IODE Group of Experts on Marine Information Management (GE-MIM)

Twelfth Session

NOAA Miami Regional Library, Miami, USA
22–25 January 2013

UNESCO

Intergovernmental Oceanographic Commission
Reports of Meetings of Experts and Equivalent Bodies

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IOC/IODE-MIM-XII/3
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ANNEXES

1. OPENING OF THE SESSION

1.   The Chair of the Group, Ms Linda Pikula, welcomed the participants to the Twelfth Session of the IODE Group of Experts on Marine Information Management (GE-MIM). Mr Pissierssens, Technical Secretary, thanked NOAA for hosting the meeting.

2.   Ms Pikula then invited the participants to introduce themselves, taking into account the participation of new members.

2. ADMINISTRATIVE ARRANGEMENTS

3.   The Technical Secretary, Mr Peter Pissierssens, informed the Group of the available working documents and called attention to the provisional agenda. He reminded the Group that all documents had been made available through the IODE web site. The Group adopted the Agenda of the meeting.

3. REPORT ON INTERSESSIONAL ACTIVITIES

3.1   IMPLEMENTATION STATUS OF THE GE-MIM-XI WORK PLAN

4.   This Agenda Item was introduced by the GE-MIM Chair, Ms Linda Pikula. She invited the Group to review progress made with the work plan of its previous Session (GE-MIM-XI), held in 2010 in Ostend, Belgium (the work plan of the 11th Session was available as Recommendation MIM-XI.**2** (MIM Action Plan for 2011-2012) attached as Annex II to the GE-MIM-XI Report (Document IOC/IODE-MIM-XI/3).

5.   The Group then proceeded reporting on each of the action items adopted by GE-MIM-XI (2010):

Agenda item	Para	Description	By whom	By when
3.1 Implementation Status GE-MIM-X	9	**The Group requested** Ms Pauline Simpson to follow-up this item (deadline: September 2010)	P. Simpson	9/2010

6.   Ms Simpson reported that this agenda item referred to 'a listing of hardware and software for library applications'. Apart from this being an enormous task that is unlikely to ever be definitive, a listing of this type would go out of date very quickly, and would require updating often.   The Group was invited to revisit this request to understand the task and if necessary, redefine the parameters e.g. which library applications; only open source software; eliminate hardware from the scope etc etc. The Group concluded that such a list would be difficult to maintain as technology changes constantly. **The Group therefore decided** to close this item.

	12	**The Group requested** the Secretariat to stress the importance of having both data managers and information managers attending IODE-XXI.	Secretariat	With the CL

7.   COMPLETED Mr Pissierssens informed the Group that IOC Circular Letter 2358 (14 September 2010) included the sentence "*It would be appreciated if delegations would be composed of both* experts *in data management and experts in marine information management*". Despite this request only 4 IODE national coordinators for MIM participated in

IODE-XXI, compared to 30 IODE national coordinators for data management. The same appears to be the case for IODE-XXII in 2013.

	15	**The Group requested** the Secretariat to proceed with the production of the certificates based upon nominations received from the Member States and valid for one inter-sessional period. **The Group requested** the Secretariat to check this proposal with the IOC Executive Secretary.	Secretariat	9/2010

8.   NOT DONE. This action was not implemented. **The Group tasked the Secretariat** to design and distribute certificates for "IODE National Coordinator for Marine Information Management" [deadline: 01/03/2013].

	18	**The Group agreed** that more attention should be given to monitoring programmemes and outcomes of international library and information conferences to identify emerging issues and technologies that are of relevance to marine information managers.	Members	Continuous

9.   NOT DONE see Agenda item 6. **The Group decided** that this should be coordinated with IAMSLIC. It was noted that publications, issues, initiatives, events or conferences of both national and international nature should be considered. **The Group also recommended** to seek contact with other library associations such as SLA, CILIP. In order to ensure MIM training is in sync with current curricula **the Group further recommended** to seek contact with university courses of library and information science. In this regard the need was stressed to communicate actively with the IODE national coordinators for MIM through an email list. This list could include both the IODE NCs for MIM and IAMSLIC members. **The Group recommended** that IODE NCs for MIM (who are not IAMSLIC members) should be invited to subscribe to the IAMSLIC mailing list. **The IAMSLIC invited experts were requested** to discuss this proposal with the IAMSLIC Exec and, if there is agreement, provide subscription information/instructions to the IODE Secretariat. It was recalled that the list of IODE NCs for MIM is available through http://www.iode.org/nc-mim

	19	**The Group requested** the Chair to contact IAMSLIC suggesting the creation of a new category called "innovations" in their blog and **instructed** the GE-MIM members to actively contribute to this blog.	Chair	6/2010

10.   Ms Pikula reported that contact had been made with IAMSLIC, but at that time it was felt that the existing forms of IAMSLIC communications were sufficient. The Group decided to close this action item.

	25	**The Group noted** that email had been used for this purpose. **The Group concluded** that the Groupware (iode.grouphub.com) had not been used extensively. **The Group agreed** that the site should be used to share working documents.	All	Continuous

11.   NOT DONE. The Group noted that the Groupware was not used and that other systems such as Dropbox, Googledocs etc. were being used. **The Group decided** to close this action item.

	37	**The Group requested** the Secretariat to also include in the survey, a request for information on	Secretariat	7/2010

		MIM needs, as available. [IOGOOS survey]		

12.   **The Group noted with regret** that the survey was not undertaken because the ODINCINDIO project had proved to be non-viable due to lack of interest from the Member States in the IOCINDIO region. Despite repeated attempts from the Secretariat to re-start communication on a joint plan of action this has not been successful. Mr Pissierssens noted that a Circular Letter has been issued to identify interest to establish a sub-regional ODIN that will focus on Member States surrounding the Persian Gulf. Information on the responses to this CL will be provided during IODE-XXII. **The Group welcomed this initiative** and **urged** the inclusion of MIM in the terms of reference of the new ODIN, if established.

	39	**The Group recommended** that the IOCINDIO regional committee should consider MIM needs of the region and **requested** the Secretariat (M. Odido) to discuss this matter further with the IOC staff responsible for organizing the meeting.|	M. Odido	12/2010

13.   See above

	46	**The Group requested** that information and occasional reports exchanged between members should be made available through the iode.grouphub.com groupware site (in a separate OceanDocs SG section).	All	Continuous

14.   As mentioned before it was noted that the Groupware was not being used. The Group decided that discussions on communication would be covered under agenda item 4.5.

	63	**The Group requested** to ensure that for all video presentations in the www.vimeo.com/iode site a link to the powerpoint files should also be available.	Secretariat	10/2010

15.   <mark>NOT COMPLETED</mark> **The Group decided** on the following action:

16.   The Group noted that Vimeo allows the following metadata fields: Title, Description, Tags, Credits. The Group decided that it is necessary to "clean up" the metadata for all 328 videos. The Group decided that the following rules should be used to fill the fields:

    Create an Album for each course and Title as: OTA – name of course - YYYY/MM - venue code: Ostend, Hyderabad,…
    For each lecture:
        Title: title of lecture
        Description: link to OceanTeacher course page
        Tags: oceanteacher, marine information management, MIM, librarian
        Credits: instructor Surname, Firstname – link to OceanExpert record for that person;
        IODE OceanTeacher; http://www.iode.org http://www.oceanteacher.org
    It was noted that all OceanTeacher videos are combined under the channel https://vimeo.com/channels/oceanteacher (74 videos).
    In each OTA course (Moodle) a link needs to be added to the Album in Vimeo for that particular course. It was noted that the field length of the Title field is 150 characters. ACTION: (Claudia Delgado, September 2013) -

	64	**The Group requested** the Secretariat to add a link from the web page on IODE NCs for MIM	Secretariat	6/2010

		(http://www.iode.org/index.php?option=com_oe&task=viewGroupRecord&groupID=60&Itemid=43) to the Video (http://www.vimeo.com/10378983)		

17. COMPLETED

3.2.1 Matters arisen from IODE-XX	72	**The Chair urged** members of the Group to send photographs to the IODE Project Offices.	MIM NCs	<IODE21

18. COMPLETED. The Secretariat reported that some librarians had provided photographic materials for the IODE 50th anniversary celebrations. These had been included in the web site IODE Gallery on http://gallery.iode.org/main.php

4.1.1 MIM Communication strategy	78	**The Group adopted** the draft IOC Communication Strategy for Marine Information Management and decided to submit it for approval by IODE-XXI. It is attached as Recommendation MIM-XI.1.	n/a	Continuous

19. COMPLETED. The Group was informed that the Communication Strategy had been published as IOC/INF-1288 (http://www.iode.org/index.php?option=com_oe&task=viewDocumentRecord&docID=7196) and a page had also been created on the IODE web site http://www.iode.org/index.php?option=com_content&view=article&id=4:about-information-management&catid=5&Itemid=35#communication_strategy

	79	**The Group instructed** the Secretariat, conditional upon adoption of the Strategy by IODE-XXI, to publish the Strategy as a publication in the IOC Manuals and Guides series and to circulate it to all stakeholders, including IOC Member States and IAMSLIC members. All GE-MIM members should be added to all ODIN MIM mailing lists.	Secretariat	4/2011

20. See above. The Strategy was not published as a Manuals and Guides but as an INF document.

	80	**The Group requested** the Secretariat to set up a mailing list function addressing all ODIN marine information managers (not restricted to MIM NCs). This function will need to be incorporated in OceanExpert.	Secretariat	9/2010

21. COMPLETED All IODE web site administrators can send emails to the groups within the web site. The IODE national coordinators for MIM are such a group. The GE-MIM Chair has been given administrator privileges to send messages to this group. No functionality has been created currently in OceanExpert. See also action – see above.

4.1.3 SCOR/IODE/WHOI MBL data publication	86	**The Group expressed concern** about the tight timeline and **called** on the project leaders to reconsider it, while bearing in mind the importance of demonstrating results during the IODE 50th anniversary and IODE-XXI.	Chair to inform Project leaders	6/2010

22.   Discussions on this topic were referred to Agenda Item 4.8.1

	87	**The Group stressed** the importance of not limiting the [data publication] system being developed to DSpace but make it more generally applicable to e-repositories.	Chair to Project leaders	6/2010

23.   Discussions on this topic were referred to Agenda Item 4.8.1

	88	**The Group regretted** that many other similar initiatives that are being implemented (projects) were not mentioned during the workshops and **stressed** the need to build upon the experience of these.	Chair to Project leaders	6/2010

24.   Discussions on this topic were referred to Agenda Item 4.8.1

	89	**The Group identified** Pauline Simpson (e-repositories/metadata), Marc Goovaerts (OceanDocs/DSpace technical expert), Arame Keita (ODINAFRICA MIM coordinator), Andrea Cristiani (ODINCARSA LA MIM coordinator), Linda Pikula (GE-MIM Chair) as GE-MIM experts to contribute to the SCOR/IODE/MBL WHOI pilot project on data publication.	Chair to Project Leaders	6/2010

25.   Discussions on this topic were referred to Agenda Item 4.8.1

4.1.4 Cooperation with OBIS	92	**The Group recommended** adding under "Additional information" on a results page a link to "Avano" (http://www.ifremer.fr/avano/).	Secretariat to iOBIS Secretariat	6/2010

26.   NOT DONE. In this regard the Group was informed that Dr Vanden Berghe had left IOC and had been replaced by Mr Ward Appeltans. It was also noted that Avano would be terminated in 2012. Further discussions were referred to Agenda Item 6.2. The Group decided to close this item without further action.

