented on the continuous basis.

### 3.5.3 Communication with other Task Teams of ETDMP

### 3.5.4 Review of candidate standards

The Expert Team agreed that action item 9 “Review candidate standards submitted to ODSBP process” should not be reflected in the future work plan
as this is standard business of the Task Team for ODS and ODSBP respectively.

3.5.5 First meeting of the ODSBP Steering Group

As it was presented by Prof. Yutaka, first ODSBP Steering Group meeting is scheduled for beginning of 2015.

The Expert Team agreed the need to confirm the meeting timing with IOC Project Office for IODE.

The Expert Team also welcomed all TT leaders to participate in the planned ODSBP SG via WebEx.

The Expert Team agreed that all TT leaders should provide submission of the standards and best practices by IODE-XXIII.

The Expert Team agreed to ask JCOMM (technical experts only) and other advanced NODCs for candidate experts (steering group and technical experts) and steering group members.

During the discussion about the membership of ODSBP SG the Expert Team agreed that total core SG membership to be kept under 10.

Prof. Yutaka informed that the review for OSDBP steering group membership will be done after the first meeting.

4. TASK TEAM FOR IODE ODP - PROGRESS REPORT FOR 2012 - 2014

Mr. Tobias Spears, TT leader, informed the Expert Team about the progress made during the inter-sessional period.

The ODP project has been very active since the last ETDMP meeting with a number of major objectives being completed or ongoing:

1. The Russian Federation has established and current supports the Partnership Centre for the IODE ODP, led by Sergey Belov. (see IODE announcement: http://www.iode.org/index.php?option=com_content&view=article&id=393&Itemid=100141)

2. An ODP project manager work profile was developed and Tobias Spears has taken on this role.


4. Development was completed on a major release of the ODP Toolkit V2 backend infrastructure.

5. Development was completed on the ODP web site. (see www.oceandataportal.net)

6. ODP regional and national nodes were set up for SNDM-Argentina and a
customized version of the ODP portal interface was provided as part of this project. (see portal home page: http://portal.mincyt.gob.ar/portal/portal/sndm/home)

7. Interoperability arrangements have been established between the ODP, SeaDataNet, and the WMO Information System (WIS). (see ODP partners page: http://www.oceandataportal.net/portal/portal/odp-theme/data/relatedprojects)

8. ODP training sessions were held with SNDM-Argentina and ODINAFRICA. Training materials and reference guides are available on Ocean Teacher and the ODP web site.

9. The ODP team is participating in the Ocean Data Interoperability Platform (ODIP) program and is a key stakeholder in one of the project prototype developments.

10. The ODP team is currently working with other stakeholders in preparation for potential ODP node or data provider implementations (e.g. GEOWOW).

11. A number of development activities are behind schedule or progressing more slowly than expected: a) migration of ODP metadata layer to ISO 19139, b) developing and implementing the ODP accreditation process, c) scheduled follow-up/review of existing node and data provider implementations

Mr. Spears provided detailed report about the progress made since 3rd ETDMP session.

4.1 Governance

**Action 1** - Review the ToR for SG-ODP and Partnership centre for IODE ODP

**Status:** Complete - both ToR are available on the IODE web site.

SG-ODP:


Partnership Centre for IODE ODP:

http://www.iode.org/index.php?option=com_content&view=article&id=393&Itemid=100141

**Action 2** - Liaise and collaborate with other groups in order to establish strong links with existing regional and global initiatives

**Status:** Ongoing. ODP is currently participating in the Ocean Data Interoperability Platform (ODIP) and contributing to Prototype 1 development (metadata and data interoperability between ODP, SDN, and others via the GEOSS Common Broker infrastructure).

In addition, the ODP team is working directly with SeaDataNet, WIS, and EuroGOOS directly in order to expand interoperability arrangements with the programs.
4.2 ODP management

**Action 3** - Describe the profile (responsibilities, tasks and competences) of the ODP project manager, for consideration at IODE-XXII and IOC GA.

**Status: Complete.** The profile for the ODP project manager was developed, presented, accepted, and the position filled (T. Spears).

**Action 4** - Monitor progress on the ODP 2012-2013 workplan and advice the SG-ODP on changes if necessary

**Status: Ongoing.** The ODP-TT workplan has been rationalized to an extent with the ODP workplan developed under the SG-ODP (http://www.iode.org/index.php?option=com_oe&task=viewDocumentRecord&docID=6039).

**Action 5** - Assess the deployment of the ODP nodes with assistance of the Partnership Centre for IODE ODP

**Status: Ongoing.** Progress in this area has been slow, but progress continues to be made. Regional nodes have been implemented for SNDM Argentina and ODINWESTPAC, and interoperability arrangements have been implemented with WIS and SeaDataNet. The ODP node accreditation process has not been completed, so the key monitoring tools are the data provider and resources reports included in the global ODP portal. Although some nodes appear to be functioning well, there are consistent accessibility issues with some nodes, while others are accessible but not making significant, new contributions. Interoperability arrangements with SeaDataNet and other programs have not been evaluated in detail.

4.3 Standards

**Action 6** - Liaise with ODS TT on standards and best practices related topics; identify, prioritize, and assign work activities resulting from discussions.

**Status: Not completed.** There is a lack of activity in this area and while attending a recent workshop, an attempt was made to promote the ODS process as a mechanism for expanding into other domains of research. During a recent workshop, a comment was made that the process is too long and complex, and the group favored simply developing and publishing the standard and leave to others’ discretion whether or not they would use the standard.

4.4 Metadata

**Action 7** - Liaise with Metadata TT on vocabularies and metadata related topics; identify, prioritize, and assign work activities resulting from discussions.

**Status: Not completed.** There has been periodic follow-up with MD-TT, but operational workloads and other competing priorities have impacted the delivery of this task.
**Action 8** - Revise and distribute the document on interoperability and migration of the ODP metadata into the ISO 19139 encoding in coordination with ETDMP TT for Metadata.

**Status**: Not completed. There has been periodic follow-up with MD-TT, but operational workloads and other competing priorities have impacted the delivery of this task.

4.5 Data providers

**Action 9** - Identify and network with potential new data providers (projects, programmes and other communities).

**Status**: Ongoing. A tracking sheet has been developed and potential data providers were identified by SG-ODP.

**Action 9(i)** - Identify and assess the contribution of the data from SeaDataNet

**Status**: Ongoing. Limited contributions (417) are currently available from SeaDataNet and are reporting in the 'Related projects' section of the portal: http://www.oceandataportal.net/portal/portal/odp-theme/data/relatedprojects. Through the ongoing collaboration between ODP and SeaDataNet as part of the Ocean Data Interoperability Platform, the intent is to enable full two-way exchange of metadata and data.

**Action 9(ii)** - Identify and assess the contribution of the data from EuroGOOS

**Status**: Ongoing. A substantial list of proposed European data contributions have been identified ( >5,200 data files - EMODnet Physics) and will be implemented in cooperation with EuroGOOS.

**Action 9(iii)** - Identify and assess contributions from NMDIS, NODC of Russia, US NODC, ISDM, IMOS, OBIS and other existing data providers

**Status**: Ongoing - Data provider and data contribution reports are available on via the global ODP node (left hand panel under 'Ad-hoc Query'). The reports are produced daily and one can revisit past days by changing the date in the report URL:

Data availability example: [http://is.oceandataportal.net/iserv/stat/21-06-2014_T2.html](http://is.oceandataportal.net/iserv/stat/21-06-2014_T2.html)


**Action 9(iv)** - Prepare a document “Technical specification on interaction with SeaDataNet, WIS, EuroGOOS, OBIS and ESIMO”. Distribute the document within IODE, JCOMM, SeaDataNet, WIS, EuroGOOS and ESIMO.

**Status**: Not completed - This deliverable is expected to evolve with the development of the ODIP prototypes and the use of the GEOSS Common Broker to enable interoperability between ODP and the partner systems.

4.6 ODP portal
Action 10 – Identify and interact with the ODP user community (feedback/bug tracking)

**Status:** Ongoing - Significant progress has been made in this area through the implementation of a support site using JIRA as a mechanism for tracking enhancement and bug requests. Further engagement is necessary through periodic follow-up with node and data providers. The ODP portal also includes a user feedback form and requests will be monitored and directed to the appropriate resource. In addition, two contact e-mails (odp-tech@meteo.ru and odp-centre@meteo.ru) have been established in support of this activity.

Action 11 - Provide specifications for the ODP portal interface (features, functionalities, appearance, and user-friendliness – manual on how to use the portal)

**Status:** Ongoing - The ODP portal interface has evolved based upon feedback and requests from organizations hosting ODP nodes. However, additional feedback/input is required and this will involve a survey of ETDMP members, node providers, and other stakeholders.

4.7 Capacity building

Action 12 – Revise and distribute the technical documentation on the ODP V2 toolkit components

**Status:** Ongoing - Major development on ODP V2 back office components was completed in 2013. The deployment of full ODP nodes has been greatly simplified through the development of packaged virtual machines, full technical and user training, and implementation of node monitoring functionality. The next areas of focus is the ODP portal interface and implementation of technical interoperability arrangements with other programs/systems.

Action 13 – Identify and prioritize ODP training requirements

**Status:** Complete - ODP training sessions have been held with SNDM Argentina (2013) SPINCAM, ODINAFRICA, and ODINWESTPAC.

Action 14 – Prepare “Manuals and Guides on IODE ODP”

**Status:** Ongoing - The development of ODP setup and operations materials have been completed and combined with the development of the ODP training courses. However, the development of strategic documents (guide the relationship between ODP an WIS, etc.) have not been completed.

Action 15 – Develop documentation and guidance material for the training courses on ODP regional nodes for ODINs with assistance of the Partnership Centre for IODE ODP

**Status:** Complete - The ODP training materials have been completed and maintained as sessions are held and feedback is received from attendees and users. See:
TT leader noted that the team has a number of key issues to resolve, including:
1. Implementation of ISO 19139 metadata support within the ODP.
2. Defining and implementing enhancements to the ODP portal interface.
3. Continuing implementation of ODP nodes, data providers, and technical interoperability arrangements.
4. Development and implementation of the ODP node accreditation process.

5. TASK TEAM FOR METADATA - PROGRESS REPORT FOR 2012 - 2014

Mr. Don Collins, leader of TT for Metadata, presented progress report of the group.

5.1 Introduction

The Metadata Task Team proposed an ambitious list of tasks at ETDMP III in 2012. This report summarizes the progress on each of the enumerated Tasks and sub-tasks.

Task One of the TT workplan for 2012 - 2014 was intended to encourage discussion between the Metadata Task Team and the other two Task Team ("Liaise with ODS and ODP Task Teams on a regular and repeating basis". Unfortunately, there has been very little inter-Team discussion during the work period.

Due to a change in duties, Ms. Jixiang Chen was unable to participate in this project. Mr. Don Collins was unable to establish contact with proposed Metadata Task Team member Mr. Polito for this project.

Task Two was a multiple-part task to review and compare several controlled vocabularies for commonalities, underlying supporting infrastructures, and to recommend required elements for each of the identified vocabularies. Several vocabularies are discussed in more detail below. For some of the vocabularies, an attempt is made to identify the key information elements supported by the ISO 19115-2 metadata standard and ISO 19139 XML standard encoding and then to suggest that each vocabulary manager consider how to export the content of their vocabulary into the recommended encoding structure. This supports the goal proposed at ETDMP II to converge on use of ISO 19115-2 as the common metadata exchange construct.

Task Three was intended to encourage the Metadata Task Team to become more familiar with available XML-based tools, such as Simplified Knowledge Organization System (SKOS), the Marine Metadata Interoperability (MMI) project or other community-based tools.

5.2 Additional resources
Mr. Collins informed the Expert Team that the NOAA Environmental Data Management (EDM) Wiki at https://geo-ide.noaa.gov/wiki has been a valuable learning resource for these analyses. This wiki is available online at no cost to anyone who wants to review its contents, with no registration or login requirements.

The US National Oceanographic Data Center's National Coastal Data Development Center (NCDDC) provides substantial training materials for learning about the ISO 191nnn suite of standards at http://www.ncddc.noaa.gov/metadata-standards/. Free online courses are offered in real time and in delayed mode via video recordings of presentations. Since 2012, NCDDC has provided training to more than 6000 participants from more than 40 countries.