	93	**The Group recommended** that a MIM expert be included in the planned IODE Group of Experts for OBIS.	Secretariat	2011

27.   The Group was informed that the Group had been formally established (IOC Circular Letter 2398 had been issued in August 2011; 4 long-term members had been designated – see http://www.iode.org/index.php?option=com_oe&task=viewGroupRecord&groupID=251). However due to the current financial crisis a meeting of the Group had not been held. It was noted that if and when the first Session of the GE-OBIS is planned, a relevant MIM expert can be invited. GEMIM Chair L. Pikula met with Ward Appeltans informally August 2012 to discuss MIM collaboration with OBIS. Possible MIM contributions include citation metrics on OBIS documents and OBIS influenced papers to be prepared by MIM members.

28. **The Group requested** to ensure that a GE-MIM expert is included (as observer or invited expert) in sessions of the GE-OBIS and **called on** the OBIS Secretariat to take this into account when planning the first Session of the GE-OBIS.

	103	**The Group requested** the GE-MIM long-term members to suggest and identify suitable short-term members with expertise in one or more of the above topics within a marine library environment.	GE-MIM long-term members	When GE-MIM-XII agenda is available

29. <mark>NOT DONE</mark>. Further discussions on this topic were referred to Agenda item 4.3.

4.2.1 ASFA	107	**The Group recommended** that ODIN MIM Coordinators approach the ASFA Board referring to the substantial archives of grey material available in their libraries. Local experts could visit national institutions with portable equipment to undertake the scanning.	M.Odido to request to ODIN MIM coordinators	6/2010

30. **The Group invited** the ODIN coordinators present at the Session to report on this subject. Ms. Linda Pikula attended the ASFA session in Morocco and presented a proposal for a joint digitization collaborative initiative. Richard Pepe recorded this as a recommendation. The Group was informed that Mr Pepe had meanwhile retired. There was no further communication on this topic between the ASFA and IODE secretariats. Due to the absence of Ms Noble (GE-MIM member and ASFA Board member) no further information was available. Ms Kalentsits reported that IAMSLIC had successfully submitted a proposal for digitization of documents (the work was subsequently implemented by FAO, Fisheries and Aquaculture Branch Library) and would submit another proposal in 2013.

31. **The Group called on** member states participating in ODINs (and who are also ASFA input centres) to prepare and submit digitization proposals to the ASFA Board.

32. **The Group noted** that due to the venue of the 2013 ASFA Board (Peru) the cost of sending a GE-MIM member to the meeting would be high.

	109	**The Group recommended** to coordinate with ASFA the possible funding of this digitization effort through ODINCARSA LA.	Secretariat/ ODINCARSA-LA	Early 6/2010

33. <mark>NOT DONE</mark>. Reference was made to item 108.

	110	**The Group recommended** that attention be given to providing training on digitization (and include course material in OceanTeacher). In this regard reference was made to the Courses "Preservation and Archiving of Digital Media", "Digital Asset Management", "Funding for Digital Projects" and "Data Curation and Digitization"	Ocean Teacher SG	>3/2011

34.   COMPLETED. Ms Pikula informed the Group that a series of courses regarding the digitization and archiving of all forms of print and media have been conducted through the OceanTeacher programme MIM beginning in September 2009 through 2012 at the Ostend, Belgium IOC Project Office for IODE. Instructors were recruited from the University of Iowa, the Institute of Museum and Library Services U.S., Belgian Archives, Vrije Universiteit Brussels, CIMAS Cooperative Institute (US), Central Caribbean Marine Institute, Woods Hole Oceanographic Institution, Rosenstiel School of Marine Science, Miami, and U.S.NOAA Library. 68 Students representing over 40 countries participated in these courses. It has been reported that many countries have begun to prioritize their collections for digitization and projects have begun. Twelve digitization grants have been prepared as a result of the September 2012 course in "Funding for Digital projects" and are awaiting decisions. A listing of the courses offered is available in the OceanTeacher Report

| | 11 1 | **The Group requested** Ms Pikula to attend the upcoming ASFA Board meeting and propose cooperation on "ASFA enhancement" through joint action between ODIN partner institutions and ASFA input centres (when these are not identical) on digitization of national/institutional holdings and related updating of the ASFA bibliographic records. In this regard it was requested to prepare a full list of ODIN partner institutions and ASFA input centres to identify collaborative opportunities. **The Group further requested** ODINs to identify materials that should, as a priority, be digitized, and provide this information to Ms Pikula prior to the ASFA Board. In addition **the Group recommended** an analysis of ASFA records prepared by individual countries and focus on digitizing those documents. | Chair | 7/2010

(cost: $2.5K) |

35.   Ms Pikula informed the Group that she attended the ASFA meeting in Casablanca, Morocco 5-9 July 2010, Institut National de Recherche Halieutique (INRH). A presentation was made showing the inventories of print and other media prioritized for digitization in 18 IODE ODIN MIM Centres gathered as a result of an OceanTeacher Course: Digital Asset Management held October 2009 IODE Ostend, Be. The Report of that meeting states: *Ms Pikula (IODE) gave a presentation on the IOC-IODE/ODIN programmeme activities related to capacity building in marine information management, digitization and repositories .....She raised the possibility of collaboration between ASFA and the IODE/ODIN regarding digital projects .....*

36.   **The FAO ASFA Secretariat agreed** to investigate means to increase ASFA collaboration with and also ASFA participation in IOC-IODE/ODIN activities and initiatives (e.g. capacity building in digitization and repositories).

| | 11 2 | **The Group requested** its Chair to convey its gratitude to Mr Pepe during the upcoming ASFA Advisory Board in Morocco in July and to invite him to continue sharing his valuable knowledge and expertise with the GE-MIM in the future. **The Group further requested** the Secretariat to send a Letter to FAO to express IODE's appreciation. | Chair

Secreta riat | 7/2010

11/2010 |

37.   COMPLETED. Ms. Linda Pikula presented on behalf of IODE, Mr Pepe with an IODE achievement award in recognition of his 28 years of outstanding service to the Aquatic Sciences and Fisheries Abstracts (ASFA), the bibliographic reference tool of choice for the ocean

research (and freshwater) community. This took place during the 2010 ASFA Advisory Board held in Casablanca, Morocco (5-9 July 2010).

4.2.3 IAMSLIC	125	**The Group expressed concern** about the limited duration of the proposed MoU (2 years) and especially the short termination notice (30 days) and **called** for a revision of these items.	Chair/ Secretariat	9/2010 (depends on IOC Exec Sec)

38.   Ms Pikula, Chair GEMIM, assisted in the discussion between IOC and IAMSLIC regarding the MoU between IOC and IAMSLIC which was signed on 30 August 2011. Further discussion on this subject was referred to Agenda Item 4.2.

	126	**The Group requested** the Secretariat to draft a revised MoU and Annex based upon the above elements and prepare a draft version that can be submitted to IAMSLIC for consideration and further discussion (deadline August 2010). **The Group expressed** the hope that the IOC/IODE proposals will be shared with the full IAMSLIC community and that feedback will be received to further fine-tune the MoU.	Secretariat/ Chair/ IAMSLIC	9/2010 (depends on IOC Exec Sec)

39.   See above

5.1.1 ODINAFRICA	136	**The Group decided** to prepare a comparative table/document that will provide information on ABCD, DSpace (OceanDocs), NewGenLib and Koha. This document should be sent to all ODINAFRICA partners and request them to choose the solution of choice for their library.	Suzie Davies/ Pauline Simpson	End 6/2010

40.   COMPLETED. Ms Simpson informed the Group that a comparison table had been generated, circulated, and presented at the ODINAFRICA MIM Workshop in Dakar in 2010. The outcome of the discussions was to commence a pilot project with ABCD and also pilot work with Marc Goovaerts on customising DSpace to operate as a library catalogue (only). Ms Keita informed the Group that ABCD was being used by only two libraries since 2011 (Nigeria, Sudan). All of the MIM centres are now using AgrioceanDSpace.

	137	**The Group stressed the need** to ensure that library catalogues developed at the institutional level are available over the WWW as well as locally.		

41.   Ms Pikula informed the Group that many of the IODE Marine Information Centres now have web accessible library catalogues as well as repositories. IODE GEMIM has been advising the ODIN Marine Information Managers on various integrated library management system solutions (ILMS) and repository software, and has assisted in their selection according to local and regional needs. GE-MIM representatives have attended regional MIM Workshops to provide demonstrations of the latest open source catalogues and repositories. E.g. ODINCARSA LA, 14-15 October 2010, INIDEP, Argentina, ODINECET Workshop, September 2011 Ukraine, ODINAFRICA Workshops: 28-30 November 2010, Dakar, Senegal ,4-8 April, 2011, Lome,Togo, ,27-31 August 2012 Mombasa, Kenya, September/October 2012, Nairobi, Kenya , ODINPIMRIS March 2012, Suva, Fiji. IODE assists in development of the AgriOceanDspace (AOD) repository and provides advice on usage of the ABCD online catalogue. Assistance in JOOMLA software provided as well.

	13 8	**The Group requested** Suzie Davies and Pauline Simpson to prepare the comparison document by the end of June 2010.		

42.　　　COMPLETED　SAME AS 136

5.1.2 ODINECET	14 0	Referring to Agenda Item 5.1.1 **the Group requested** the ODINECET coordinator to share the information that made them choose Koha with all ODINs.	ODINE CET Coordin ator	6/2010

43.　　　Ms Akimova informed the Group that all libraries from the ODINECET group have a catalogue but few are web-accessible. The IT department of Ms Akimova's institution (IBSS) identified KOHA as a suitable open source application and also committed itself to providing the necessary technical support. KOHA was customized to their needs. A problem remains the conversion of existing catalogues into KOHA.

5.1.3 ODINCARS A LA	14 3	**The Group recommended** that georeferencing of publications should also be considered by the Marine Atlas projects (see also Agenda Item 6.6).	Marine Atlas coordin ators CMA/ AMA	7/2010

44.　　　The Group was informed by Ms Keita that she had discussed this issue within ODINAFRICA and they had welcomed it. The Group referred discussions on this topic to Agenda Item 6.5.

	14 6	**The Group requested** that Ms Cristiani circulates deposit statistics to ODINCARSA-LA OceanDocs partners as a means to motivate depositors.	Andrea Cristian i	6/2010

45.　　　Ms Pikula informed the Group that ODINCARSA LA Coordinator Andrea Cristiani, Uruguay attended the OceanDocs Steering Committee meeting January, 2012 Ostend, Belgium and provided a report showing ODINCARSA-LA regional meetings to motivate deposits into OceanDocs.

	May 2010	Oct. 2011	Jan. 2012
Latin America Community	**1119***	**1690****	**> 1700*****
Total OceanDocs	3170	3652	3674
		Oct. 2012	Dec. 2012
Latin America Community		1855**	1884***
Total OceanDocs		4008	4077

46.　　　Meetings:

- OceanDocs Latin America Workshop, October 16-17, 2010, Mar del Plata, Argentina.

- OceanDocs presentation at 2nd Meeting of Latin America Regional Group of IAMSLIC, 22 Oct. 2010, Mar del Plata, Argentina

- Training session for Argentine librarians by Gabriela Silvoni, 23 Oct. 2010, INIDEP. Mar del Plata, Argentina.

- Training material in Spanish: "Guia OceanDocs" (OceanDocs Guidelines) and "Como editar documentos ya publicados" (How to edit document already published).

- Training for 10 Argentine librarians from UNSJB Madryn, Trelew and UTN on OceanDocs and Aquatic Commons, UTN, Trelew, Argentina. It is expected that these institutions will start to deposit thesis and reports soon.

- Training course in digitization and OceanDocs input for IBMP librarian conducted by G. Silvoni at INIDEP, April 2011.

- Marketing efforts:
  Promotion of OceanDocs within the Latin American IAMSLIC Group through Biblio_latino mailing list and IAMSLIC GL website.
  Argentina: "Jornada Virtual de Acceso Abierto 2011" Presentation "Open Access paths in Marine Science in Argentina / Caminos recorridos en el Acceso Abierto en Ciencias marinas en Argentina" by Gabriela Silvoni and Guillermina Cosulich.
  Chile: Meeting of the Marine Information Management Working Group GT-GIM/CONA.
  Uruguay: OceanDocs Presentation at the 1st Meeting IAMSLIC Group Uruguay by Andrea Cristiani, June 28, 2010. Montevideo, Uruguay.

| 5.1.5 ODINWESTPAC | 156 | **The Group welcomed** the development of an e-repository for the WESTPAC region but **called** on China to improve coordination with IODE and its Secretariat as the coordinator was now making communications to Member States without copying the IODE Secretariat, which could be counterproductive. Improved communication and coordination could also result in submission of records from other countries in the region (currently the repository includes only Chinese records). | Chair/ Secretariat/ China NMDIS | 6/ 2010 |

47.   Mr Pissierssens informed the Group that no information had been received from the ODINWESTPAC coordinator on this subject. The activities report for the upcoming IODE Session included information about the establishment of a document repository as part of the ODINWESTPAC web site http://www.odinwestpac.org . A link is provided to the site http://221.239.0.193:8080/jspui/ In the repository communities were created for all WESTPAC Member States but records had been created for China only (179 records). See also agenda item 5.1.5

| | 157 | **The Group invited** NMDIS/SOA to discuss this matter with Ms Linda Pikula and Mr Marc Goovaerts to ensure that the ODINWESTPAC e-repository is interoperable with OceanDocs and can be harvested**. | Ms Pikula/ Mr Goovaerts | 6/2010 |

48.   NOT DONE Ms Pikula informed the Group that interoperability has been discussed, but no action has been taken.

| | 158 | **The Group requested** Ms Linda Noble to compile a list of ASFA partners and collaborating centres in the | Linda Noble | Done |

		ODINWESTPAC region		

49.   DONE Ms Pikula informed the Group that Ms Noble has delivered this list of ASFA partners and collaborating centres in the ODINWESTPAC region. **The Group requested** Ms Pikula to make the list available to the IODE Secretariat for possible inclusion in the ODINWESTPAC web site and to assist with the identification of IODE national coordinators for MIM in the WESTPAC region.

	159	**The Group requested** the GE-MIM Chair to contact the ASFA partners and collaborating centres in the ODINWESTPAC region in order to encourage them to consider the MIM aspect of ODIN.	Chair	6/2010

50.   Ms Pikula informed the Group that she has not specifically contacted ASFA partners but has been in contact with the newly appointed Chinese NC Ms Huifen Xue to encourage participation in MIM. Additionally WESTPAC member Australia has appointed a new NC, Ms Joanna Ruxton and been contacted regarding MIM products and activities. Vietnam Librarians have also been contacted. In the ODINWESTPAC Report Ms Xue mentions a planned meeting to be held in 2013 coordinated by NMDIS and including Marine Information Specialists.

5.1.6 ODINCINDIO	161	**The Group instructed** the GE-MIM Chair to contact the MIM community in the ODINCINDIO region (including former ODINCINDIO trainees) to inquire about their opinion and ideas for future activities of ODINCINDIO and what IODE can do for them.	Chair	6/2010

51.   NOT DONE. Reference was made to item 37.

5.2 Mentoring Programmemes and Internships	164	**The Group called** on all ODINs to include funding for mentoring and internships in their budgets as a means to reinforce and continue the OceanTeacher Academy training and its long-term impact.	M. Odido to contact ODIN coordinators	7/2010

52.   NOT DONE. No information was received from Mr Odido.

	165	**The Group discussed** the options listed above and **identified** the following for follow-up:		
		- IODE/GE-MIM to support existing proposal of Pacific Marine & Environmental Library Twinning Programme	No action needed	n/a
		- IODE/GE-MIM to approach IAMSLIC to develop a joint IODE/IAMSLIC programme under the new MOU	Chair	9/2010 (depends on IOC Exec Sec)
		- GE-MIM encourage informal mentoring opportunities: (a) Provide range of bibliographic resources on mentoring into OceanTeacher; (b) Provide web links to existing mentoring programmemes; and (c) Have a contact person responsible for directing interested people to particular	Suzie Davies	end 7/2010

		programmemes. **The Group identified Suzie Davies.**		

53.   Ms Pikula reported that mentoring was going forward in the ODINPIMRIS project. Discussions on a joint IODE/IAMSLIC mentoring programmeme were referred to agenda item 4.2. Ms Davies had prepared a document for GE-MIM-XI on mentoring. This Agenda Item was discussed further under Agenda Item 5.2.

5.3 OceanTeacher and MIM	17 1	**The Group recommended** that cooperation with these initiatives is investigated as a complementary option for training to OceanTeacher's face-to-face curriculum. Ms Simpson offered to contact Prof Sheila Corrall at the University of Sheffield.	Pauline Simpson	6/2010

54.   COMPLETED. Ms Simpson informed the Group that she had contacted the University of Sheffield, Information School http://www.sheffield.ac.uk/is. Folioz is a distance learning programmeme designed and specially commissioned by the Australian Library and Information Association http://folioz.pbworks.com/w/page/6853895/FrontPage. Unless IODE would consider commissioning a similar distance learning programmeme, Sheffield lecturers (if available) could only consider visiting Ostend and presenting topics that they were already giving at the Information School. Of course a cost would be involved. Sheffield does not offer distance learning courses. Sheffield iSchool is working on the JISC funded RDMRose project developing open learning materials for research data management for information professionals http://www.sheffield.ac.uk/is/research/projects/rdmrose

	17 6	**The Group called** on Member States to ensure that all marine libraries are professionally staffed by trained librarians and invited these to participate in the OceanTeacher Academy MIM courses.	Member States	continuous

55.   Ms Pikula informed the Group that Member States are reminded of this need through notification of the OceanTeacher MIM courses offered each semester by IODE. Member states nominate their MIM staff to participate in the OT IODE courses which provide training in current data and information practices and trends.

	17 8	**The Group requested** the ODIN coordinators for MIM to actively promote the courses when announcements are sent by the IODE Secretariat.	ODIN coordinators	continuous

56.   Ms Pikula informed the Group that ODIN Coordinators are actively promoting the IODE OT MIM and Data courses as formal announcements and informal discussions take place. It was noted that announcements for MIM courses were also sent to the IAMSLIC mailing list.

	17 9	**The Group considered** the need for follow-up after the courses and to monitoring progress as students attend various courses. **The Group recommended** regular surveying of former students to assess their progress.	Oceanteacher secretariat	continuous

57.   Ms Pikula informed the Group that this regular surveying of former students had not been done. Informal follow up on progress has been made.

58.   **The Group recommended** that regular (e.g. every two years) assessments should be made of the career progress of former students. **The Group also stressed** the need for former trainees to report back on their activities as trainer, possibly through online surveys.

	180	**The Group recommended** that detailed continued assessment be implemented by the ODIN regional coordinators. This will require the definition of milestones (either by the ODIN project or by the Lecturers during the course) and subsequent performance assessment against the delivery of the milestones.	ODIN regional coordinators	continuous

59. Ms Pikula informed the Group that ODIN regional coordinators had not implemented milestones and performance assessments at this time. Referring to item 179 **the Group requested** that the ODIN coordinators should carry out the regular surveys on former students' training activities. **The Group decided** to develop some guidelines on the assessments. **The Group also called** for "success stories" which could promote OceanTeacher and assist with future mobilization of funds.

6.1 E-repositories	189	…the Group adopted Recommendation MIM-XI.2 (Terms of Reference of the IODE Steering Group for the OceanDocs Project)	IODE-XXI	3/2011

60. The Group was informed that the establishment of the Steering Group had been adopted together with the other MIM-XI.2 recommendations during IODE-XXI. A first meeting of the Steering Group had been held 24-27 January 2012 at the IOC Project Office for IODE, Ostend. Final Report http://unesdoc.unesco.org/images/0021/002172/217284E.pdf (see also http://www.iode.org/index.php?option=com_content&view=article&id=307%3Aiode-steering-group-for-oceandocs&catid=10&Itemid=100013)

	190	**The Group identified** the following potential members for the Steering Group:
		- Mr Marc Goovaerts (Hasselt University – Technical Support);
		- ODIN repositories
		  o Andrea Cristiani (ODINCARSA LA OceanDocs User Group);
		  o Arame Keita/ James Macharia (ODINAFRICA OceanDocs User Group),
		  o Olga Akimova (CEEMAR ODINECET repository, Ukraine) http://www.ceemar.org/
		  o Satyaranjan Sahu (Digital Repository Service, NIO, India) http://drs.nio.org/drs/index.jsp
		  o ?? (ODINWESTPAC e-repository of marine scientific publications) http://221.239.0.193:8080/jspui/
		  o ?? (ODINPIMRIS PIMRIS regional repository) http://pimrisregional.library.usp.ac.fj/
		- Representatives from partner agencies
		  o IAMSLIC (Aquatic Commons) (tbd)
		  o IFREMER (Avano)
		  o FAO (ASFA, AGRIS,…)
		- GE-MIM Chair
		- IOC/IODE Secretariat
		- Invited Experts (eg Mr Denys Slipetskyy, Ms Pauline Simpson)
			IODE-XXI	3/2011

61.   The Group was informed that the following participants attended the first session of the OceanDocs SG, January 2012: Andrea Cristiani; Susana Macanawai; Saida Messaoudi, Lisa Raymond; Pauline Simpson (co-Chair); Marc Goovaerts (co-Chair); Denys Slipetsky; Linda Pikula as GEMIM Chair; Hardy Schwamm (Iamslic); Adita Naik Kakodkar; Mika Odido; Imma Subirats (FAO); Thembani Malapelo (FAO); Peter Pissierssens; Claudia Delgado. See Final Report: http://unesdoc.unesco.org/images/0021/002172/217284E.pdf

62.   **The Group noted with appreciation** that all recommendations for participation formulated by GE-MIM-XI had been followed, with exception of India (who could not attend) and ODINWESTPAC (where no MIM contact was identified at the time). **The Group recommended** that a formal contact should be established for the ODINWESTPAC repository.