5.3 Vocabularies analyses and discussions

He informed the meeting that the task of reviewing and comparing the contents of multiple controlled vocabularies from SeaDataNet (SDN), Ocean Data Portal (ODP), International Council for Exploration of the Seas (ICES), US NASA Global Change Master Directory (GCMD) and others was too broad a task for the Metadata Task Team (MD-TT) to complete. With limited resources TT have made a first pass at this large and complex effort, but there is far more work to be done. As with most technology oriented tasks, the technology to manage and access controlled vocabularies continues to evolve.

We have chosen to focus on how the ISO standard encodes and presents a suite of metadata elements for each of the identified vocabularies, so that vocabulary managers can begin (or continue) to produce well-formed, ISO compliant metadata components for organizations, platforms and instruments, projects and keywords.

As defined on the EDM wiki, a metadata 'component' is a section of information that can be reused multiple times as a block of information or XML encoded content. The following discussion for each controlled vocabulary is framed in the context of treating content from each vocabulary as a repeatable component of information.

Organizations vocabulary analysis and discussion

Action 2(i): "...recommend required elements for identifying organizations..."

Information about an organization is included as part of the ISO CI_ResponsibleParty component. The specific element is organizationName, an optional characterString associated to a specific role (i.e., what role does the organization perform). The broader CI_ResponsibleParty component also may include related contact information (e.g., address, telephone, online contacts) for the named
organization. The Cl_ResponsibleParty component may be used in multiple places in an ISO description of a data set, depending on the role that the organization preforms (e.g., resourceProvider, distributor, sponsor).
Common elements across these systems appear to be the following:

<table>
<thead>
<tr>
<th>element</th>
<th>SeaDataNet</th>
<th>GCMD</th>
<th>US NODC</th>
<th>ISO 19115-2</th>
</tr>
</thead>
</table>
| organization name                | rdf:RDF>skos:Collection>skos:member>skos:Concept>skos:prefLabel | Data Center>Data_Center_Name | institutions.name | gmd:CI_ResponsibleParty>gm
d:organizationName>gco:CharacterString |
| address information              | Personnel>Address | institutions. address, institutions. city, institutions. state, institutions. postal, institutions. Country | gmd:CI_ResponsibleParty>gm
d:contactInfo>gmd:address |
| online contact                   | institutions. website, institutions. email | institutions. website, institutions. email | gmd:CI_ResponsibleParty>gm
d:contactInfo>gmd:onlineResource |
| role                             | dependent on use | dependent on use | dependent on use | gmd:CI_ResponsibleParty>gm
d:role |
| telephone information            | (used for individuals, not organizations) | institutions. PhoneNumber | gmd:CI_ResponsibleParty>gm
d:contactInfo>gmd:phone |


Source for SeaDataNet mapping extracted from SKOS endpoints identified at [http://vocab.nerc.ac.uk/collection/C75/](http://vocab.nerc.ac.uk/collection/C75/).

Similar elements, e.g., GCMD Data_Center_Name and NODC institutions.name may not always be mapped to the same ISO 19115-2 elements. Defining best practices for how to consolidate mapping
information elements from various databases or other internal metadata management activities can be a substantial and time consuming effort. As decisions are made, the outcomes of these discussions should be recorded in a widely available resource. The US National Data Centers use the NOAA Environmental Data Management wiki mentioned above. A recommendation from ETDMP might be to identify or create a community wiki for consolidating and documenting best practices at this level of detail or to recommend use of an existing resource, such as the NOAA EDM wiki.

Platforms vocabulary analysis and discussion

Action 2(ii): "Identify specific concerns related to platforms metadata..."

Mr. Collins recalled that many of the concerns that were expressed at ETDMP III relating to platforms management at ICES and SeaDataNet (SDN) were about incomplete inclusion of platform categories in ICES vocabulary and inconsistencies between codes used by ICES and US NODC. Additional platform categories were added to the ICES database, using the SEAVOX platform categories vocabulary (http://vocab.nerc.ac.uk/collection/L06/). ICES and US NODC have made great progress with resolving conflicts between these two widely-accessed platforms vocabularies and plans are to finish resolving the relatively few remaining known conflicting entries very soon. ICES and US NODC have also begun discussing machine-to-machine information exchange between our two systems but this is still very preliminary.

ICES is preparing to update and modify the underlying infrastructure for their system, including the platform information management component (2014, M. Sørensen, pers. comm.). In response to a 2010 JCOMM directive, ICES and US NODC will expand the length of the character string used for a platform code (currently 4 characters) and will begin to transition away from using the first two characters of a platform code as a country identifier. Both ICES and US NODC will continue to coordinate closely with each other and the international community to ensure that both organizations present the same platform code for the same platform. Additional questions about changes to the ICES system should be directed to ICES staff.

Action 2(iii): "...identify common elements; recommend required elements..."

The following discussion relates ICES platforms vocabulary elements to the ISO 19115 standard for representing that information.
The ISO 19115-2 metadata element gmi:MI_Platform compound element component is used to document a platform. Key ISO characteristics for platforms are: platform name, commissioning date, platform identification code, sponsor (or owner) and description (i.e., additional comments about the platform that may distinguish it from other platforms). Platform call sign, while a significant attribute for many platforms, is included as part of the description element in gmi:MI_Platform.

The ISO 19115-2 standard also supports linking a platform to an enumerated list of the instruments on the platform using the gmi:instrument element. At this time, neither the ICES nor the US NODC platforms vocabularies routinely link or identify the platforms mounted on a particular platform using the available linkage defined in ISO 19115-2.

The US National Geophysical Data Center (NGDC) maintains an XML component management system called DOCUCOMP. This system supports reusable component entries that link multiple instruments to a platform for insertion into an ISO metadata record.

Common elements across these systems appear to be the following:

<table>
<thead>
<tr>
<th>SeaDataNet</th>
<th>ICES</th>
<th>US NODC</th>
<th>ISO 19115-2</th>
</tr>
</thead>
<tbody>
<tr>
<td>platform name</td>
<td>gmi:MI_Platform&gt;gmi:platform&gt;gmi:identifier&gt;gmd:code&gt;gco:CharacterString</td>
<td>platforms&gt;name</td>
<td>platforms&gt;platforms&gt;name &gt;gmd:CITATION&gt;gmd:title&gt;gco:CharacterString</td>
</tr>
<tr>
<td>platform identifier/code</td>
<td>rdf:RDF&gt;skos:Collection&gt;skos:member&gt;skos:Concept&gt;skos:prefLabel</td>
<td>code</td>
<td>platforms&gt;NODC_code</td>
</tr>
</tbody>
</table>
Instruments vocabulary analysis and discussion

Action 2(iv): recommend required elements for identifying instruments

SeaDataNet maintains the SDN device categories table (L05) and a replication of the GCMD Instruments Keywords table. US NODC also maintains a table of instrument identifiers. Each of these tables describes an instrument or device at different levels of detail and specificity.

The SDN and GCMD approaches to instrument identifiers support ontological relationships between terms, encoding related term, broader term and narrower term relationships in their respective SKOS endpoints for instruments vocabularies.
Common elements across these systems appear to be the following:

<table>
<thead>
<tr>
<th>Element Description</th>
<th>SeaDataNet</th>
<th>GCMD</th>
<th>US NODC</th>
<th>ISO 19115-2</th>
</tr>
</thead>
<tbody>
<tr>
<td>instrument name</td>
<td>rdf:RDF&gt;skos:Collection&gt;skos:member&gt;skos:Concept&gt;skos:prefLabel</td>
<td>Topic&gt;Term&gt;Variable_Level_n (n may be 1, 2 or 3)</td>
<td>instruments.name</td>
<td>gmi:MI_Instrument&gt;gmi:citation&gt;gmd:CI_Citation&gt;gmd:title</td>
</tr>
<tr>
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<td>gmi:MI_Instrument&gt;gmi:citation&gt;gmd:CI_Citation&gt;gmd:identifier&gt;gmd:MD_Identifier&gt;gmd:code</td>
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Discovery keywords vocabulary analysis and discussion

Action 2(v): “...recommend required elements for identifying keywords…”

The category of "keywords" is too broad and the SDN system is too complex to be part of the Team’s analysis. Many discovery-level
keyword vocabularies and thesauri can be used to describe the variables, units, instruments, platforms, projects, and other characteristics of an ocean data set or collection. The important factors are to 1) fully define the resource that provides the keywords in the ISO 19115 metadata description, giving proper credit/attribution to the keyword resource provider and 2) accurately represent the keyword entries from the identified resource.

The NASA Global Change Master Directory project (http://gcmd.nasa.gov/learn/keyword_list.html) manages relatively high-level vocabularies for parameter valids, projects, instruments, platforms, and other key concepts. The NETMAR Oceanography Thesaurus Parameter Facet (http://vocab.nerc.ac.uk/scheme/NETOC_PARAM/current/#) provides a useful assemblage of ontologically-linked concepts and terms. The SDN and SeaVOX system provides an extremely detailed collection of terms for specific concepts. Any of these systems should be leveraged when documenting geospatial data using the ISO 19115 standard.

Projects vocabulary analysis and discussion

Action 2(vi): “…recommend required elements for identifying keywords…”

The MD-TT was not able to prepare a review of project identifiers during the work period.

TOOLS FOR MANAGING AND DISSEMINATING CONTROLLED VOCABULARIES

Action 3(i): “Recommend ways to use XML-based vocabulary management tools…”

The MD-TT members have done some preliminary investigations of SKOS, but we have had no resources to make more progress.

Action 3(ii): “Identify which, if any, of priority vocabularies listed in Task 2 are represented using standard XML markup…”

The British Oceanographic Data Centre, SeaVOX, and SeaDataNet programs make extensive use of SKOS markup language to present information about organizations (code set C75) and organization categories (code set 71), ICES platforms (code set 17) and platform
categories (code set L06), instruments (devices from code set L22), and multiple keyword vocabularies.

The MD-TT recommends that MD-TT and ODP-TT work closely with these existing program resources to better understand how to use content from these SKOS endpoints in well formed ISO XML discovery records.

SUMMARY
In summary, Mr. Collins noted that recognizing and adjusting for resource limitations, the MD-TT began an ambitious review of several significant descriptive keyword and other vocabularies. In the process, we have identified a few useful, freely-available metadata resources and learned about many other resources provided by SeaDataNet, SeaVOX and other entities. The preliminary identification of specific ‘required elements’ for identifying an organization, platform, and instrument/device have been linked to relevant ISO elements.

He noted that looking ahead, the MD-TT may continue to learn and share information about available existing tools and resources. The MD-TT does not fully understand the capabilities or requirements of the existing ODP infrastructure, so this is another area in which the MD-TT should coordinate more closely with the ODP team.

REPORT REVIEW
Mr. Collins distributed MS PowerPoint presentation summarizing his report and including some additional information.

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Metadata Task Team 2012-2014
Summary Report Review

JCOMM ETDMP-4
23-26 June 2014
Don Collins (US NODC)
Ting (Julia) Yu (NMDIS)
Metadata Team Tasks

1. Improve liaison with other Task teams
2. Review/look for commonalities between several existing representations of identified controlled vocabularies
   1. Organizations
   2. Platforms
   3. Instruments
   4. Projects
   5. Discovery keywords
3. Review/consider tools for managing vocabularies

Metadata Task 2:
A closer look at some vocabularies

- **Instruments**
  - Need to investigate 19115-2 representation for instruments related to platforms
  - Encoded as an extended MD_KeywordTypeCode in CDI ISO

- **Keywords**
  - Need additional time/resources to understand implementation/relationship between IS0 and various keyword vocabularies

- **Projects**
  - European Directory of Marine Environmental Research Projects (EDMERP)
  - No additional information about projects at this time
Metadata Task 2:
A closer look at some vocabularies

- Organizations
  - European Dictionary of Marine Organizations (EDMO)
  - SDN/BODC SKOS representation but not[?] inserted as xlink to CDI ISO?
  - Encourage mapping/coordination with US to harmonize/extend EDMO scope?