	19 1	**The Group requested** the Secretariat to inquire from the host of the ODINWESTPAC (Prof. Lin Shaohua, mailto:shlin@mail.nmdis.gov.cn) and ODINPIMRIS (through Ms Sin Joan Yee , yee_s@usp.ac.fj) repositories to identify a suitable member of the Steering Group.	Secreta riat/ Marc Goovae rts	6/2010

63.   See 190.

	19 2	**The Group invited** Mr Marc Goovaerts to act as interim Chair until the end of the first *ad hoc* meeting	Marc Goovae rts	>= 9/2010

64.   COMPLETED The Group noted that the first meeting of the OceanDocs SG was held in Ostend in January 2012. It was hoped that an ODIN Member would take the Chair responsibility but in the interim, Mr Goovaerts and Pauline Simpson were elected co-Chairs until January 2013 when the first progress review is to be undertaken. The Group was informed that Mr Goovaerts did not wish to continue as co-Chair from 2013 due to other responsibilities. The Group recommended that the OceanDocs Steering Group should elect a new Chair during its next (second) Session.

65.   The Group was informed that a virtual Session (Webex) will be held in February 2013, and a physical meeting should be held in January 2014.

	19 3	**The Group recommended** that the *ad hoc* Steering Group should meet as soon as possible, possibly virtually, prior to IODE-XXI	Secreta riat	9/2010

66.   See above.

	19 4	**The Group requested** Mr Goovaerts to approach Mr Merceur to suggest including the IODE logo in the Avano homepage.	Marc Goovae rts	6/2010

67.   The IODE logo has not been included in the Avano homepage. However it was recalled that Avano will be terminated in 2013. The Group decided therefore that no further action would be required. Also see Agenda Items 6.2 and 6.5.1

	19 5	**The Group instructed** the Steering Group to address the OceanDocs Policy Document and submit it, through the GE-MIM, to IODE-XXI for adoption and subsequent publication.	Ocean Docs Steerin g Group	<12/201 0

68.   The OceanDocs Policy Document was completed by Pauline Simpson and Marc Goorvaerts and accepted by the OceanDocs SG at their first meeting in January 2012. Now available in OceanDocs: http://www.oceandocs.org/handle/1834/4225

69.   **The Group decided** that the document should be published in the IOC/INF series and **instructed t**he Secretariat to do the necessary.

6.2 OceanExpert	199	**The Group recommended** that the functionality of linking OceanDocs to OceanExpert records is implemented as soon as possible. It was recommended further to utilize an RDF based approach (see also http://linkeddata.org	Secretariat/ Marc Goovaerts	2011

70.   Mr Kakodkar informed the Group that the project office worked with Destin Informatique on implementing this project. A pilot setup of linking OceanExpert with OceanDocs using ASKOSI is already online on the ASKOSI demo server (http://www.destin-informatique.com/askosi/view.jsp?scheme=oceanexpert&display=tops&application=oceandocs&role=author#tops). Further discussions under 6.2 and 6.3

	200	**The Group identified** a few issues that need to be fixed: - messages are sent out when a record is modified to the "owner" of the record. It says "someone" has modified the record. This should be changed to indicate who has modified the record (name + email). The email message sent also includes the password. The password should not be included. - Fix the "new record element" "select institution"	Secretariat (A. Kakodkar)	2010

71.   Mr Kakodkar informed the Group that the name of the modifier and date of modification could be viewed at the bottom of the respective member record page. Most of the OceanExpert members do not remember their login details; hence once members receive this email they might want to log in to OE and will have to send another request for a password causing more delay. This is a main reason for including the password in the email. Further discussions under 6.2.

	201	**The Group recommended** the following new features: - Linking from OceanExpert to OceanDocs (to see publications by individual) and/or ASFA - Need to add link from OceanExpert homepage to IODE web site - Possibility to also track changed names of institutions - In advanced search change "Region" to "ODIN region"	Marc Goovaerts	2011

72.   Mr Kakodkar informed the Group that OceanExpert and OceanDocs are already linked using ASKOSI, through which a list of all publications of individual authors can be seen. There is already a link to http://iode.org from OceanExpert homepage. We will need to investigate tracking of institution name changes using ASKOSI. There is already a search option in advance search called "ODIN region is". Further discussions under 6.2 and 6.3.

6.3 OceanPortals	205	**The Group requested** to investigate the cost to retrieve the Portal Oceanico and to migrate it to either a static website or another (eg Joomla) CMS. In addition it was **requested** to consider the possibility to migrate the full-text documents included in the portal to OceanDocs.	Secretariat	6/2010

73.   The Group was informed by Mr Pissierssens that UNESCO's informatics department cannot provide any support for either sites as this was a commercial software product for which UNESCO has terminated its support agreement. Some experiments had been implemented to convert content in the database driven sites to static html but these experiments were not successful. The sites are both still online (http://www.portaloceanico.net and www.africanoceans.net but there is no guarantee for how much longer).

74.   **The Group regretted** that the sites could not be continued and **expressed concerns** about the potential loss of this historical archive.

	206	**The Group requested** Ms Cristiani to discuss with the ODINCARSA LA community the need and interest for a new "Portal Oceanico" but then also to identify potential content providers.	Andrea Cristiani	6/2010

75.   DONE/CLOSED Ms Pikula informed the Group that Ms. Cristiani discussed Portal Oceanico with the ODINCARSA community and determined that because of a lack of personnel in some institutions they were not interested in pursuing a new portal at the present time.

	208	**The Group requested** to investigate the cost to retrieve the African Ocean Portal and to migrate it to either a static website or another (eg Joomla) CMS. In addition it was **requested** to consider the possibility to migrate the full-text documents included in the portal to OceanDocs.	Secretariat	6/2010

76.   See item 205 above

	209	**The Group requested** Ms Keita to discuss with the ODINAFRICA community the need and interest for a new "African Ocean Portal" but then also to identify potential content providers.	Arame Keita	6/2010

77.   Ms Keita informed the Group that there is still a high need for an African Ocean Portal and that the editorial committee should be re-constituted. Ms Keita informed the Group that ODINAFRICA is planning to migrate content to the new ODINAFRICA web site. **The Group welcomed** this initiative. **The Group also recommended** that ODINAFRICA investigates whether a web crawler could extract content.

	210	**The Group** recommended to use RSS feeds from OceanDocs to the Portals.	Marc Goovaerts	2011

78.   The Group closed this item.

	213	**The Group requested Marc Goovaerts** to investigate the possibility to use "social bookmarking" technology to develop a new service replacing OceanPortal.	Marc Goovaerts	8/2010

79.   Ms Pikula informed the Group that a report from Marc Goovaerts had been received regarding social bookmarking, software used and appropriate use in relation to OceanPortal. Illustrative examples are included in his report. Social bookmark sites like Delicious, Digg, Diigo were created in the past decade to manage and share web links. A social bookmarking service is a centralized online service which enables users to add, annotate, edit and share bookmarks of web documents (Wikipedia).

80.   Products like Mendeley and CiteULike have taken over some of these functionalities, but they are first of all research and publication-oriented. Therefore they are less relevant for a link site as OceanPortal. Zotero is a reference manager site, which can also manage web pages. It is possible to use the existing services to create a network of link submitters, while feeding the OceanPortal with the tools the social bookmarking sites provide. A copy of Marc Goovaerts report is available. Further discussions were referred to agenda item 6.5.1 (Aquatic Research Platform).

6.4 Coastal Atlases	218	**The Group welcomed** the active role of Ms Simpson in involving marine information managers in Coastal Atlas projects and **called on** the Caribbean Marine Atlas, African Marine Atlas and other similar initiatives to make full use of marine information managers in Atlas projects.	M. Odido to Atlas project managers	6/2010

81.   <mark>COMPLETED</mark> Ms Simpson informed the Group that Mr Odido had circulated the document 'Contribution of Information Managers to Marine and Coastal Atlases' to the ODIN MIM Community and Atlas Project Managers.

82.   **The Group recommended** to distribute the document to the ICAN steering group. (see http://www.iode.org/ican) . See also agenda item 6.5.2

	220	**The Group noted** that currently no MIM experts had been identified to participate and **recommended** that this be arranged as soon as possible and in time for the July meeting. **The Group stressed the need** to have a MIM expert as a member in each of the national atlas coordination teams.	M. Odido to Atlas project managers (to get agreement)	6/2010

83.   Ms Keita informed the Group that she had represented GEMIM at an Atlas Editorial meeting held in March 2012 in Nairobi. However, no MIM expert has been formally appointed to represent MIM on the African Marine Atlas Project.

84.   **The Group re-iterated** the need to include a MIM expert in the regional African Marine and Coastal Atlas team as well as in national marine atlas teams.

The Group, taking into account the proposed establishment of the IODE ICAN Project and its Steering	223	**The Group requested** Mr Marc Goovaerts and Ms Pauline Simpson to coordinate the activity so the product can be presented during IODE-XXI (March 2011) and IOC-XXVI (June 2011).	Marc Goovaerts/ Pauline Simpson	3/2011

Group, **recommended** including a MIM expert in the SG-ICAN. 6.5 Subject specific Bibliographies				

85.   COMPLETED Ms Simpson informed the Group that the IODE Anniversary Bibliography: 50 years of service 1961-2011 was completed and issued as IOC/INF/1278 in 2011 at the IODE XXI meeting. http://biblio.iode.org. …

	224	**The Group requested** the Chair to consult a few MIM experts to inquire about their willingness and availability for a 3-6 month secondment to Ostend.	Chair	6/2010 ($8000-14000 from PO)

86.   COMPLETED Ms Pikula informed the Group that Maria Kalentsits from Estonia was recruited for secondment to Ostend for a period of three months to work on the IODE Anniversary Bibliography. In this regard **the Group expressed its great appreciation** for the substantial contribution by Ms Kalentsits to the bibliography.