- Platforms
  - Close coordination ongoing between USNODC and ICES
  - Disambiguating and resolving discrepancies
  - Preliminary mapping of platform information to ISO 19139 from US perspective to compare to SDN or other mapping to ISO

Metadata Task 3:
Tools for managing/disseminating controlled vocabularies

- Focus on better understanding of Simple Knowledge Organization System (SKOS) representation of terms, concepts and semantic relationships
- Identify useful tools for managing or providing guidance
Metadata Task 3:
Tools for managing/disseminating controlled vocabularies

• Useful resources for learning about managing controlled vocabularies
  – IODE Ocean Teacher video at http://vimeo.com/98624019
  – NOAA Environmental Data Management (EDM) wiki at https://geo-ide.noaa.gov/wiki
  – US NODC National Coastal Data Development Center metadata training at http://ncddc.noaa.gov/metadata-standards/

Metadata Task 3:
Tools for managing/disseminating controlled vocabularies

• Useful resources for learning about SKOS
Metadata Task 3:
Tools for managing/disseminating controlled vocabularies

- Useful resources for understanding ISO19nnn standards and mappings
  - SeaDataNet Common Data Index (CDI)
    [http://www.seadatanet.org/content/download/20284/140589/file/CDI-profile-V10.0.pdf](http://www.seadatanet.org/content/download/20284/140589/file/CDI-profile-V10.0.pdf)
  - US NOAA Environmental Data Management (EDM) wiki

The Expert Team stressed the need to extend the membership of the Task Team by sending message on this to IODE and JCOMM. Chair called attention to importance of joint contribution on ISO 19139 metadata template for ODP metadata, which currently based on ISO 19115. The Expert Team thanked Mr. Collins on comprehensive information about the new developments in NOAA that can assist in further activities of the Expert Team.

6. Partnership Centre for IODE ODP report

Dr. Sergey Belov, head of Partnership Centre for IODE ODP, presented report on status and activities carried out.

Dr. Belov recalled that The National Oceanographic Committee of the Russian Federation had agreed to offer to IOC/IODE to establish an IOC Project Office for IODE ODP. Taking account the formal requirements related to Project Offices as well as the offer of Russia the title of such “office” was changed to “Partnership Support Centre for IODE ODP”. The official opening of the Office took place on 10 September 2013.

6.1 Tasks of the Partnership Centre for IODE ODP

Dr. Belov informed the Expert Team that Partnership Centre for IODE ODP is responsible for:

- develop, host and maintain the tools and specifications for the portal and its distributed marine data system operation
- assist IODE’s Ocean Data Information Networks (ODINs), NODCs and other IODE ODP nodes to achieve their regional and thematic objectives
- develop, strengthen and maintain the IODE ODP data management training programmes and tools
monitor and report on the status and availability of the IODE ODP portal, websites, tools and specifications used by the IODE ODP node

- Provide an infrastructure to develop and test the web-based technologies and tools and also to generate new ideas and perspectives of the IODE ODP;

- Promote collaboration between relevant experts in integrated marine data management in IOC programmes and projects, other organisations and systems (e.g. OBIS, WIS, GEOSS)

6.1 Staff

At the Partnership Centre the full-time dedicated staff and their responsibilities is as follows:

- Dr Sergey Belov is the Head of the Partnership Centre for the IODE ODP and ODP Technical Coordinator
- Mr Sergey Sukhonosov is Lead Developer for ODP
- Mr Kirill Richik is Developer (ODP node monitoring and statistics, HelpDesk solution) at the Partnership Centre for IODE ODP
- Ms Evgenya Elicheva is Technician (web site development and portal) at the Partnership Centre for IODE ODP (full-time)

In addition assistance is provided by RIHMI-WDC/NODC staff:

- Mr Oleg Vasilyev, Technician (web site development and portal back-end) (full-time)
- Ms Kristina Belova, Developer
- Ms Natalya Puzova, lead developer (portal core technology)

6.2 Budget

Dr. Belov informed that yearly budget for Partnership Centre is about 65 000 USD. This amount includes salary and operational expenses.

6.3 Results since September 2013

Dr. Belov informed the meeting about the results and achievements since the official opening of the Partnership Centre.

Development

The Partnership Centre completed the ODP V2 toolkit and has implemented both data providers and nodes based on the technology. ODP V2 toolkit is available on request using Ocean Data Portal web site or number of emails: (odp-centre@meteo.ru, odp-tech@meteo.ru). When request is approved specific FTP account will be issued.

New component as HelpDesk service via the ODP portal was developed and will be in production mode from July 2014. HelpDesk is called to organize efficient and fast way of feedback and communication of users with developers, including general public users, ODP node operators, researchers looking for data, etc.
Updated packaging of ODP node infrastructure components has greatly simplified the process of establishing new ODP nodes.

**ODINS AND REGIONAL ACTIVITIES**

In October 2013 ODP specialized node (Sistema Nacional de Datos del Mar, SNDM) for Argentina has been established in MINCyT (e.g. http://en.mincyt.gob.ar/news/sea-data-portal-is-launched-9255). ODP specialized node portal is available at http://portal.mincyt.gob.ar/

In April 2013 ODP regional node for ODINWESTPACK has been established in NMDIS, China. ODP ODINWESTPAC regional node is available at http://portal-odp.nmdis.gov.cn/

**CAPACITY BUILDING**

Five training courses were provided during the October 2013 and April 2014 by the Partnership Centre. All trainings except ODINAFRICA Training Course of Ocean Data Portal were on-site trainings.

- **TRAINING COURSE ON ESTABLISHMENT OF THE OCEAN DATA PORTAL REGIONAL NODE AND DATA NETWORK FOR SNDM-ARGENTINA** (7 – 11 October 2013, Buenos Aires, Argentina)
- **TRAINING COURSE ON ESTABLISHMENT OF THE OCEAN DATA PORTAL DATA NETWORK FOR Southeast Pacific data and Information Network in support to Integrated Coastal Area Management (SPINCAM)** (Buenos Aires, Argentina, 15 – 16 October 2013)
- **ODINAFRICA Ocean Data Portal training-of-trainers course** (16 – 21 December 2013, Oostende, Belgium)
- **ODINAFRICA Training Course of Ocean Data Portal** (10-14 March 2014, Oostende, Belgium) – coordination by WebEx
- **ODINWESTPAC Ocean Data Portal training course** (21 – 25 April 2014, Tianjin, China)

**INFRASTRUCTURE**

Two new high performance servers (2xIntel Xeon E5-2660 @2.2GHz, 2 cores per socket, 128GB RAM, 1.63 TB HDD) were purchased in 2013 and used as the infrastructure for ODP global node. Global node is acting as HA (High-availability) cluster with outage-proof system. Partnership Centre re-located domains www.oceandataportal.net and odp.oceandataportal.net for ODP global node needs.

Besides this, Light Data Provider factory has been established and provided to KODC, US NODC, Canada (ODIS, ISDM).

**PROMOTION**

ODP is participating in key global partnerships (such as the development of interoperability connections with GEOSS under the Ocean Data Interoperability Platform) and these arrangements present new opportunities to evolve the ODP technical architecture and the contributions to the ODP.
ODP - GOOS GRA planning meeting took place via WebEx in November 2013 (see 6.4.6)

Numerous improvements to ODP communications materials, documentation, infrastructure, and technology have been completed and are ongoing.

New web site on Ocean Data Project has been developed, hosted and launched by Partnership Centre (http://www.oceandataportal.org).

New metadata registry service (http://meta.meteo.ru, http://metadata.oceandataportal.net) has been launched for interoperability need between ODP – SeaDataNet, ODP – WIS. This registry is populating ODP metadata in ISO 19139 metadata standard.

MINUTES OF GOOS GRA PLANNING MEETING
Dr. Belov presented minutes from the GOOS GRA planning meeting.

GOOS GRA Planning Meeting

Date: November 5, 2013

Present:
Tobias Spears
Sergey Belov
Patrick Gorringe

Actions, Notes, and Decisions:

1. **Decision:** Access to GOOS GRA data can be accomplished either via existing web services or directly via existing FTP (provides data and metadata) repositories. It was decided that access to GRA data through the ODP would initially consist of access to the FTP data repositories, and then evolve to using the Web services as a second phase.

2. Note: The GRA metadata content was discussed. At this time, GRA metadata is not in an ISO 19139 format, but this will come in time. There is sufficient metadata available (with the data) and this metadata is being enhanced as an ongoing activity.

3. Action: As part of the ODP engagement tracking, the GOOS GRAs and contacts will be added to data provider register. Tobias will provide the template to Patrick for completion.

4. Action/Decision: Branding of data contribution to the ODP will be a priority for the GRAs. Such branch is already in place with interoperability arrangements such as the one with SeaDataNet. The ODP Partnership Centre will update the ODP Portal to include quick access to GRA data, along
with associated branding. The target delivery will be the end of November along with enabling access to GRA data and metadata.

5. Action: In addition to providing quick access to the GRA data, there is a need to provide credit and background related to the GOOS GRAs. The ODP Partnership Centre will update the ODP portal and web site to include information about the GRAs. The target delivery will be the end of November along with enabling access to GRA data and metadata.

6. Action: There will be a need to properly brand contributions from the GRAs within the metadata catalogue. The ODP Partnership Centre will work with the GRAs to refine the metadata presented through the ODP to provide some acceptable level of branding within the metadata (e.g. include reference to GRA within data set title or some similar strategy that will be applied consistently across records). The target delivery will be the end of November along with enabling access to GRA data and metadata. However, the branding strategy within the metadata may evolve over time.

7. Action: In order to proceed with implementing access to the GRA data, the list of existing FTP sites, web services, and contacts will be required. Tobias to provide a template for completion by Patrick. The target date will be end of business November 8th.

8. Action: The ODP Partnership Centre will begin implementing access to GRA data (using EuroGOOS as a test case) within a 1 – 2 week sprint which will begin once supporting information is provided by Patrick. The target delivery will be the end of November.

9. Action: In order to properly brand the GRA contributions to ODP, an appropriate high resolution logo will be required for the ODP web site, portal interface, and other communications material. Patrick will provide a suitable GRA logo to the ODP Partnership Centre. The target delivery will be before the end of November to allow the logo to be used on the ODP web site and portal interface.

7. Ocean Data Standards and Best Practices Project (ODSBP) outlook.

This agenda item was introduced by Prof. Yutaka Michida and Paul Oloo. Prof. Michida distributed presentation that was covering following issues:

1) Standards to be identified
2) Membership issue of ODSBP and its SG

3) Intersessional plans (IODE-23 and 5th ETDMP session)

### Standards to be Identified

1. **Data and Time (MG54 Vol.2)**
2. **Latitude and Longitude**
3. **Units**
4. **Platform/Instruments**
5. **Institutions**
6. **Ontology**
7. **Taxa**
8. **QC flag scheme (MG54 Vol.3)**
9. **Country codes (MG54 Vol.1)**
10. **Other** (ship codes, Communication protocols, GIS standards, geographic names,)

### Membership issue

The Steering Group will be composed, initially, of the former members of the JCOMM/IODE ETDMP Task Team for the Ocean Data Standards Pilot Project, experts from relevant JCOMM bodies, and representatives of IODE NODCs with a special interest in data standards.

In addition representatives of major international oceanographic data management projects will be invited as relevant to the agenda (e.g. GTSP, Argo, SeaDataNet, MyOcean, OceanSITES, IMOS,...), as well as other experts as deemed necessary by the Steering Group.

The Steering Group will designate its own Chair(s). For the first Session the former members of the JCOMM/IODE ETDMP Task Team for the Ocean Data Standards Pilot Project will Chair the meeting.

(TOR for ODSBP)
Membership issue

Members of OOSPP as decided at ETMPP-3 in 2012
Yutaka Michida (IODE, Japan)
Paul Olooo (JCOMM, Kenya)
Richard Crout (IODE?, USA)
Anyuan Xiong (JCOMM, China)

Possible composition of OOSBP-SG
Yutaka Michida
Paul Olooo
Richard Crout
Anyuan Xiong
- experts from JCOMM bodies?
- representatives from NODCs?