6.6 IOC Strategic Plan for D&IM	229	**The Group requested** the Chair to circulate the Document to all GE-MIM Members for their comments and, after some revisions, submitted to the IODE Co-Chairs for incorporation in the revised strategy document to be discussed by IODE-XXI.	Chair	8/2010 final: 10/2010

87.   Ms. Pikula reported that the Strategic Plan had not been revised at IODE-XXI but that a revised version has been prepared for adoption by IODE-XXII. MIM Chair   was invited to participate in the IODE Officer's meeting to revise the Strategic Plan March 2012, taking into account the suggestions of GEMIM. The draft is available as Document IOC/IODE-XXII/20 (http://www.iode.org/index.php?option=com_oe&task=viewDocumentRecord&docID=9956) .

88.   **The Group** referred discussion on this subject to agenda item 4.6

6.7 Application of new technologies in MIM	235	**The Group stressed the need** to keep the MIM community abreast of new technology developments and **called** on experts active in these areas to share their expertise with the community through OceanTeacher	All	continuous

89.   Ms Pikula informed the Group that although OT Instructors do share their knowledge through the OT courses, as mentioned in the diversity of Instructors in section action item 110, more participation from the worldwide marine information community is needed and hoped to be achieved through collaborative efforts with IAMSLIC and other professional organizations.

90.   **The Group invited** IAMSLIC members and other marine information management and related experts to actively contribute to OceanTeacher as lecturers.

7. 50th anniversary of the IODE	239	**The Group requested** Ms Suzie Davies and Ms Linda Pikula to assist the Secretariat with selection of imagery for the calendar and gift ideas.	Ms Suzie Davies	July-September 2010

91. Ms Pikula worked on the preparation of the IODE Calendar, MIM photograph memories and other IODE gift selections.

8. GE-MIM-XI work plan	240	**The Group adopted** its work plan for the next inter-sessional period through Recommendation MIM-XI.2	AII	2010-2011
10. Dates and Place of the next Session	245	**The Group recommended** that the 12th Session of the IODE Group of Experts on Marine Information Management be held late 2011 (September-November). It was recommended that the venue of the Session be discussed later, possibly back-to-back with IAMSLIC 2011, the 2011 ASFA Board meeting, or alternatively in Ostend or Miami.	Secretariat	2010-2011

92. The Group was informed that, due to the financial crisis, it had been decided to reschedule the 12th Session to January 2013.

11. Adoption of the Summary Report	248	**The Group requested** the Chair to present the Report of the Session to the Twenty-First Session of the IODE Committee that will be held in Liège, Belgium between 23-26 March 2010.	Chair	3/2011

93. The Group was informed that the report of the 11th Session had been presented by Ms Pikula during IODE-XXI.

3.2   MATTERS ARISING FROM IODE-XXI AND THE IODE OFFICERS MEETING (2012)

3.2.1   MATTERS ARISEN FROM IODE-XXI

94. This agenda item was introduced by Ms Linda Pikula. Ms Pikula recalled that she had provided an overview of the outcome of the GE-MIM's 11th Session. The Committee had decided to include more MIM elements in the next version of the IOC Strategic Plan for Oceanographic Data and Information Management. The Committee had commended GE-MIM for the progress made in implementing the planned activities. The Committee had noted the excellent collaboration established with IAMSLIC and FAO/ASFA. The Committee encouraged GE-MIM to enhance its collaboration with ODINs in order to strengthen activities at the regional level. The Committee had approved the report of the 11th Session of the GE-MIM and the Recommendations therein. The Committee had also instructed the Secretariat to publish the "IOC Communications Strategy for Marine Information Management". Within the IODE-XXI budget funds had been allocated for GE-MIM-XII, to participate in the 2011 and 2012 ASFA Advisory Board meetings, for activities related to OceanDocs and for ODIN activities related to MIM. It was noted that due to the financial crisis that affected UNESCO and its IOC as from November 2011, several of these activities had to be cancelled or postponed. This will also be discussed under the relevant agenda items.

3.2.2   MATTERS ARISEN FROM THE 2010 OFFICERS MEETING

95. Introducing this item the Chair informed the Group that the 2012 Session of the IODE Officers had taken place at the IOC Project Office for IODE, Ostend, Belgium between 30 January and 3 February 2012. She noted that, in order to save funds, this meeting had been held largely through Webex. The report of the meeting is available as Document IOC/IODE-Off-2012/3 (2012 IODE Officers Meeting – Summary Report) which can be downloaded from the IODE web site on http://www.iode.org/index.php?option=com_oe&task=viewDocumentRecord&docID=8532 . The

Officers had reviewed the action items of the IODE-XXI report. Those related to the work of GE-MIM and for which the Officers had made suggestions or decisions included:

(i)   The IOC Strategic Plan for Oceanographic Data and Information Management: the Officers stated that the need to include more MIM elements would be discussed at the meeting of the IWG on the Strategic Plan (held 1-2 March) – see http://www.iode.org/index.php?option=com_oe&task=viewEventRecord&eventID=1018.

(ii)   OceanDocs: ref to para 221 of the IODE-XXI summary report: "T*he delegate from France informed the Committee that France had performed an inventory of publications prepared after French Scientific research cruises. The inventory is available in electronic format and France is willing to share it with OceanDocs. The Committee accepted this kind offer*".   The Officers had requested the GE-MIM Chair to contact Mr Peti de la Villéon on this matter. Ms Pikula informed the Group that she had contacted Mr. Petit de la Villeon several times regarding this item, but he has not yet delivered the information.

        The Group instructed the Secretariat to keep contacting Mr de Villéon for the inventory.

(iii)   OceanExpert: The Committee proposed that the over 4000 institutions referred to in the OceanExpert database should be linked to the SeaDataNet EDMO codes. Mr Kakodkar was requested to investigate this. The number of institutions is 5122. Mr Kakodkar informed the Group that, IODE had contacted SeaDataNet group and discussed collaboration for linking EDMO with OceanExpert Institutions, but we did not receive any fruitful response. SeaDataNet wanted to discuss this more within their group and with IODE. **The Group requested** that the GE-MIM Chair should also be involved in the further discussions with SeaDataNet on this topic.

(iv)   OpenScienceDirectory: The Committee expressed its appreciation to EBSCO and Hasselt University and urged them to continue this valuable product, which provides essential services to scientists in developing countries. The Officers decided that this service should be continue and invited Hasselt University to continue its support;

(v)   OceanTeacher:

        o   The Committee recognized that Internet connectivity and bandwidth problems persist in some countries, which hinders access to OceanTeacher content. The Committee instructed the Steering Group for OceanTeacher to investigate possibilities for making the digital library and/or the classroom available in offline version. Mr Kakodkar informed the Group that the OceanTeacher courses are constantly updated and the courses include files, which need more storage space as well as external links from other websites, prove difficult to access and index. Experimental tools for indexing Moodle were not functioning as expected at the time of testing.
        The Group regretted that making OceanTeacher available offline does not seem to be possible. **The Group recommended** however that OceanTeacher videos (Vimeo files) should be made available on CD/DVD upon request.

        o   The Committee, taking into account the needs of start-up data and information centres, instructed the SG-OceanTeacher to consider developing case-study materials as well as step-by-step training materials (eg for the setting up of databases). The Officers recommended that the GEs should identify manuals that need to be updated. Ms Pikula informed the Group that the Steering Group had not developed the case-study materials and the manuals needing updating had not been identified. It should be remembered that the committee did not want to rewrite

manuals, but suggested a replacement for manuals as case-study materials and step by step training materials available online in digital format.

96. The Group recalled that the GE-MIM had published 4 IOC Manuals and Guides:

- IOC Manuals and guides No. 30 - Volume 1: Report on Diagnostic Procedures and a Definition of Minimum Requirements for Providing Information Services on a National and/or Regional Level (01/01/94). Moulder, David S.; Moritz, Tom

  o **The Group invited** IAMSLIC to evaluate the need for a revision of IOC Manuals and Guides No. 30 Volume 1 and, if necessary, identify authors.

- IOC Manuals and guides No. 30 - Volume 2: Information Networking, V2: the Development of National and Regional Scientific Information Exchange (01/01/94) . Pissierssens, Peter

  o **The Group considered** this as a suitable candidate for a revision of IOC Manuals and guides No. 30 - Volume 2, taking into account the experience with ODINAFRICA and other ODINS during the past 20 years.

- IOC Manuals and guides No. 30 - Volume 3: Standard Directory Record Structure for Organizations, Individuals and Their Research Interests (01/01/94). Moulder, David S.; McFadden, Charles;...

  o **The Group considered** this as a suitable candidate for a revision, taking into account adopted standards, persistent identifiers for individuals, e-repositories, data publishing, OceanExpert, etc.

- IOC Manuals and guides No. 30 - Volume 4: Standard Library Directory Record Structure (01/01/99) . Moulder, D.S.

  o **The Group decided** that this manual is no longer relevant as most of the directories have disappeared. **The Group invited** Ms Taylor to identify any current substitutes.

97. **The Group decided** to discuss the Officers' suggestions and recommendations regarding the ODINs under their respective agenda sub-items under agenda item 5.1, and on Capacity Building under 5.2 and 5.3.

98. The Group was informed that the Officers had revised the budget for 2012-2013, taking into account the financial crisis. The Officers included US$ 6,000 for an expert mission by Ms Pikula and Ms Kraft to Vietnam (book conservation). They also maintained US$ 12,000 for the GEMIM-XII Session in 2012 (although this was later rescheduled to 2013. OceanTeacher training courses were also maintained. Support was also provided for participation in the 2012 ASFA Advisory Board (attended by Marc Goovaerts). Regrettably all ODIN related activities had to be cancelled, as it was not possible to allocate funds to all ODINs and maintain a minimum level of activity.

4. STRATEGIC ISSUES

4.1 POSSIBLE IMPACT OF CHANGES IN IODE STRUCTURE AND TERMS OF REFERENCE ON MIM

99. This agenda item was introduced by Mr Pissierssens. He referred to **Document IOC/IODE-XXII/21 "Changes in IODE structure and Terms of References"** which had been prepared for IODE-XXII. He noted that the Document identified 3 important weaknesses of

IODE today: (i) IODE is too closely knit and somewhat exclusive (limited to NODCs); (ii) there is little involvement of the ocean research and observation community; and (iii) users of IODE services/products are not well defined. The document firstly recommended a revision of the Terms of Reference in response to the instruction of the IOC Executive Council to add a reference to the IOC data policy. Secondly the document proposes extending the stakeholder scope to include the "ocean science and observation community".