Intersessional plans

GOSDP objectives

(i) develop and manage a process for the reception, reviewing and recommending of standards and best practices, based upon the process developed by the Ocean Data Standards Pilot Project;
(ii) actively liaise with all relevant communities, programmes and projects such as Ocean Data Portal, ETMPP Metadata Task Team, SeaDataNet Technical Task Team, GE-EICHH, GE-MIM, SG-OBIS, GTSP, ICSU WDS, GEO/GEOS, ICES;
(iii) promote and monitor the usage of recommended standards and practices in the relevant communities, including those mentioned under (ii);
(iv) regularly review and revise recommended standards and best practices based upon feedback from the relevant communities, including those mentioned under (ii);
(v) maintain an online catalogue of best practices, enabling easy discovery and downloading of these documents by users (e.g. JCOMM Catalogue of practices and standards).
Intersessional plans

Task of ODSEP

(i) advise the IODE Committee on the vision, strategy and implementation of the Ocean Data Standards and Best Practices Project (ODSEP);
(ii) report to the IODE Committee (and ETDP, as appropriate) on the progress of submission, recommendation, publishing and revision of standards and best practices recommended through the Project;
(iii) develop a document on, and maintain the process for evaluating proposals for standards and best practices.
3. ODSBP

Recommendation on ODSBP adopted at IODE-22

The IODE,

Acknowledging that the issue of standards is one of the most critical elements for IODE, and the consolidation of a set of standards will benefit every member of IODE as well as the broader oceanographic and marine meteorology data community,

Considering existing practices in ocean data management and exchange, developed and used by IODE NDCs as well as by international projects, recognizing that interoperability between NDCs will be achieved through the use of internationally endorsed standards and best practices to allow shared use of metadata, data and products, and is key to the successful development of the Ocean Data Portal and similar systems,

Noting with satisfaction the work of the Ocean Data Standards Pilot Project in developing a standards process,

Recommends to close the JCOMM/IODE Ocean Data Standards Pilot Project, recommends to establish the Ocean Data Standards and Best Practices Project with the Terms of Reference as attached in the Annex to this recommendation,
Encourages all IOC Member States, Programmes, relevant organizations and projects, to collaborate with the Ocean Data Standards and Best Practices Project, by submitting standards and best practices for consideration and contributing to the evaluation process.

Urges Member States to play an active role in the Ocean Data Standards and Best Practices Project and to adopt recommended standards at the earliest opportunity.

Invites JCOMM to join the Ocean Data Standards and Best Practices Project.

Annex to Recommendation IODE-XXII.6  TOR for ODSEP

Objectives of the Project
The objective of the Ocean Data Standards and Best Practices Project (ODSBP) is to achieve broad agreement and commitment to adopt a number of standards and best practices related to ocean data management and exchange. This will include the following main tasks:
(i) develop and manage a process for the reception, reviewing and recommending of standards and best practices, based upon the process developed by the Ocean Data Standards Pilot Project;
(ii) actively liaise with all relevant communities, programmes and projects such as Ocean Data Portal, ETDMPP Metadata Task Team, SeaDataNet Technical Task Team, GE-BICH, GE-MIM, SG-OBIS, GTSPP, ICSU-WDS, GEUGEOSS, ICES;
(iii) promote and monitor the usage of recommended standards and practices in the relevant communities, including those mentioned under (ii);
(iv) regularly review and revise recommended standards and best practices based upon feedback from the relevant communities, including those mentioned under (ii);
(v) maintain an online catalogue of best practices, enabling easy discovery and downloading of these documents by users (e.g. JCOMM Catalogue of practices and standards).

Management
The Project will be managed by a Steering Group with the following Terms of Reference:
Prof. Michida stressed the need for more active contribution of the standards and best practices from the IODE community and outside of it. The Group welcomed the efforts of the ODSBP and discussed potential solutions to foster the development and implication of new standards and best practices.

8. Ocean Data Portal outlook

Mr. Tobias Spears presented paper on
9. Metadata outlook

10. Partnership Centre for IODE ODP – the way forward

Dr. Belov reported about the priorities and actions to be implemented during next intersessional period by Partnership Centre for IODE Ocean Data Portal. He noted that following priorities are worked out:

- Follow the decisions and actions worked out by ETDMP and SG-ODP
- Continue to work on portal interfaces for specific user groups
- Continue to work on data implication from and data provision to EuroGOOS/EMODNet, WIS, etc.
- Improvement of the monitoring and reporting tools using common solution (Zabbix)
- Assessment and support of the acting and planned ODP nodes
- Promoting the IODE activities (Ocean Data Portal, OceanTeacher, OceanExpert, OceanDocs, OBIS) among the relevant communities

He informed the meeting about required actions:

- Implementation of complete interoperability package based on the results for metadata from TT ODP and TT Metadata;
- A number of sub-portals for specific user communities; updated search facilities and services;
- Updating training materials and technical documentation on regular basis;
- ODP nodes accreditation requirements document;
- Support of user loyalty and feedback tracking systems;
- Creation of metrics for ODP usability and accessibility;

He also noted the needs of the PC ODP for:

- Budget extension due to multiple responsibilities;
- Staff positions for new directions of work;
- Evaluation of documentation and papers from the ETDMP group (TT ODPs);

The Group welcomed Dr. Belov for the presentation and expressed the importance of the future actions to be done by Partnership Centre for IODE Ocean Data Portal.

11. Established collaboration with other programmes, projects and initiatives

This agenda item was presented by Antonio Novellino, technical expert of EMODNet Physics project, and Mr. Patrick Gorringe, represented as EuroGOOS deputy director. Mr. Novellino presented information about EMODnet Physics project, including goal and objectives, structure and roadmap, and how this can be further linked with IODE activities and its IODE Ocean Data Portal project.
EMODnet - European Marine Observation and Data Network - Physics

Knowledge base for growth and innovation in ocean economy, assembly and dissemination of marine data for seabed mapping
MARE/2012/10 - Lot 6 Physics [SI2.656795]

A Novellino  G Manzella  D Schaep  S Poulquen  L Rickards  P Goringe

Marine Knowledge 2020 and MSFD

Bring together Marine Data from different sources with the aim of
- helping industry, public authorities and researchers find the data and make more effective use of them to develop new products and services.
- improving our understanding of how the seas behave.

Why EU-level action?
- National data do not tell us all we need to know about the seas as a global system connected by shifting winds, seasonal currents and migrating species; analysis at European level is essential.

Marine Strategy Framework Directive (MSFD)
- Comprehensive compulsory monitoring of the Marine environment beyond geographical limits and borders

Marine Strategy Framework Directive (MSFD)

contacts@emodnet-physco.eu
EMODnet Physics - background

fully integrating the separate EU initiatives for marine knowledge.

- building a single gateway to access data from EMODnet, the Copernicus Marine Service and fisheries data made available through the Data Collection Framework;
- using the European Maritime and Fisheries Fund to provide the in-situ component of Copernicus;
- bringing fisheries control data into the equation;
- setting up a single Expert Group to monitor the activities of EMODnet, the Copernicus Marine Service and the Data Collection Framework.
EMODnet Physics objectives in practice:

- Provide a single point of access to marine near real time and achieved data
- Build on existing infrastructures and avoid duplication of efforts
- Improve back office infrastructure for the benefit of the ROOSs and contributing institutes and give visibility and awareness to contributors
- Provide a System of Systems to ensure data access to any user
- Crate added value interoperability layers on top
- Reach new stakeholders and users
- Give feedback and support to contributing institutes and DG MARE
- Contribute to a stronger community on local, regional, European and global scales towards the development of the European Marine Observation and Data Network
EMODnet Physics towards phase 2

The specific tasks of the project are:

1. **Update** the existing data and metadata products and access to the data, metadata and data products already offered by the ur-EMODnet portal
2. **Inclusion of new fixed stations** in the existing ur-EMODnet
3. **Inclusion of Euro-Argo**, by Corolis through MyOcean in-situ TAC Global Component
4. **Inclusion of ice maps** from MyOcean satellite products
5. **Visualization** of the data as sets of measurements (time series)
6. **Seasonal average** of data at pre-defined depths and on grids depending on data coverage
7. **Daily time series** of daily averaged data along coastal strips defined on the base of data coverage
8. **Layers of energy in support to Habitats**
9. Feedback; during the operational mode of the portal statistics will be collected and users must be questioned about their experiences and their assessment of ease-of-use and fitness for purpose of the data.
10. Analysis; preparing an analysis of the lessons learned;
11. Maintenance; keeping the portal operational 24/7 and 365/365.

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**EMODnet Physics**

Existing Infrastructure and approach

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contacts@emodnet-physics.eu
EMODnet Physics

Landing pages
www.emodnet-physics.eu
www.emodnet.eu/physics

Contacts and feedback
contacts@emodnet-physics.eu

Operational Test system
http://151.1.25.219/emodnet2/ ...

Background, meetings, news
www.emodnet-physics.eu/portal
www.emodnet-physics.eu/portal/meetings
www.emodnet-physics.eu/portal/news

Operational System
www.emodnet-physics.eu/map
www.emodnet-physics.eu/map/dashboard
www.emodnet-physics.eu/map/catalogue
www.emodnet-physics.eu/map/service/defaultWMS
www.emodnet-physics.eu/map/service/WSEmodnet2

contacts@emodnet-physics.eu
December 2010
formal start of EMODnet Physics preparatory action
December 2011
access to about 40 stations
June 2012
access to about 350 unique stations
June 2013
access to about 460 stations
July 2013
(formal start of EMODnet Physics II)

May 2014
- Access to more than 550 fixed platforms, 10 fannybox
- Ready to access to more than 1300 platforms (near real time data)
free latest 60 days data
CDI and SeaDataNet

Backoffice infrastructure
Linking RT and historical data

- Different users have different needs
- The user must be informed about data quality
- The user must be informed about any data available
- It is the user who decide what to access/download/use

EMODnet Physics & ROOSs

- Identify and establish links to new data providers and platforms
- Optimize the links between the different data providers
- Identify any possible issues in relation to data sharing from potential new data originators
- Harmonization of platform names, common vocabularies, improve the readiness and functionalities in the current system i.e. Improve the back-end infrastructure
- Prepare the current regional data portals to handle data from other platforms i.e. gliders, IF Radars etc. (if not already done)
- Optimize the data flow and visibility of European FerryBox data
Mr. Gorringe expressed the interest in collaboration with IODE Ocean Data Portal as a data platform for EMODnet Physics and hoped that number of current data providers and stakeholders will increase that will benefit both IODE and ODP.

The Group welcomed Mr. Novellino and Mr. Gorringe for their participation in the meeting and proposed TT on ODP to work out actions to their work plan for the linkage with EMODnet Physics. The Group also stressed the importance of new data contributions to the IODE Ocean Data Portal.

Dr. Belov made a short online demonstration of the IODE Ocean Data Portal and its present data providers and data sets. The demonstration was followed by the discussion on bridging with IODE via Ocean Data Portal and way forward connecting, in particular, European data to the ODP. The Group requested Dr. Belov and Mr. Gorringe and Mr. Novellino discuss detailed technical aspects via email after the meeting.

12. Status of ODP interoperability arrangements

This agenda item was presented by Dr. Belov. He informed the Group about current status of the ODP interoperability package.
Interoperability

"Interoperability – ability of two and more systems or components to exchange information and to use information that has been exchanged”

IEEE Computer Dictionary

Interoperability categories

- **semantic**: allowing to access similar classes of objects and services across multiple sites, with multilinguality of content as one specific aspect
- **functional / pragmatic**: based on a common set of functional primitives or on a common set of service definitions
- **syntactic**: allowing the interchange of metadata and protocol elements
- **technical/basic**: common tools, interfaces and infrastructure providing uniformity for navigation and access
Semantic interoperability

- Common parameters dictionary
  Systems uses different naming and other characteristics of parameters. Controlled name, description, unit of measure, method and reflection of other properties of parameters need to be adopted

- Common vocabularies/ontologies
  Controlled keywords

- Other common dictionaries
  Organizations, projects, platforms, instruments, etc.

Semantic interoperability

- Data identification
- Metadata identification
- Data granularity
  Systems usually using different data model and rules to aggregate data for exchange!
- Metadata attributes
  There is a number of metadata attributes (classes) from ISO 19115/19139 when value of them can be assigned in various ways: bounding boxes, temporal extent, etc.
Syntactic interoperability

- Metadata
  IODE distributed system based on ODP is based on metadata-driven approach

- Data delivery formats
  It is required to use agreed data model (NetCDF, ASCII, etc.)

Cooperation with other projects, programmes and initiative

a) Metadata exchange
b) Data discovery
c) Data access and delivery to users
d) System monitoring and report
Cooperation with SeaDataNet

Tasks for the implementation phase include:

- common vocabularies adoption
- discovery metadata harmonization for ODP-SDN exchange
- harmonization of user identification and role between systems
- technical procedures and tools for ODP-SDN interaction

Cooperation with SeaDataNet

Technical scenarios. Scenario 1: Metadata and unrestricted data set exchange
It was noted that cooperation with SeaDataNet has not been moved from Scenario 1 (metadata only exchange) due to data restrictions in SeaDataNet.

Cooperation with OBIS

Initial proposal is to arrange discussion platform with OBIS and ODP on following items:
- Metadata compatibility and interoperability;
- Code lists and vocabularies;
- Potential service-to-service interaction scheme;
- ODP V2 toolkit and OBIS software harmonization issues (maps, etc).

It was proposed to discuss the cooperation with OBIS with following options.
Dr. Belov informed that cooperation with WIS has been discussed in DMCG meeting in January 2014 held in WMO headquarters, Geneva. WIS is considering ODP as a bridging activity for delivering ocean data. But this is limited with small amounts of data providers in IODE connected to ODP.
Cooperation with GEOSS

Cooperation with GEOSS within the EuroGEOSS (http://www.eurogeoss.eu) broker system includes metadata exchange via CSW.

The ODP provided metadata is required to have URL on data.

Results of the interoperability tests can be found on http://www.eurogeoss-broker.eu

It was stated that ODP communication registry has been compiled by Tobias Spears. It contains actual information on the status of each collaborating activity (project, program or initiative).
Conclusions

ODP has means of connecting and providing an access to IODE metadata (ISO 19115/19139 based) and data from related projects, programmes and initiatives:
- GeoNetwork software (harvesting and catalogue services);
- ISO 19139 metadata services;

ODP currently has providing access to 11400 datasets from other projects:
SeaDataNet (around 390 datasets) and WIS (over 11000).
http://www.pcmdi-dataportal.net/portal/portal/odp-theme/data/relatedprojects

ODP metadata (selection) can be found in EuroGEOSS Brokering Service portal -
http://www.eurogeoss.eu/broker/Pages/AbouttheEuroGEOSSBroker.aspx

Dr. Belov concluded his presentation about the status of implication of ODP interoperability arrangements.

13. Prospective 2015

This agenda item was presented by Tobias Spears, TT-ODP lead and Sergey Belov. Mr. Spears presented a compiled spreadsheet, describing core activities of the Group based on results and priorities discussed during the meeting. See Annex IV for more details.

14. Interoperability model – metadata, standards and interfaces

This agenda item was presented by Tobias Spears. He proposed following actions to be implemented:

- Metadata: Develop the metadata strategy for ODP. Initially, produce a minimal ODP metadata, then map to ISO 19115-1/ISO 19139

  ODP-TT and MD-TT to develop minimal view of ODP metadata from ODP database (based on WMO core, SDN CDI (ISO 19115:2003), ISO 19115-2). ISO 19115-1 is a future activity due to major changes that have occurred in structure and positioning of some elements. This will produce ISO 19139 migration guide and contribute to interoperability implementation and specifications.

  Breakdown: WMO core profile and SDN (Partnership Centre with support from ODP-TT, MD-TT); ISO 19115-2 (ODP-TT, MD-TT)

- Standards:
Develop ontologies between parameter lists and groupings supported by ODP and partners (ODP internal code lists, GCMD descriptive keywords, WMO code lists, etc) and develop/implement a maintenance/governance process.

- Interfaces:
  - PC for ODP to modernize netCDF implementation (currently outdated) taking into account NOAA netCDF templates as potential models.
  - PC for ODP to consolidate ODP search facilities (reduce the number of query points from three to one).
  - PC for ODP to enhance ODP portal interface by including map services from SeaDataNet (including link back to source).
  - PC for ODP to enhance ODP portal interface by including map services from EMODnet (including link back to source).

The Group discussed proposed actions and recommended to included them in the ETDMP work plan.

### 15. Work plan for next inter-sessional period

**Work plan for the Task Team on ODS**

<table>
<thead>
<tr>
<th>Action</th>
<th>Task</th>
<th>Deadline</th>
<th>Who</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Develop standards/best practices for submitted proposals in the marine community through the IODE/JCOMM Standards Process as outlined by JCOMM-IV and IODE-XXI</td>
<td>Continuous</td>
<td>YM, PO</td>
</tr>
<tr>
<td>2</td>
<td>Examine further the candidates of standards for ‘Lat, Lon, Alt.’ (based on ISO 6709); and units (based on SI), and seek appropriate persons and/or organizations that make proposals.</td>
<td>March 2013</td>
<td>YM, PO, Greg Reed</td>
</tr>
<tr>
<td>3</td>
<td>Encourage SeaDataNet, GE-BICH, GTSPP, and MyOcean and other relevant bodies to submit their proposals to ODS. (Prepare and distribute letters).</td>
<td>Continuous</td>
<td>YM, Secretariat</td>
</tr>
<tr>
<td>4a</td>
<td>Encourage, by preparing and distributing an invitation for submissions, JCOMM and IODE communities to submit proposals of standards for, Thematic codes like platform type, Geo-Area (IHB) and instrument type; Standard vocabularies for parameters, institutions, platforms/platform types and instruments; unique data tag, data exchange format,</td>
<td>Continuous</td>
<td>TT</td>
</tr>
</tbody>
</table>
From agenda item 3.3:

The Expert Team stressed that the QARTOD manuals referred to above could be excellent candidates for submission to the ODSBP.

The Expert Team recommended to include QARTOD in the list of relevant communities to be addressed by ODSBP, as referred to in the draft terms of reference of the ODSBP (see agenda item 3.1)

WORK PLAN FOR THE TASK TEAM ON METADATA

<table>
<thead>
<tr>
<th>Action</th>
<th>Task</th>
<th>Deadline</th>
<th>Who</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Liaise with ODS and ODP Task Teams on a regular and repeating basis</td>
<td>Continuing</td>
<td>MD-TT, ODS-TT, ODP-TT, ETDMP</td>
</tr>
<tr>
<td></td>
<td>Task Description</td>
<td>Timeframe</td>
<td>Chair</td>
</tr>
<tr>
<td>---</td>
<td>----------------------------------------------------------------------------------</td>
<td>----------------</td>
<td>----------------</td>
</tr>
<tr>
<td>2</td>
<td>Review and compare priority vocabularies</td>
<td>Continuing</td>
<td>MD-TT</td>
</tr>
<tr>
<td>2(i)</td>
<td>Review and compare EDMO/SDN organizations list and ODP organizations list table structure; identify common elements; recommend required elements for identifying organizations; compare list contents, if resources allow</td>
<td>Dec 2012</td>
<td>MD-TT</td>
</tr>
<tr>
<td>2(ii)</td>
<td>Identify specific concerns related to platforms identification management between SDN, ICES, and ODP.</td>
<td>Dec 2012</td>
<td>Collins, Iona (for SDN), others as needed</td>
</tr>
<tr>
<td>2(iii)</td>
<td>Review and compare EDMO/SDN platforms list and ODP platforms list table structure; identify common elements; recommend required elements for identifying platforms; compare list contents, if resources allow</td>
<td></td>
<td>MD-TT</td>
</tr>
<tr>
<td>2(iv)</td>
<td>Review and compare EDMO/SDN instruments list and ODP instruments list table structure; identify common elements; recommend required elements for identifying instruments; compare list contents, if resources allow</td>
<td></td>
<td>MD-TT</td>
</tr>
<tr>
<td>2(v)</td>
<td>Review and compare EDMO/SDN keywords list and ODP keywords list table structure; identify common elements; recommend required elements for identifying keywords; compare list contents, if resources allow</td>
<td></td>
<td>MD-TT</td>
</tr>
<tr>
<td>2(vi)</td>
<td>Review and compare EDMO/SDN projects list and ODP projects list table structure; identify common elements; recommend required elements for identifying projects; compare list contents, if resources allow</td>
<td></td>
<td>MD-TT</td>
</tr>
<tr>
<td>3</td>
<td>Recommend ways to use XML-based vocabulary management tools (e.g., SKOS, MMI)</td>
<td>Continuing</td>
<td>MD-TT</td>
</tr>
<tr>
<td>3(i)</td>
<td>MD-TT members familiarize with functionality of SKOS, MMI and/or other xml-based frameworks.</td>
<td>Continuing</td>
<td>MD-TT</td>
</tr>
<tr>
<td>3(ii)</td>
<td>Identify which, if any, of priority vocabularies listed in 2 are represented using standard XML markup (in SKOS, OWL, etc.)</td>
<td>Concurrent with review for each vocabulary in 2.</td>
<td>MD-TT</td>
</tr>
</tbody>
</table>

From agenda item 4.1:
The **Expert Team recommended** that attention should be given to providing a “clearinghouse service” that will inform users about existing controlled vocabularies and similar authority systems so as to avoid that groups will continue creating new such systems.

**WORK PLAN FOR THE TASK TEAM FOR THE IODE OCEAN DATA PORTAL**

<table>
<thead>
<tr>
<th>Action</th>
<th>Task</th>
<th>Deadline</th>
<th>Who</th>
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</thead>
<tbody>
<tr>
<td><strong>Governance</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Review the ToR for SG-ODP and Partnership centre for IODE ODP</td>
<td>February 2013</td>
<td>ODP-TT, SG-ODP</td>
</tr>
<tr>
<td>2</td>
<td>Liaise and collaborate with other groups in order to establish strong links with existing regional and global initiatives</td>
<td>Continuous</td>
<td>ODP-TT</td>
</tr>
<tr>
<td><strong>ODP management</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Describe the profile (responsibilities, tasks and competences) of the ODP project manager. For consideration at IODE-XXII and IOC GA</td>
<td>December 2012</td>
<td>ODP-TT – SG-ODP – IODE PO</td>
</tr>
<tr>
<td>4</td>
<td>Monitor progress on the ODP 2012-2013 workplan and advice the SG-ODP on changes if necessary</td>
<td>Continuous</td>
<td>ODP-TT</td>
</tr>
<tr>
<td>5</td>
<td>Assess the deployment of the ODP nodes with assistance of the Partnership Centre for IODE ODP</td>
<td>1Q 2014</td>
<td>ODP-TT, IODE PO, Partnership Centre for IODE ODP</td>
</tr>
<tr>
<td><strong>Standards</strong></td>
<td></td>
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<tr>
<td>6</td>
<td>Liaise with ODS TT on standards and best practices related topics; identify, prioritize, and assign work activities resulting from discussions</td>
<td>Continuous, Quarterly webex calls</td>
<td>ODP-TT, ODS-TT</td>
</tr>
<tr>
<td><strong>Metadata</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>7</td>
<td>Liaise with Metadata TT on vocabularies and metadata related topics; identify, prioritize, and assign work activities resulting from discussions</td>
<td>Continuous, Quarterly webex calls</td>
<td>ODP-TT, MD-TT, Partnership Centre for IODE ODP</td>
</tr>
<tr>
<td>8</td>
<td>Revise and distribute the document on interoperability and migration of the ODP metadata into the ISO 19139 encoding in coordination with ETDMP TT for Metadata</td>
<td>January 2013</td>
<td>ODP-TT, MD-TT, Partnership Centre for IODE ODP</td>
</tr>
<tr>
<td><strong>Data providers</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Identify and network with potential new data providers (projects, programmes</td>
<td>Nov 2012, and continuous</td>
<td>ODP-TT, SG-ODP</td>
</tr>
<tr>
<td></td>
<td>Task Description</td>
<td>Target Date</td>
<td>Responsible Parties</td>
</tr>
<tr>
<td>---</td>
<td>----------------------------------------------------------------------------------</td>
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<td>---------------------------------------------------------</td>
</tr>
<tr>
<td>9(i)</td>
<td>Identify and assess the contribution of the data from SeaDataNet</td>
<td>February 2013</td>
<td>ODP-TT, Partnership Centre for IODE ODP</td>
</tr>
<tr>
<td>9(ii)</td>
<td>Identify and assess the contribution of the data from EuroGOOS</td>
<td>February 2013</td>
<td>ODP-TT, Partnership Centre for IODE ODP</td>
</tr>
<tr>
<td>9(iii)</td>
<td>Identify and assess contributions from: NMDIS, NODC of Russia, US NODC, ISDM, IMOS, OBIS and other existing data providers</td>
<td>February 2013</td>
<td>ODP-TT, Partnership Centre for IODE ODP</td>
</tr>
<tr>
<td>9(iv)</td>
<td>Prepare a document “Technical specification on interaction with SeaDataNet, WIS, EuroGOOS, OBIS and ESIMO” Distributed the document within IODE, JCOMM, SeaDataNet, WIS, EuroGOOS and ESIMO.</td>
<td>March 2013</td>
<td>ODP-TT, Partnership centre for IODE ODP</td>
</tr>
</tbody>
</table>