100.   The second proposal in this document is the establishment of **"IODE Specialized Ocean Data Centres" (IODE-SODC).** The main weakness of IODE today is the lack of involvement of the ocean research and observation community and its too closely knit and somewhat exclusive structure (limited to NODCs). In some Member States an excellent relation has been built between NODCs and national research institutions. In other cases such a relationship has not been built and this for a variety of reasons. In the latter case this means that data may not be deposited at the NODC and awareness of the research community about data management and IODE may be very low. However in those cases where a good relationship exists there may be a wide variety of projects, programmemes and institutions that operate at the national or regional level and that collect data. These entities may have set up their own data management system or worse, they may have no formal data management system. When they did set up a data management system they may or may not have used IODE methods (e.g. for quality control). In addition the existing NODCs may not have the resources to process all data generated they these other entities. The proposal is therefore to establish a new type of data centre: a "IODE Specialized Ocean Data Centres (IODE-SODC)". These centres will operate independently of IODE but will be associated with IODE. For the SODCs the advantage of being associated with IODE will be that they will receive information on standards and practices used in the entire IODE network, and they have easy access to the data and information services of IODE (e.g. ODP, OceanDocs, etc). For IODE the advantage is to be able to communicate directly with a much larger global community of users and other stakeholders.

101.   Mr Pissierssens then noted that this document addresses almost entirely ONLY the data management aspects of IODE. He urged GE-MIM to prepare a similar analysis for marine information management. In this regard he stressed that the MIM component of IODE had never been able to establish the equivalent of NODCs for marine information management and this had remained an anomaly within IODE. He also referred to the new relationship with IAMSLIC and recommended that the GE-MIM should address this issue now and either prepare an addition to Document 21 or to prepare an additional document that relates to MIM. He cautioned that time was limited as all documents for IODE-XXII should be online not later than half February 2013. **The Group decided** that no benefit would be gained from structural changes regarding marine libraries but that the new relationship with IAMSLIC would considerably expand the community reached by IODE.

102.   **The Group recommended** that the newly established SODCs actively and systematically collaborate and seek cooperation from the library at their host institution, taking into account that libraries have a role and skills in data management in the area of ocean data management policy and planning, controlled vocabularies, data publication/citation, data discovery/access/mining, data preservation and client training. **The Group recommended further** that this should be included in the terms of reference of the SODCs.

103.   The role of IODE/MIM is to lead the way in the above defined areas and to develop capacities, including training, mentoring and networking opportunities for librarians to develop these services.

104.   **The Group stressed the need** for the marine information management community to be pro-active in defining its future role and **recommended** that this topic should be discussed jointly with IAMSLIC and should result in a position paper.

105.   The Group considered that the role of the IODE national coordinators for marine information management required a revision. The Group recalled that, at its 9th Session (2007), the GE-MIM proposed a revision of the Terms of Reference of the IODE National Coordinators for Marine Information Management as follows (through Recommendation MIM-IX.1):

- •   Act as a point of contact for marine librarians and marine information managers in their country, in order to liaise with the IODE community (via the GE-MIM) on matters of importance to MIM;

- •   Act as a communicator of IOC activities and initiatives to the national MIM community and beyond;

- •   Provide assistance and support to the GE-MIM on IODE programmeme activities at the national or international level;

- •   Establish a national working group that will create a national network of marine related libraries/marine information centres for their country or participate in existing related networks;

- •   Highlight and identify issues and participate in discussions of national importance relating to MIM with the GE-MIM and the national MIM community (such as capacity building and professional standards, technological innovations and policy, communications and collaboration, national and international MIM resources);

- •   Provide reports to the IODE Committee (or IODE Officers), highlighting needs and issues that should be addressed by GE-MIM, for consideration by the IODE Committee or IODE Officers. The Committee or IODE Officers can then instruct the GE-MIM to deal with these needs and issues;

- •   Participate in Sessions of the IODE Committee

106.   **The Group adopted** Recommendation MIM-XII-3 (Revised Terms of Reference of the IODE National Coordinators for Marine Information Management,)

4.2   PROPOSAL FOR THE ESTABLISHMENT OF THE JOINT IODE-IAMSLIC JOINT GROUP OF EXPERTS ON MARINE INFORMATION MANAGEMENT (IODE-IAMSLIC GE-MIM)

107.   This Agenda Item was introduced by Ms Linda Pikula taking in to consideration recommendations of the IAMSLIC Task Force received November 2011 and opening these recommendations for discussion towards development of Terms of Reference for a Joint IODE-IAMSLIC GE-MIM.

108.   The Group considered the recommendations made by the IAMSLIC Task Force:

Recommendation 1. On balance, the Task Force finds that the proposal has sufficient merit to warrant further discussions with IODE on specific details.

These include:

1. Funding mechanisms for IAMSLIC GE-MIM members to physically attend the annual/biannual meetings.

- • The fact that IAMSLIC won't be able to fund participation of its representatives in joint GE-MIM meetings should be brought to IODE attention

- • Alternative funding solutions to be discussed and agreed on with IODE

- • A situation should be avoided where IAMSLIC members predominantly attend joint meetings via WebEx while IODE members attend in person. A balanced

ratio (either all members present in person or all attend through WebEx) should allow goals to be accomplished in most efficient way and perspectives equally represented.

109. The Group discussed the possibility to have GE-MIM and IAMSLIC Sessions back-to-back. It was noted that the duration of the GE-MIM (4 days) would be difficult to add on to the IAMSLIC Conference duration (4 days). The Group recommended to reduce the duration of its Sessions to 3 days and to organize the discussions on inter-sessional activities online (by email or Webex). It was noted that the 2015 IAMSLIC Annual Conference will be held in October in Europe. **The Group recommended** that the first Session of the joint GE-MIM should be held back-to-back with the 2015 IAMSLIC Annual Conference to test the format. It was noted that GE-MIM Sessions are normally held prior to an IODE Committee Session and then followed by an IOC Assembly but the Group considered that establishing the joint GE should be a priority.

110. The Group discussed the funding of the IAMSLIC members in GE-MIM Sessions. It was agreed that IAMSLIC would fund at least one representative. Funding of additional IAMSLIC representatives will depend on the availability of (co-)funding of the experts, IAMSLIC or IODE.

111. The Group considered the different options for mixing long-term and short-term: 4 long-term IODE + 4 long-term IAMSLIC; 4 long-term IODE + 4 short-term IAMSLIC; 2 long-term IODE +2 short-term IODE + 2 long-term IAMSLIC + 2 short-term IAMSLIC. **The Group agreed** that IAMSLIC will seek interest from its membership for either long-term or short-term membership and identify their members of the Group accordingly.

112. The Group recalled that members should be knowledgeable in marine information management in general, and should have specific expertise in at least one topic of the agenda of a Session. In this regard **the Group recommended** to submit the summary report of GE-MIM-XII to the IAMSLIC President prior to the 2013 Conference to enable experts to come forward. **The Group also stressed** the importance for GE-MIM members to commit time and effort to the work of the Group, which always includes inter-sessional tasks.

  2. IODE MIM policy and IAMSLIC strategic goals to be analyzed for synergy.

113. **The Group acknowledged** that IODE/MIM and IAMSLIC objectives are synergistic.

  3. Objectives of the Group and tangible deliverables should be discussed with the IODE and clearly described in the Terms of Reference. Clear position descriptions for members of IAMSLIC-IODE GE-MIM should be established.

114. **The Group noted** that deliverables are identified in the inter-sessional work plan. GE-MIM members should volunteer to commit time and effort to the work of the Group, which always includes inter-sessional tasks with set deadlines. Such tasks may include contributing to writing of working documents or manuals, performing desk studies, product reviews, partnering in project initiatives, reporting on relevant conferences, initiating new information products, providing expert opinion, etc.

  4. Governance of IAMSLIC-IODE GE-MIM to be elaborated. This would also strongly enhance transferral of corporate knowledge and project history when GE-MIM Chair position changes. A position of Deputy Chair of the IAMSLIC-IODE GE-MIM should be proposed to be established. Positions of Chair and Deputy Chair could alternate between IAMSLIC and non-IAMSLIC in order to ensure shared control and ownership of the committee between both IODE and IAMSLIC.

115.   In this regard **the Group recalled** the tasks of the GE-MIM Chair:

- Chairing Sessions of the Group

- Representing the Group and reporting on the Group's activities during Sessions of the IODE Committee

- Representing the Group and reporting on the Group's activities during Sessions of the IODE Officers (The Chair is an IODE Officer)

- Representing the Group at IAMSLIC Conference

- Preparing, on close consultation with the IODE Secretariat, the agenda and annotated agenda for Sessions of the Group

- Preparing working documents for Sessions of the Group as well as for the IODE Committee and IODE Officers meetings

- Monitoring progress of work during the inter-sessional period

- By default the Chair is a member of the steering group of any IODE project that requires MIM input. The membership can be delegated by the Chair to another member of the GE-MIM.

116.   **The Group recalled** that it elects its own Chair during a Session of the Group. A Chair is elected for not more than two inter-sessional periods. The Group can choose to also elect a Vice-Chair.

   5. The role of freshwater IAMSLIC libraries and their involvement in joint GE-MIM to be discussed with IODE (e.g. participation of freshwater librarians in IODE OceanTeacher Academy programmemes)

117.   **The Group decided** that Membership in the GE-MIM is open also to freshwater librarians.

118.   A number of IODE projects or activities are already open to freshwater experts, e.g. OceanExpert. Freshwater librarians are welcome to utilize OceanDocs expertise for their own purpose. They can submit documents to the IAMSLIC Aquatic Commons, which is hosted by the IOC Project Office for IODE.

119.   **The Group decided** that priority will be given to marine science librarians but, dependent upon the availability of funds, freshwater librarians can participate in OceanTeacher Academy courses as students. Such decision would be made on an *ad hoc* basis. Participation of self-funded students is welcomed.

   Recommendation 2. The Executive Board could consider following IAMSLIC responsibilities to be included in the Terms of Reference:

   a. Nominate 4 members representing the diverse IAMSLIC community.
      A possible composition proposed (provided that nominees will also represent different regional groups and are able to remain members at least for 2 inter-sessional periods and agree to undertake and complete GE-MIM Action Items):

      • Representative of the IAMSLIC-IODE MoU Committee
      • Representative of the Aquatic Commons Board
      • Representative of the Strategic Planning Group
      • IAMSLIC Member at Large

120.   The Group referred to the discussions on the membership and requested that membership should be closely linked to the topics that are discussed at GE-MIM.

> b. <u>Support the IAMSLIC nominees in their contributions to GE-MIM information management projects, scientific and technical studies and/or coordination tasks. Specifically identifying supporting skills base to deliver the GE-MIM Work Programmeme agreed at each session</u>

121.   **The Group concluded** that no action was required by IODE for this topic.