**ODP Portal**

<table>
<thead>
<tr>
<th></th>
<th>Task Description</th>
<th>Target Date</th>
<th>Responsible Parties</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>Identify and interact with the ODP user community (feedback/bug tracking)</td>
<td>Continuous</td>
<td>ODP-TT</td>
</tr>
<tr>
<td>11</td>
<td>Provide specifications for the ODP portal interface (features, functionalities, appearance, and user-friendliness – manual on how to use the portal)</td>
<td>December 2012</td>
<td>ODP-TT – SG-ODP</td>
</tr>
</tbody>
</table>

**Capacity Building**

<table>
<thead>
<tr>
<th></th>
<th>Task Description</th>
<th>Target Date</th>
<th>Responsible Parties</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>Revise and distribute the technical documentation on the ODP V2 toolkit components</td>
<td>March 2013</td>
<td>ODP-TT, Partnership Centre for IODE ODP</td>
</tr>
<tr>
<td>13</td>
<td>Identify and prioritize ODP training requirements</td>
<td>March 2013</td>
<td>ODP-TT, SG-ODP</td>
</tr>
<tr>
<td>14</td>
<td>Prepare “Manuals and Guides on IODE ODP”</td>
<td>Draft version should be presented at IODE-XXII (March 2013) Final version, June 2013</td>
<td>ODP-TT, Partnership centre for IODE ODP, SG-ODP</td>
</tr>
<tr>
<td>15</td>
<td>Develop documentation and guidance material for the training courses on ODP regional nodes for ODINs with assistance of the Partnership Centre for IODE ODP</td>
<td>End of 2013</td>
<td>ODE PO (OTA), ODP-TT, Partnership Centre for IODE ODP</td>
</tr>
</tbody>
</table>

From agenda item 5.3:

**The Expert Team agreed** on the need to develop detailed Terms of Reference for the ODP Project Manager.
The Expert Team stressed the importance of presenting a well-populated portal to IODE-XXII. It was recognized that, unless this would be achieved, the future of ODP would be uncertain.

From agenda item 5.5:

The Expert Team agreed on the following actions: (i) present linkage between SDN and ODP at IODE-XXII (this may allow direct link to data, provided that the new SDN ISO profile is available before the end of 2012); (ii) transfer of user credentials creating a “circle of trust” between ODP and SDN (after IODE-XXII).

From agenda item 6:

The Expert Team requested Dr Belov and Dr Gorringe to implement the necessary actions to populate ODP with EuroGOOS data by IODE-XXII.

From agenda item 8:

The Expert Team welcomed the pending establishment of the Partnership Centre for IODE-ODP and thanked the Russian Federation for the kind offer.

16. ADOPTION OF THE REPORT

The meeting agreed to adopt only the work plan in plenary and instructed the Secretariat to finalize the full report after the meeting and to adopt it by email. It was agreed that the draft version will be prepared and will be circulated to the ETDMP members for their final review and edits.

17. DATE AND PLACE OF THE NEXT SESSION

The Chair introduced this Agenda Item. The proposal is to have our next meeting in spring-summer of 2016 at the IOC project office for IODE in Ostend (Belgium).

18. CLOSING OF THE SESSION

The Chair thanked the Members of the Group for their active participation in this Session.

The Chair closed the meeting on 26 June 2014 at 15:07.
# ANNEX I - Meeting agenda

## Monday, 23 June

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Speaker</th>
</tr>
</thead>
<tbody>
<tr>
<td>09:00</td>
<td>Opening of the Session</td>
<td></td>
</tr>
<tr>
<td>09:10</td>
<td>Adoption of the agenda</td>
<td></td>
</tr>
<tr>
<td>09:20</td>
<td>Working and practical arrangements</td>
<td></td>
</tr>
<tr>
<td>09:30</td>
<td>ETDMP overall progress report for 2012 - 2014</td>
<td>Sergey Belov</td>
</tr>
<tr>
<td>10:30</td>
<td><strong>Coffee break</strong></td>
<td></td>
</tr>
<tr>
<td>11:00</td>
<td>Task Team for ODS - Progress report for 2012 - 2014</td>
<td>Yutaka Michida</td>
</tr>
<tr>
<td>11:30</td>
<td>Discussions <em>(key issues, focus subjects, priorities, etc.</em>)</td>
<td></td>
</tr>
<tr>
<td>12:30</td>
<td><strong>Lunch break</strong></td>
<td></td>
</tr>
<tr>
<td>13:30</td>
<td>Task Team for the IODE ODP - Progress report for 2012 - 2014</td>
<td>Tobias Spears</td>
</tr>
<tr>
<td>14:30</td>
<td><strong>Coffee break</strong></td>
<td></td>
</tr>
<tr>
<td>15:00</td>
<td>Discussions</td>
<td></td>
</tr>
<tr>
<td>15:30</td>
<td>Partnership Centre for IODE ODP report</td>
<td>Sergey Belov</td>
</tr>
<tr>
<td>16:00</td>
<td>Task Team for Metadata - Progress report for 2012 - 2014</td>
<td>Donald Collins (by WebEx)</td>
</tr>
<tr>
<td>16:30</td>
<td>– Discussions</td>
<td></td>
</tr>
<tr>
<td>17:00</td>
<td>– Discussions</td>
<td></td>
</tr>
</tbody>
</table>

## Tuesday, 24 June

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Speaker</th>
</tr>
</thead>
<tbody>
<tr>
<td>09:00</td>
<td>Ocean Data Standards and Best Practices Project (ODSBP) outlook. <em>(Strategic plan, candidates and liaison with relevant communities (ODIP, ICSU WDS, GEO/GEOSS, ICES, etc.)</em>)</td>
<td>Yutaka Michida</td>
</tr>
<tr>
<td>10:00</td>
<td>Discussions</td>
<td></td>
</tr>
<tr>
<td>10:30</td>
<td><strong>Coffee break</strong></td>
<td></td>
</tr>
<tr>
<td>11:00</td>
<td>Ocean Data Portal outlook <em>(Strategic plan, ODP nodes expansion, survey on ODP technology and direction, ODP node certification and processes, perspective focus regions)</em></td>
<td>Tobias Spears</td>
</tr>
<tr>
<td>12:00</td>
<td>Partnership Centre for IODE ODP –</td>
<td>Sergey Belov</td>
</tr>
<tr>
<td>Time</td>
<td>Activity</td>
<td>Presenter/Details</td>
</tr>
<tr>
<td>--------</td>
<td>--------------------------------------------------------------------------</td>
<td>--------------------------------------------------------</td>
</tr>
<tr>
<td>12:30</td>
<td>Lunch break</td>
<td></td>
</tr>
<tr>
<td>13:30</td>
<td>Discussions</td>
<td></td>
</tr>
<tr>
<td>14:00</td>
<td>Metadata outlook. (ISO 19139, netCDF, SKOS, DOI and vocabs)</td>
<td>Donald Collins (by WebEx)</td>
</tr>
<tr>
<td>14:30</td>
<td>Coffee break</td>
<td></td>
</tr>
<tr>
<td>15:00</td>
<td>Established collaboration with other programmes, projects and initiatives. (ODIP, RDA, others)</td>
<td>Yutaka Michida, Tobias Spears, Donald Collins (by WebEx)</td>
</tr>
<tr>
<td>15:30</td>
<td>Status of ODP interoperability arrangements. (SeaDataNet, WIS, EuroGOOS, EMODnet, etc.)</td>
<td>Sergey Belov</td>
</tr>
<tr>
<td>16:00</td>
<td>Discussions</td>
<td></td>
</tr>
<tr>
<td>17:00</td>
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</tr>
</tbody>
</table>

**Wednesday, 25 June**

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Presenter/Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>09:00</td>
<td>SeaDataNet (overview and way to collaboration with IODE/ODP)</td>
<td>Peter Thijsse</td>
</tr>
<tr>
<td>09:30</td>
<td>EuroGOOS and EMODnet Physics (overview and way to collaboration with IODE/ODP)</td>
<td>Antonio Novellino/ Patrick Gorringe</td>
</tr>
<tr>
<td>10:00</td>
<td>Demonstration of the ODP portal and website</td>
<td>Sergey Belov</td>
</tr>
<tr>
<td>10:30</td>
<td>Coffee break</td>
<td></td>
</tr>
<tr>
<td>11:00</td>
<td>Discussion on bridging with IODE via Ocean Data Portal and way forward connecting, in particular, European data to the ODP</td>
<td>All</td>
</tr>
<tr>
<td>12:30</td>
<td>Lunch break</td>
<td></td>
</tr>
<tr>
<td>13:30</td>
<td>Prospective 2015 (short-term plan to establish two-way data connection with SeaDataNet, EMODnet and EuroGOOS)</td>
<td>Tobias Spears, Peter Thijsse, Antonio Novellino, Patrick Gorringe</td>
</tr>
</tbody>
</table>
### Thursday, 26 June

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Presenter</th>
</tr>
</thead>
<tbody>
<tr>
<td>09:00</td>
<td>Work plan for next inter-sessional period – priorities</td>
<td>Sergey Belov</td>
</tr>
<tr>
<td>09:30</td>
<td>Task Team for ODS. Work plan for next inter-sessional period</td>
<td>Yutaka Michida</td>
</tr>
<tr>
<td>10:30</td>
<td><em>Coffee break</em></td>
<td></td>
</tr>
<tr>
<td>11:00</td>
<td>Task Team for ODP. Work plan for next inter-sessional period</td>
<td>Tobias Spears</td>
</tr>
<tr>
<td>12:30</td>
<td><em>Lunch break</em></td>
<td></td>
</tr>
<tr>
<td>13:00</td>
<td>Task Team for Metadata. Work plan for next inter-sessional period</td>
<td>Donald Collins</td>
</tr>
<tr>
<td>14:00</td>
<td>Other business</td>
<td></td>
</tr>
<tr>
<td>14:30</td>
<td><em>Coffee break</em></td>
<td></td>
</tr>
<tr>
<td>15:00</td>
<td>Date and place of next session</td>
<td></td>
</tr>
<tr>
<td>15:30</td>
<td>Closing of the session</td>
<td></td>
</tr>
</tbody>
</table>
ANNEX II - LIST OF PARTICIPANTS

CORE MEMBER

Dr Sergey BELOV (Chair)
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INVITED EXPERT

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Fax: +32-59-79 5220
Email: p.pissierssens@unesco.org
## ANNEX III - LIST OF ACRONYMS

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AODC</td>
<td>Australian Oceanographic Data Centre</td>
</tr>
<tr>
<td>ASAP</td>
<td>Automated Shipboard Aerological Programme</td>
</tr>
<tr>
<td>ASCII</td>
<td>American Standard Code for Information Interchange</td>
</tr>
<tr>
<td>BODC</td>
<td>British Oceanographic Data Centre</td>
</tr>
<tr>
<td>BUFR</td>
<td>Binary Universal Form for the Representation of meteorological data</td>
</tr>
<tr>
<td>CDI</td>
<td>SeaDataNET Common Data Index</td>
</tr>
<tr>
<td>CSR</td>
<td>Cruise Summary Report</td>
</tr>
<tr>
<td>CSV</td>
<td>Comma Separated Values</td>
</tr>
<tr>
<td>DBCP</td>
<td>Data Buoy Cooperation Panel</td>
</tr>
<tr>
<td>DBMS</td>
<td>DataBase Management System</td>
</tr>
<tr>
<td>DBCP</td>
<td>Data Buoy Cooperation Panel</td>
</tr>
<tr>
<td>DCPC</td>
<td>Data Collection and Production Centre (of WIS)</td>
</tr>
<tr>
<td>DIF</td>
<td>Directory Interchange Format</td>
</tr>
<tr>
<td>DMCG</td>
<td>JCOMM Data Management Coordination Group</td>
</tr>
<tr>
<td>DNA</td>
<td>IODE Designated National Agency</td>
</tr>
<tr>
<td>E2EDM</td>
<td>End-to-End Data Management</td>
</tr>
<tr>
<td>EDIOS</td>
<td>European Directory of the Ocean-observing System</td>
</tr>
<tr>
<td>EDMED</td>
<td>European Directory of Marine Environmental Data</td>
</tr>
<tr>
<td>EDMERP</td>
<td>European Directory of Marine Environmental Research Projects</td>
</tr>
<tr>
<td>ETDMP</td>
<td>JCOMM/IODE Expert Team on Data Management Practices</td>
</tr>
<tr>
<td>ETMC</td>
<td>JCOMM Expert Team on Marine Climatology</td>
</tr>
<tr>
<td>FTP</td>
<td>File Transfer Protocol</td>
</tr>
<tr>
<td>GBIF</td>
<td>Global Biodiversity Information Facility</td>
</tr>
<tr>
<td>GCC</td>
<td>Global Collecting Centre</td>
</tr>
<tr>
<td>GCMD</td>
<td>Global Change Master Directory</td>
</tr>
<tr>
<td>GE-BICH</td>
<td>IODE Group of Experts on Biological and Chemical Data Management and Exchange Practices</td>
</tr>
<tr>
<td>GHRSST</td>
<td>Global High-Resolution Sea Surface Temperature</td>
</tr>
<tr>
<td>GIS</td>
<td>Geographic Information System</td>
</tr>
<tr>
<td>GISC</td>
<td>Global Information System Centres (of WIS)</td>
</tr>
<tr>
<td>GLOSS</td>
<td>Global Sea Level Observing System</td>
</tr>
<tr>
<td>GOSUD</td>
<td>Global Ocean Surface Underway Data Pilot Project</td>
</tr>
<tr>
<td>GTS</td>
<td>Global Telecommunication System</td>
</tr>
<tr>
<td>GTSPPP</td>
<td>Global Temperature and Salinity Profile Programme</td>
</tr>
<tr>
<td>HTTP</td>
<td>Hypertext Transfer Protocol</td>
</tr>
<tr>
<td>ICOADS</td>
<td>International Comprehensive Ocean-Atmosphere Data Set (USA)</td>
</tr>
<tr>
<td>IHB</td>
<td>International Hydrographic Bureau</td>
</tr>
<tr>
<td>IMOS</td>
<td>Integrated Marine Observing System (Australia)</td>
</tr>
<tr>
<td>IOC</td>
<td>Intergovernmental Oceanographic Commission of UNESCO</td>
</tr>
<tr>
<td>IOCCP</td>
<td>IOC International Ocean Carbon Coordination Project</td>
</tr>
<tr>
<td>IODE</td>
<td>International Oceanographic Data and Information Exchange (of IOC)</td>
</tr>
<tr>
<td>ISDM</td>
<td>Integrated Science Data Management (Canada)</td>
</tr>
<tr>
<td>ISO</td>
<td>International Organization for Standardization</td>
</tr>
<tr>
<td>JCOMM</td>
<td>Joint WMO-IOC Technical Commission for Oceanography and Marine Meteorology</td>
</tr>
<tr>
<td>JCOMMOPS</td>
<td>JCOMM in situ Observing Programme Support Centre</td>
</tr>
<tr>
<td>MCP</td>
<td>Marine Community Profile</td>
</tr>
<tr>
<td>MEDI</td>
<td>Marine Environmental Data Inventory (IODE)</td>
</tr>
<tr>
<td>META-T</td>
<td>Water Temperature Metadata Pilot Project</td>
</tr>
<tr>
<td>NDBC</td>
<td>NOAA National Data Buoy Center (USA)</td>
</tr>
<tr>
<td>NetCDF</td>
<td>Network Common Data Form</td>
</tr>
<tr>
<td>NMDIS</td>
<td>National Marine Data and Information Service (China)</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Description</td>
</tr>
<tr>
<td>--------------</td>
<td>-------------</td>
</tr>
<tr>
<td>NODC</td>
<td>IODE National Oceanographic Data Centre</td>
</tr>
<tr>
<td>OBIS</td>
<td>Ocean Biogeographic Information System (IOD)</td>
</tr>
<tr>
<td>OceanSITES</td>
<td>OCEAN Sustained Interdisciplinary Timeseries Environment observation System</td>
</tr>
<tr>
<td>ODAS</td>
<td>Ocean Data Acquisition System</td>
</tr>
<tr>
<td>ODASMS</td>
<td>ODAS Metadata Service</td>
</tr>
<tr>
<td>ODINBlackSea</td>
<td>Ocean Data and Information Network for the Black Sea region</td>
</tr>
<tr>
<td>ODP</td>
<td>IODE Ocean Data Portal</td>
</tr>
<tr>
<td>ODS</td>
<td>Ocean Data Standards</td>
</tr>
<tr>
<td>OGC</td>
<td>Open Geospatial Consortium</td>
</tr>
<tr>
<td>OPeNDAP</td>
<td>Open-source Project for a Network Data Access Protocol</td>
</tr>
<tr>
<td>QC</td>
<td>Quality Control</td>
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<tr>
<td>SDN</td>
<td>SeaDataNet</td>
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<tr>
<td>SOA</td>
<td>State Oceanic Adminsitration (China)</td>
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<tr>
<td>SOT</td>
<td>JCOMM Ship Observations Team</td>
</tr>
<tr>
<td>THREDDS</td>
<td>Thematic Real-time Environmental Distributed Data Services</td>
</tr>
<tr>
<td>TT</td>
<td>Task team</td>
</tr>
<tr>
<td>VOS</td>
<td>Voluntary Observing Ship</td>
</tr>
<tr>
<td>W3C</td>
<td>World Wide Web Consortium</td>
</tr>
<tr>
<td>WDC</td>
<td>World Data Centre (ICSU)</td>
</tr>
<tr>
<td>WESTPAC</td>
<td>IOC Sub-Commission for the Western Pacific</td>
</tr>
<tr>
<td>WIGOS</td>
<td>WMO Integrated Global Observing System</td>
</tr>
<tr>
<td>WIS</td>
<td>WMO Information System</td>
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<td>WMO</td>
<td>World Meteorological Organization</td>
</tr>
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<td>WMS</td>
<td>Web Map Services</td>
</tr>
<tr>
<td>XBT</td>
<td>Expendable Bathythermograph</td>
</tr>
<tr>
<td>XML</td>
<td>Extensible Markup Language</td>
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## ANNEX IV - ETDMP PRIORITIES

### ODP-TT Updates from ETDMP-III

<table>
<thead>
<tr>
<th>Action</th>
<th>Task</th>
<th>Deadline</th>
<th>Who</th>
<th>Status</th>
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<tr>
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<td>Governance</td>
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<tr>
<td>2</td>
<td>Liaise and collaborate with other groups in order to establish strong links with existing regional and global initiatives</td>
<td>Continuous</td>
<td>ODP-TT</td>
<td>Ongoing - ODP is currently participating in the Ocean Data Interoperability Platform (ODIP) and contributing to Prototype 1 development (metadata and data interoperability between ODP, SDN, and others via the GEOSS Common Broker infrastructure). In addition, the ODP team is working directly with SeaDataNet, WIS, and EuroGOOS directly in order to expand interoperability arrangements with the programs.</td>
</tr>
<tr>
<td></td>
<td>Describe the profile (responsibilities, tasks and competences) of the ODP project manager, For consideration at IODE-XXII and IOC GA</td>
<td>Дек.12</td>
<td>ODP-TT – SG-ODP – IODE PO</td>
<td><strong>Complete</strong> - The profile for the ODP project manager was developed, presented, accepted, and the position filled (T. Spears).</td>
</tr>
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</tr>
<tr>
<td>4</td>
<td>Monitor progress on the ODP 2012-2013 workplan and advice the SG-ODP on changes if necessary</td>
<td>Continuous</td>
<td>ODP-TT</td>
<td><strong>Ongoing</strong> - The ODP-TT workplan has been rationalized to an extent with the ODP workplan developed under the SG-ODP (<a href="http://www.iode.org/index.php?option=com_oe&amp;task=viewDocumentRecord&amp;docID=6039">http://www.iode.org/index.php?option=com_oe&amp;task=viewDocumentRecord&amp;docID=6039</a>).</td>
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<td>Standards</td>
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<tr>
<td>5</td>
<td>Assess the deployment of the ODP nodes with assistance of the Partnership Centre for IODE ODP</td>
<td>Ongoing - Progress in this area has been slow, but progress continues to be made. Regional nodes have been implemented for SNDM Argentina and ODINWESTPAC, and interoperability arrangements have been implemented with WIS and SeaDataNet. The ODP node accreditation process has not been completed, so the key monitoring tools are the data provider and resources reports included in the global ODP portal. Although some nodes appear to be functioning well, there are consistent accessibility issues with some nodes, while others are accessible but not making significant, new contributions. Interoperability arrangements with SeaDataNet and other programs have not been evaluated in detail.</td>
<td></td>
<td></td>
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<tr>
<td>6</td>
<td>Liaise with ODS TT on standards and best practices related topics; identify, prioritize, and assign work activities resulting from discussions</td>
<td>Continuous, Quarterly webex calls</td>
<td>ODP-TT, ODS-TT</td>
<td><strong>Not completed</strong> - There is a lack of activity in this area and while attending a recent workshop, an attempt was made to promote the ODS process as a mechanism for expanding into other domains of research. During a recent workshop, a comment was made that the process is too long and complex, and the group favored simply developing and publishing the standard and leave to others’ discretion whether or not they would use the standard.</td>
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</tr>
<tr>
<td>7</td>
<td>Liaise with Metadata TT on vocabularies and metadata related topics; identify, prioritize, and assign work activities resulting from discussions</td>
<td>Continuous, Quarterly webex calls</td>
<td>ODP-TT, MD-TT, Partnership Centre for IODE ODP</td>
<td><strong>Not completed</strong> - There has been periodic follow-up with MD-TT, but operational workloads and other competing priorities have impacted the delivery of this task.</td>
</tr>
<tr>
<td>8</td>
<td>Revise and distribute the document on interoperability and migration of the ODP</td>
<td>янв.13</td>
<td>ODP-TT, MD-TT, Partnership Centre for IODE ODP</td>
<td><strong>Not completed</strong> - There has been periodic follow-up with MD-TT, but operational workloads and other competing priorities have impacted the delivery of this task.</td>
</tr>
<tr>
<td></td>
<td>Identify and network with potential new data providers (projects, programmes and other communities)</td>
<td>Nov 2012, and continuous</td>
<td>ODP-TT, SG-ODP</td>
<td>Ongoing - A tracking sheet has been developed and potential data providers were identified by SG-ODP.</td>
</tr>
<tr>
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<td>---</td>
<td>---</td>
</tr>
<tr>
<td>9(i)</td>
<td>Identify and assess the contribution of the data from SeaDataNet</td>
<td>фев.13</td>
<td>ODP-TT, Partnership Centre for IODE ODP</td>
<td>Ongoing - Limited contributions (417) are currently available from SeaDataNet and are reporting in the ‘Related projects’ section of the portal: <a href="http://www.oceandataportal.net/portal/portal/odp-theme/data/relatedprojects">http://www.oceandataportal.net/portal/portal/odp-theme/data/relatedprojects</a></td>
</tr>
<tr>
<td></td>
<td>Through the ongoing collaboration between ODP and SeaDataNet as part of the Ocean Data Interoperability Platform, the intent is to enable full two-way exchange of metadata and data.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9(ii)</td>
<td>Identify and assess the contribution of the data from EuroGOOS</td>
<td>фев.13</td>
<td>ODP-TT, Partnership Centre for IODE ODP</td>
<td>Ongoing - A substantial list of proposed European data contributions have been identified (&gt;5,200 data files - EMODnet Physics) and will be implemented in cooperation with EuroGOOS.</td>
</tr>
</tbody>
</table>

**metadata into the ISO 19139 encoding in coordination with ETDMP TT for Metadata**

**Data providers**

**9**  
Identify and network with potential new data providers (projects, programmes and other communities)  

**9(i)**  
Identify and assess the contribution of the data from SeaDataNet  

**9(ii)**  
Identify and assess the contribution of the data from EuroGOOS
| 9(iii) | Identify and assess contributions from: NMDIS, NODC of Russia, US NODC, ISDM, IMOS, OBIS and other existing data providers | фев.13 | ODP-TT, Partnership Centre for IODE ODP | **Ongoing** - Data provider and data contribution reports are available on via the global ODP node (left hand panel under 'Ad-hoc Query'). The reports are produced daily and one can revisit past days by changing the date in the report URL:

**Data availability example:** [http://is.oceandataportal.net/iserv/stat/21-06-2014_T2.html](http://is.oceandataportal.net/iserv/stat/21-06-2014_T2.html)