122.   **The Group concluded** that items c,d,e,f,g listed below were not directly related to the GE-MIM but rather to the MoU between IOC/IODE and IAMSLIC:

> c. Extend the use of the IAMSLIC mailing list for such exercises as surveys; for example, to identify knowledge gaps and training requirements for marine information managers
>
> d. Identify courses to be offered through the OceanTeacher Academy MIM Prospectus
>
> e. Identify and nominate OceanTeacher lecturers from the IAMSLIC community with the experience and skills to teach new courses identified
>
> f. Establish links between IAMSLIC and IODE at regional levels by building strong interactions with regional ODIN networks – report on these links and shared activities at GE-MIM session
>
> g. Establish links with MIM National Coordinators and collaborate on developing stronger national marine/freshwater networking opportunities

Recommendation 3. The Task Force suggests to start working on the Terms of Reference for joint IAMSLIC-IODE GE-MIM as soon as major points of concern are addressed.

123.   **The Group decided** to revise the Terms of Reference of the GE-MIM, taking into account that they had not been modified since 1984 and required revision also taking into account the proposed establishment of a Joint IODE-IAMSLIC GE-MIM.

124.   **The Group adopted** Recommendation MIM-XII.1

Recommendation 4. Annex 2 of the Memorandum of Understanding (MoU) between IAMSLIC and IODE describing Joint IAMSLIC-IODE GEMIM and ensuring equal partnership between both Parties should be prepared; MoU to be updated to include the joint IAMSLIC-IODE GE-MIM.

125.   **The Group recognized** the need to renew the MoA but not to be covered by this GE-MIM Session. **The Group recommended** that the new MoA should be discussed by email between the IAMSLIC President, GE-MIM Chair and IODE Secretariat, taking into account that the current MoA is expiring in December 2013 and the new MoA should be signed preferably before end of December 2013.

      4.3   GE-MIM MEMBERSHIP ISSUES

126.   This Agenda Item was introduced by Mr Pissierssens. He recalled that IODE-XIX had revised the Strategy and Structure of IODE Groups of Experts by adopting Recommendation IODE-XIX.2 (2007). As a result the membership of the Groups was revised as follows:

- o   The total number of Members of IODE Groups of Experts should not exceed 8;

- o   The Groups should be composed of not more than 4 long-term members; and not more than 4 short-term members;

- o   The long-term members will be selected by the Executive Secretary, based upon nominations from Member States and further based upon individual expertise as relevant to the concerned IODE Group of Expert. Long-term members can remain a member of the Group during not more than 4 inter-sessional periods;

- o   The short-term members shall be selected by the long-term members of the Group, based upon their specific expertise, documented in the OceanExpert system, related to specific tasks or projects and will remain a member during, preferably, not more than two inter-sessional periods.

127.   Mr Pissierssens also recalled that GE-MIM-XI had decided that short-term experts should be identified for the following large-scale issues:

- -   Repository systems, software and technical operations and marketing for OceanDocs;

- -   Digitization projects, resources, digital asset management, including metadata, preservation;

- -   e-Science and large data sets;

- -   Bibliographic citations and performance metrics;

- -   Disaster preparedness for marine information centres;

- -   Assessment of ILMS, selection and implementation assistance;

- -   Social networking, web 2.0 development, semantic web, ontologies and taxonomies;

- -   Open Source solutions to information management requirements.

128.   Mr Pissierssens then summarized the status of the current membership:

- o   Ms Linda Pikula: long-term member: has completed 3 inter-sessional periods : will leave GE-MIM as long-term member after GE-MIM-XIII;

- o   Ms Arame Keita: long-term member: will have completed 4 inter-sessional periods at GE-MIM-XII and will now leave GE-MIM;

- o   Ms Patricia Munoz Palma: long-term member: will have completed 4 inter-sessional periods at GE-MIM-XII and will now leave GE-MIM;

- o   Ms Linda Noble: long-term member: has completed 3 inter-sessional periods : will leave GE-MIM after GE-MIM-XIII. However she has not responded to the invitation to GE-MIM-XII so it is uncertain if she wishes to continue.

129.   As shown the membership of GE-MIM required new members. Accordingly IOC Circular Letter 2421 was issued (10 February 2012). As a result 4 new members were selected: (i) Ms Olga Akimova (Ukraine), Mr Richard Awah Nche (Cameroon), Ms Julia Goodman (Canada), Ms Xue Huifen (China). All current and new members were invited to GE-MIM-XII to facilitate transition. After the closing of GE-MIM-XII the Group will have 6 long-term members (5 if Ms Noble can no longer participate). This is slightly higher than the prescribed 4 long-term members but some flexibility can be accepted. Ms Pikula has been Chair during two inter-sessional periods (elected at GE-MIM-X).

130.   The Group referred to Agenda Item 4.2 for additional discussions on this topic.

4.4   IODE NATIONAL COORDINATORS FOR MIM: STATUS

131.   This Agenda Item was introduced by Mr Pissierssens. He reported that the number of IODE national coordinators for marine information management had increased to 53, 23 of which had been designated during the past inter-sessional period. In this regard it was mentioned that IOC Circular Letter 2336 had been published on 16 March 2010 and IOC Circular Letter 2405 on 4 October 2011. This demonstrated that the regular publication of Circular Letters does help to both increase and update the network membership.

132.   Mr Pissierssens provided also a brief analysis of gaps in nominations: Caribbean Islands, Middle East and Gulf region, Latin America, Pacific Islands. He mentioned that the same weakness existed in data management.

133.   **The Group welcomed** the impressive increase in nominations of IODE national coordinators for MIM during the past inter-sessional period but **regretted** that a number of countries had not identified a national coordinator for MIM, despite the presence of numerous marine libraries. The Group recalled that it had revised the Terms of Reference of the coordinators as [Recommendation MIM-XII.3.](Recommendation MIM-XII.3)

4.5   MIM COMMUNICATION STRATEGY (REVISION 2014-2015)

134.   This Agenda Item was introduced by Ms Linda Pikula, referring to Document IOC/INF-1288 (IOC Communication Strategy for Marine Information Management 2011-2013). She directed members to the current version of the MIM Communication Strategy and invited GEMIM volunteers to work on the revised version 2014-2015 of this document.

135.   The Group noted that the success of the Communication Strategy is being demonstrated by the fact that MIM experts are now involved in several IODE projects, including some that were traditionally considered as "data management" activities. Example: the African Marine and Coastal Atlas (Ms Arame Keita is member of the Editorial Board). Ms Pauline Simpson has contributed a paper on the contribution of information professionals to coastal marine atlases and participated in a workshop of the Caribbean Marine Atlas. MIM aspects have been taken into account in the revised version of the IOC Strategic Plan for Oceanographic Data and Information Management (see Agenda Item 4.6). The joint SCOR/IODE/MBL WHOI data publication project is also a demonstration of the increased role and visibility of IODE/MIM.

136.   **The Group decided** to revise the MIM Communication Strategy's implementation plan and **included** this item in the work plan. Ms Goodman and Ms Simpson offered to revise the document for review by the members.

137.   **The Group further recommended that**:

(1) For each event planned by a project, information on the event is sent to the IODE Secretariat prior to the date of the event (at least 1 month in advance). The IODE Secretariat will then post the information on the IODE web site calendar;

(2) For each event implemented by a project, a brief summary (news item) on the event should be sent to the IODE Secretariat (not later than 1 week after the event). The IODE Secretariat will then post the information on the IODE web site;

(3) For each event implemented by a project, the report of the event will be sent to the IODE Secretariat (not later than 1 month). The IODE Secretariat will then post the report on the IODE web site. The report will also be added to OceanDocs;

(4) For each of the above the IODE Secretariat will send an email to the IODE community (IODE group mailing list);

(5) The same process can be applied for new products or services released by projects.

138. **The Group recommended** that IODE should develop a Communication Strategy or adopt the MIM Communication Strategy as the IODE Communication Strategy.

4.6 IOC STRATEGIC PLAN FOR OCEANOGRAPHIC DATA AND INFORMATION MANAGEMENT

139. This Agenda Item was introduced by Ms Linda Pikula. In this regard she referred to Document IOC/IODE-XXII/20 (The IOC Strategic Plan for Oceanographic Data and Information Exchange (2013-2016)). She informed the Group that a chapter on Marine Libraries has been included in the document. This includes a description of OceanDocs and OpenScienceDirectory.

140. **The Group noted with regret** that the suggestions for amendments of the last draft made by Ms Simpson had not been taken into account in the version prepared for IODE-XXII. **The Group requested** Mr Reed to amend document taking into account the submitted amendments.

4.7 MIM AT IODE-XXII

141. This Agenda Item was introduced by Ms Linda Pikula. She explained that she will introduce several working documents. She contributed to Document IOC/IODE-XXII/16 on OceanTeacher. Input was also provided for Document IOC/IODE-XXII/15 on IODE projects, related to OceanDocs, OceanExpert. Input was also provided (through collation of received reports) for Document IOC/IODE-XXII/17 on the ODINs. The document on the GE-MIM-XII meeting (IOC/IODE-XXII/12) will be submitted by half March. The Chair informed the Group that she will represent GE-MIM at IODE-XXII with support from the USA.

142. **The Group thanked** the Chair for her active contribution in preparation for IODE-XXII and **thanked** the USA for supporting Ms Pikula's participation in the Session.

4.8 COOPERATION WITH DATA MANAGEMENT

4.8.1 SCOR/IODE/MBL WHOI DATA PUBLICATION PROJECT

143. This Agenda Item was introduced by Ms Lisa Raymond. She explained that the Marine Biological Laboratory/Woods Hole Oceanographic Institution (MBLWHOI) Library, the Scientific Committee on Oceanic Research (SCOR) and the International Oceanographic Data and Information Exchange (IODE) of the Intergovernmental Oceanographic Commission have assembled a team of librarians, data managers and scientists who are collaborating to identify best practices for tracking data provenance and clearly attributing credit to data collectors/providers.

144. One successful outcome of this collaborative effort includes tools and procedures developed by the Marine Biological Laboratory/Woods Hole Oceanographic Institution (MBLWHOI) Library and the Biological and Chemical Oceanography Data Management Office (BCO-DMO) that automate the ingestion of metadata from BCO-DMO for deposit with a copy of each data set into the Institutional Repository (IR) Woods Hole Open Access Server (WHOAS). The system also incorporates functionality for BCO-DMO to request a Digital Object Identifier (DOI) from the Library. This partnership allows the Library to work with a trusted data repository to ensure high quality data while the data repository utilizes library services and is assured that a permanent archived copy of the data is associated with the persistent DOI.

145.   The assignment of persistent identifiers enables accurate data citation. The Library can assign a DOI to appropriate datasets deposited in WHOAS. We are particularly interested in working with authors to deposit datasets associated with published articles. The DOI would ideally be assigned before submission and be included in the published paper so readers can link directly to the data set, but DOIs are also being assigned to datasets that support papers that have already been published. WHOAS metadata records link the article to the data sets and the data sets to the article.

146.   Because of the assignment of DOIs, Elsevier Publishing sought collaboration with the Library. Article records in Science Direct now contain links to datasets deposited in WHOAS that are associated with Elsevier articles.