**Data provider availability example:** [http://is.oceandataportal.net/iserv/stat/21-06-2014_T1.html](http://is.oceandataportal.net/iserv/stat/21-06-2014_T1.html) |
| 9(iv) | Prepare a document “Technical specification on interaction with SeaDataNet, WIS, EuroGOOS, OBIS and ESIMO”. Distribute the document within IODE, JCOMM, SeaDataNet, WIS, EuroGOOS and ESIMO. | мар.13 | ODP-TT, Partnership centre for IODE ODP | **Not completed** - This deliverable is expected to evolve with the development of the ODIP prototypes and the use of the GEOSS Common Broker to enable interoperability between ODP and the partner systems. |
|   | Identify and interact with the ODP user community (feedback/bug tracking) | Continuous | ODP-TT | Ongoing - Significant progress has been made in this area through the implementation of a support site using JIRA as a mechanism for tracking enhancement and bug requests. Further engagement is necessary through periodic follow-up with node and data providers. The ODP portal also includes a user feedback form and requests will be monitored and directed to the appropriate resource. In addition, two contact e-mails have been established in support of this activity. |
|   | Provide specifications for the ODP portal interface (features, functionalities, appearance, and user-friendliness – manual on how to use the portal) | дек.12 | ODP-TT – SG-ODP | Ongoing - The ODP portal interface has evolved based upon feedback and requests from organizations hosting ODP nodes. However, additional feedback/input is required and this will involve a survey of ETDMP members, node providers, and other stakeholders. |
| Capacity Building | | | | |
| 12 | Revise and distribute the technical documentation on the ODP V2 toolkit components | мар.13 | ODP-TT, Partnership Centre for IODE ODP | **Ongoing** - Major development on ODP V2 back office components was completed in 2013. The deployment of full ODP nodes has been greatly simplified through the development of packaged virtual machines, full technical and user training, and implementation of node monitoring functionality. The next areas of focus is the ODP portal interface and implementation of technical interoperability arrangements with other programs/systems. |
| 13 | Identify and prioritize ODP training requirements | мар.13 | ODP-TT, SG-ODP | **Complete** - ODP training sessions have been held with SNDM Argentina (2013) SPINCAM, ODINAFRICA, and ODINWESTPAC. |
| 14 | Prepare “Manuals and Guides on IODE ODP” | Draft version should be presented at IODE-XXII (March 2013) | ODP-TT, Partnership centre for IODE ODP, SG-ODP | **Ongoing** - The development of ODP setup and operations materials have been completed and combined with the development of the ODP training courses. However, the development of strategic documents (guide the relationship between ODP and WIS, etc.) have not been completed. | Final version, June 2013 |
15. Develop documentation and guidance material for the training courses on ODP regional nodes for ODINs with assistance of the Partnership Centre for IODE ODP

<table>
<thead>
<tr>
<th>Activity</th>
<th>Sub-activity</th>
<th>Responsibility</th>
<th>Description</th>
<th>Target Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>ODP-TT membership</td>
<td>Verify/revise membership</td>
<td>T. Spears</td>
<td>Membership: Tobias and Patrick</td>
<td>Done</td>
</tr>
<tr>
<td>Technical specification on interaction with SeaDataNet, WIS, EuroGOOS, OBIS and ESIMO</td>
<td>Development of specification template (to be applied to all working agreements)</td>
<td>PC for ODP, T. Spears</td>
<td>Assistance from PC for ODP on integrating existing content into template.</td>
<td>Draft By March 2015 (Before IODE XXIII) Final By End of 2015</td>
</tr>
</tbody>
</table>

**Complete** - The ODP training materials have been completed and maintained as sessions are held and feedback is received from attendees and users.

See:
http://www.oceandataportal.org/?page_id=45
http://www.oceandataportal.org/?page_id=47
http://www.oceandataportal.org/?page_id=39
| **Node certification processes (linkages to IODE QMF)** | **PC for ODP, T. Spears** | **Issues include:**  
- status of the QMF (ODP node accreditation criteria vs NODC accreditation criteria - same/overlap/completely different?)  
- evaluate WDS/WIS approaches  
- tools for executing accreditation  
**Action:** Contact Greg R. Re: QMF  
**Action:** PC for ODP to develop criteria (Tobias to provide WDS process) | **Draft By March 2015 (Before IODE XXIII)**  
**Final by End of 2015** |
<table>
<thead>
<tr>
<th>Manuals and Procedures Guides for the ODP</th>
<th>PC for ODP, T. Spears</th>
<th>The approach to developing these materials is intended to follow the approach employed by WIS. In essence, starting with high level guide, then referring to the technical manuals as needed. The documents and approach employed by WIS will be used to assist in communicating procedures but also providing the high level navigation through these manuals.</th>
<th>Progress By March 2015 (Before IODE XXIII)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ODP node, data provider, and interoperability arrangements</td>
<td>Brokering arrangements - Ocean Data Interoperability Platform (ODIP)</td>
<td>PC for ODP, T. Spears</td>
<td>Issues include: - re-scope ODP-SDN interoperability - investigation and addressing GeoNetwork interoperability and metadata support issues</td>
</tr>
<tr>
<td><strong>SeaDataNet</strong></td>
<td>PC for ODP, T. Spears</td>
<td><strong>Action:</strong> Support SeaDataNet activities in within the scope of ODIP Prototype 1</td>
<td>Progress to be made by next ODIP meeting (August 2014)</td>
</tr>
<tr>
<td>----------------</td>
<td>----------------------</td>
<td>-------------------------------------------------</td>
<td>-----------------------------------------------------</td>
</tr>
<tr>
<td><strong>EuroGOOS (GRAs)</strong></td>
<td>P. Gorringe, T. Spears, PC for ODP</td>
<td><strong>Action:</strong> Continue with EuroGOOS collaboration, then proceed to collaborations with other GRAs</td>
<td>Progress to be made by March 2015 (Before IODE XXIII)</td>
</tr>
</tbody>
</table>

**Key priority is to attempt to use ODP as a vehicle to push data to WIS and other major systems**
| EMODnet-Physics | P. Gorringe, A. Novellino, T. Spears, PC for ODP | **Action:** Short-term access to spatial services to ODP  
**Action:** Collaboration on development of recommendations for improving spatial service metadata  
**Action:** Ongoing collaboration on EMODnet metadata related issues  
**Action:** Improve visibility of ODP with ROOS’  
**Action:** Test and provide feedback on EDMOnet portal, services, etc from the user perspective | Progress by Fall 2014 |
<table>
<thead>
<tr>
<th>WIS</th>
<th>PC for ODP, T. Spears</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Two interop scenarios were discussed:</td>
</tr>
<tr>
<td></td>
<td>- sync metadata between ALL sites,</td>
</tr>
<tr>
<td></td>
<td>- or enable ODP to spawn remote metadata query (either to a primary node or possibly federated across multiple nodes)</td>
</tr>
<tr>
<td></td>
<td>Further analysis is required</td>
</tr>
</tbody>
</table>

Postpone to medium to longer-term.

Action: Request IODE to draft an MoU with WIS, then technical interoperability tasks proposed to be addressed by PC for ODP by the next intersessional period.

Action: If possible, coordinate participation in the next IODE committee meeting in order to promote and foster collaboration with ODP and EDMOnet.
<table>
<thead>
<tr>
<th>GEOSS</th>
<th>P. Gorringe, T. Spears, PC for ODP</th>
<th>Action: Continue with EuroGOOS collaboration, then proceed to collaborations with other GRAs</th>
<th>Postpone to medium to longer-term.</th>
</tr>
</thead>
<tbody>
<tr>
<td>WDS</td>
<td>PC for ODP, T. Spears</td>
<td>Action: As short-term task, suggest that WDS be invited to participate as specialized node under IODE</td>
<td>Postpone to medium to longer-term.</td>
</tr>
<tr>
<td></td>
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<td>Another option is to present itself as an ADU</td>
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<td></td>
<td></td>
<td>Possible future brokering arrangement</td>
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<tr>
<td>OBIS</td>
<td>PC for ODP, T. Spears</td>
<td>Action: Support OBIS in implementing metadata cataloguing/search facilities and offer to act as a use case for testing functionality, interoperability, content presentation (ISO support, etc) in order for OBIS to interface with external systems</td>
<td>Postpone to medium to longer-term.</td>
</tr>
<tr>
<td>Evaluation of existing contributions</td>
<td>Communications package</td>
<td>PC for ODP</td>
<td>Draft package by March 2015.</td>
</tr>
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</tr>
<tr>
<td>ODP reports for node, data provider, and interop arrangements</td>
<td>PC for ODP, T. Spears</td>
<td>Draft package by March 2015.</td>
<td></td>
</tr>
<tr>
<td>Summary of training delivered and attendees</td>
<td>PC for ODP</td>
<td>Draft package by March 2015.</td>
<td></td>
</tr>
<tr>
<td>Template meeting agenda</td>
<td>PC for ODP, T. Spears</td>
<td>Draft package by March 2015.</td>
<td></td>
</tr>
<tr>
<td>Prioritization scheme</td>
<td>PC for ODP, T. Spears</td>
<td>Draft package by March 2015.</td>
<td></td>
</tr>
</tbody>
</table>

Ongoing follow-up has been taking place (last contact was June 2014). Action: Patrick Gorringe to raise ODP interoperability when meeting with them the week of June 30. Postpone to medium to longer-term.
| ODP technology and direction (specifications for ongoing development) | Elicit requirements from ETDMP, existing node providers, and other experts (includes ODP web site feedback) | B. Keeley, P. Gorringe, A. Novellino, T. Spears, PC for ODP | ** A single, federated search facility is identified as a priority  
Web site system is complete.  
Helpdesk system in place by March 2015.  
Draft helpdesk reports (ODP metrics, help calls, bug/enhancement requests) by March 2015. | ** Metrics and reports must be made available to nodes, etc.  
Will contribute to ongoing engagement with existing stakeholders. |
| **ODP portal interface - develop use cases for template portal implementations** | **Action:** In the mid-term, identify use cases and selection of a small ODP portal themes to support these use cases. Include feedback from ODP helpdesk requests as input into ODP portal themes.  
**Action:** Short term (by March 2015) delivery of a common search and map facility in the ODP portal interface, and expanding the use of the map interface (show spatial domain of the data set, use of the map in performing a search, etc.)  
**Action:** ETDMP members (and other experts) to review the ODP portal interface and provide feedback to the PC for ODP.  
**Action:** In the mid to longer term, work with MD-TT to discover or develop the basic ontologies used to group and aggregate metadata records in order to simplify ODP searches (e.g. Limit to two or three use cases: e.g. Map-first approach, Query form first, users supported, intended results | **B. Keeley, P. Gorringe, A. Novellino, T. Spears, PC for ODP** |
data provider, ISO topic, etc.).
<table>
<thead>
<tr>
<th>ODP toolkit (back-office components)</th>
<th>PC for ODP</th>
<th><strong>Action:</strong> Longer term priority (no major enhancements planned over the short to medium term with the exception of bug fixes).</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ODP training materials</strong></td>
<td><strong>Review list of existing resources</strong></td>
<td>PC for ODP, T. Spears</td>
</tr>
<tr>
<td>Identify gaps and types of training materials required</td>
<td>PC for ODP</td>
<td><strong>Ongoing activity. Good tutorials and documentation for node implementations, but require these for data providers</strong> <strong>OceanTeacher is being used heavily and there is also need for a page with links to self-training materials</strong></td>
</tr>
<tr>
<td>Development of new training materials</td>
<td>PC for ODP</td>
<td><strong>Ongoing activity</strong></td>
</tr>
</tbody>
</table>


| Training sessions | Identify and prioritize training requirements (solicit interest from node providers) | PC for ODP, T. Spears | There are currently no short term training sessions planned  
A request for a jumpstart training was received for SPINCAM, but there was no detailed context for this.  
**Action:** Follow-up with SPINCAM regarding submitted training request. May not be completed or may be a mid to longer term commitment.  
A request for training from China was completed in April and the node is completed.  
No additional future training requested at this time. However, ODINAFRICA was invited to suggest proposals for focused web based training for key concepts.  
Additional effort must be placed on web based training for specific topics. |
<table>
<thead>
<tr>
<th>Plan and deliver training sessions</th>
<th>PC for ODP</th>
<th>Ongoing activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solicit feedback from training attendees</td>
<td>PC for ODP</td>
<td>Trainee feedback is requested with each session, but a periodic follow-up should be implemented to ensure the training has been effective in production.</td>
</tr>
</tbody>
</table>