147.   The Published Data Library (PDL) is a project of the British Oceanographic Data Centre that provides snapshots of specially chosen datasets that are archived using rigorous version management. The publication process exposes a fixed copy of an object and then manages that copy in such a way that it may be located and referred to over an indefinite period of time. Using metadata standards adopted across NERC's Environmental Data Centres, the repository assigns DOIs to appropriate datasets. Current deposits include several datasets from water sample measurements.

148.   SCOR, IODE, and the MBLWHOI Library have established a framework for data publication that encourages proper data citation. This framework is being shared and adopted within the marine science community.

149.   Coming in 2013: A "Cookbook" detailing procedures to establish a repository and item level versioning for the MBLWHOI Library DSpace repository.

150.   Associated websites:

> http://www.iode.org/datapublishing
> http://www.bodc.ac.uk/data/published_data_library/
> https://darchive.mblwhoilibrary.org/
> http://www.bco-dmo.org/

151.   Mr Arko reported that best practices are still evolving, especially for original field research data. For example, the DataCite DOI "standard metadata" kernel is very flexible, and additional guidance is desirable from the community including this group. Other outstanding issues include the granularity of data set to receive a DOI; documentation of quality (implicit in the existence of a DOI vs. explicit in the metadata); and the attribution for data sets collected from "background" instruments during a field expedition.

152.   Dr Leadbetter noted that, after the successful experiments done so far, the challenge will now be to mainstream data citation/publication in the marine research community. Regarding the cookbook, Dr Leadbetter reported that the Cookbook should be ready by half February. **The Group suggested** that the Cookbook should be published as an IOC Manuals and Guides.

153.   **The Group recommended** that the SCOR*/IODE/MBL WHOI data publication project* should be continued with a focus on promoting data publication in the ocean research community.

4.8.2 RESEARCH COORDINATION NETWORK (RCN): OCEANOBS

154.   This Agenda Item was introduced by Ms Lisa Raymond. She explained that Peter Pissierssens, Linda Pikula, Pauline Simpson and herself participated in this project on the Data Publication/Data Citation Task Team. The Task Team was asked to determine if there were incentives to encourage researchers to share their data and make it accessible. Using the

SCOR/IODE/MBLWHOI Library collaboration as a model, as well as reviewing other similar projects, the Task Team concluded that data publication that enables accurate data citation can indeed be an incentive to share data. Next steps need to include community accepted procedures for peer review of data because while deposit in a repository can assure provenance, quality metadata and permanence, it does not guarantee the scientific quality of the data.

155.   **The Group welcomed** the successful cooperation of GE-MIM members in the RCN project.

4.8.3 COOPERATION OBIS WITH MIM

156.   This Agenda Item was introduced by Ms Linda Pikula. She explained that the GE-OBIS had not met. She reported informal discussions with Ward Appeltans. Mr Appeltans had expressed surprise about the number of papers that referred to OBIS. It was suggested for GE-MIM to collaborate on the management of OBIS-related publications.

157.   **The Group recommended** that a marine information management expert should be a member of the SG-OBIS in order to e.g. provide guidance related to the citation metrics (as a performance measure) of OBIS-related publications, media, and other knowledge sources.

5.   CAPACITY BUILDING

5.1   ODINS

5.1.1 ODINAFRICA

158.   This Agenda Item was introduced by Ms Arame Keita. She reported that during the period 2010-2012 a number of activities had been undertaken, while others are planned, by ODINAFRICA in the area of marine information management:

(i)   An **assessment of national capacities and product development** has been undertaken in April-May 2012. A report was produced in July 2012. The conclusion was that there is good progress in the development of the core MIM products by some countries. However, a few countries are lagging behind and this was the reason for the September 2012 training course in Nairobi.

(ii)   **Library Catalogue**: between 2002 and 2010 the Inmagic DBtext software had been used to develop institutional library catalogue of ODINAFRICA partner institutions. Twenty such catalogues have been developed. However with the changes of technology that demanded a web-based catalogue solution and the high cost of the web-based version of Inmagic DBText it was decided to investigate open source solutions to replace Inmagic's software. As a result, as from 2011, ODINAFRICA partner libraries migrated to AgriOceanDspace (AOD) and ABCD, following a training course held in Lomé, Togo in April 2011. Unfortunately the lack of technical support for ABCD and the lengthy beta testing phase of AOD slowed down the migration of the library catalogues and its regional AFRILIB implementation. In June 2012 a new version of AOD (version 1.2) was released. A 2-week test was undertaken by information managers and coordinated by Ms Keita with the assistance of the AOD developer. Subsequently a training of trainers on AOD was organized from 27-31 August 2012 in Mombasa. In addition a second training course was organized (using the trainers trained in August) in Mombasa (24-29 September 2012) for a larger group on AOD and on EndNotes and Zotero as reference managers for small libraries. Currently 15 catalogues are being developed with AOD software, while 3 are using the ABCD software (Cameroon, Nigeria, Sudan). More than

17,000 records have been converted from Inmagic into AOD format and will be made available through the AFRILIB web site. More than 10,000 records are currently in the pipeline for conversion. Also AFRILIB has been migrated (current URL is http://193.190.8.15/afrilib) into AOD and some records have been uploaded from the previous database. Provided that the local system is accessible through the Internet (example: http://41.215.122.106/dspace/) the local systems can be harvested by the main system based at the IOC Project Office for IODE in Ostend, Belgium.

(iii)   **OceanDocs Africa**: Since 2005 an e-repository of marine publications and grey literature from African scientists (originally called ODINPUBAFRICA) has been built. OceanDocs Africa is now a collection within IODE OceanDocs (http://www.oceandocs.net and http://www.oceandocs.net/handle/1834/1337). It currently contains 1636 records. To ensure continued feeding of the repository, 20 institutional repositories are being developed, following a workshop held in Nairobi in October 2012.

(iv)   **Web interface of projects database**: A web interface is being built for the project database that contains information on national and regional projects that are ongoing or were terminated. The projects are currently available in static form through http://odinafrica.org/index.php?option=com_content&view=article&id=125&Itemid=44 . Templates have been provided and subsequently this will become a web-accessible database.

(v)   **OceanExpert Directory ODINAFRICA**: National directories are being developed for each ODINAFRICA participating country as part of the OceanExpert database. Ms Keita informed the Group that each participating ODINAFRICA library will actively seek new experts in their institution and country to enter into OceanExpert. They will then enter the new records into OceanExpert. They will also keep the list of all experts for their country as a "master list".

159.   Ms Keita further reported that 4 training events had taken place between 2011 -end of 2012, and 5 meetings. African experts also participated in the 2011 IAMSLIC Conference (October 2011, Zanzibar, Tanzania). An AFRIAMSLIC meeting was held in Nairobi, Kenya on 27 September 2012. Three new AFRIAMSLIC members joined: Mr Richard Awah Nche and Ms Therese Yebkep from Cameroon and Ms Maimouna Pouye from Senegal. New officers such as chairperson, Secretary and regional representatives have been nominated. Elections were planned for the end October 2012 but could not take place yet. It was noted also that Ms Edna Nyika had left IMS which had delayed the process.

160.   Ms Keita then identified the needs and planned activities of ODINAFRICA related to MIM:

(i)   **Library catalogue**: (a) Sustainability of the AgriOceanDspace software and technical support; (b) More training for countries with low capacities development for the library catalogue and repository; (c) Advanced training of trainers in AOD for the team of Mombasa **workshop** (Conversion of records and upload to AFRILIB); (d) Support to convert ABCD records to AOD format and upload to AFRILIB; (e) Technical support to finalize AFRILIB version AgriOceanDspace with all national collections; (f) Technical support for Sudan library catalogue on ABCD with Arabic publications.

(ii)   **OceanDocs Africa**: Increase the number of records and recruit new partners (projects LME and regional organizations in marine activities. The combination of Catalogue and repository with AOD interface will enable to increase significantly the numbers of records.

(iii) **OceanExpert Africa**: updating of records of experts online through http://www.oceanexpert.net and provide rights to **national** MIM coordinators to edit records and link them to publications.

(iv) **African Coastal and Marine Atlas**: Link national atlas to publication from repositories.

(v) **IODE/ODINAFRICA**: strengthen the networking of the MIM national coordinators in the ODINAFRICA region, and appoint an IODE national coordinator for MIM in each country. In this regard it was noted that such coordinators had been designated for Angola, Cameroon, Côte d'Ivoire, **Egypt**, Gabon, Ghana, Guinea, Kenya, Madagascar, Mauritania, Mozambique, Senegal, Tanzania and Tunisia.

161.   **The Group welcomed** the progress achieved by the MIM experts in Africa. The Group encouraged the ODINAFRICA MIM group to prepare a more detailed work plan, budget and timeline for future work (ref to (i) above). **The Group noted with concern** the limited response of African MIM experts to IODE surveys and emails. **The Group called** for improved communication between the ODINAFRICA project office and the IODE Project Office. **The Group also called** for better communication between the ODINAFRICA MIM coordinator and the GE-MIM members during the inter-sessional period. **The Group expressed its disappointment** about the lack of progress with ABCD development which had been identified as a suitable ILMS on several occasions but could not be used as the software was not developed as promised.

162.   **The Group welcomed** the creation of a new ODINAFRICA web site which would be launched shortly. **The Group called** on the ODINAFRICA project office to maintain the site more actively than the previous site and to add more MIM sources.

5.1.2 ODINECET

163.   This Agenda Item was introduced by Ms Olga Akimova. She referred to Document IOC/IODE-XXII/17, prepared for the 22nd Session of the IODE Committee. Ms Akimova briefly reported on progress made with the ODINECET work plan during the inter-sessional period (2011-2012). This includes (i) a three-day joint ODINECET–ODIN Black Sea meeting and ODINECET Workshop on Marine Information Management was held 12-14 September 2011 in Sevastopol (Ukraine) at the Sevastopol Institute of Banking, organized by ODINECET and ODINBlackSea coordinators with financial support of the IOC/IODE Project Office; (ii) 12 students from the region participated in OceanTeacher Academy courses in 2011-2012; (iii) E-repositories were created and/or updated: IBSS, CEEMaR; (iv) A Koha e-catalogue pilot was started at IBSS; (v) a Union catalogue system, using the IMIS software developed by the Flanders Marine Institute was implemented involving 22 marine libraries in the region; (vi) working collaboration with the IODE ODINBlackSea is in progress; (vii) ASFA input centres from the ODINECET group provide links to full-text documents from CEEMaR and IBSS repositories in ASFA records; (viii) digitization of rare monographs related to marine sciences held by ODINECET partner libraries; the List of rare books was compiled; A project proposal "ECETRAR" was submitted to the Elsevier Foundation. Despite being in the final 40 of 500 proposals it was not approved for funding.

164.   Ms Akimova then introduced the ODINECET work plan and budget for the next inter-sessional period as it would be submitted to IODE-XXII. The proposed work plan will include (i) updating of the ODINECET web site; (ii) participation in OceanTeacher training courses; (iii) organization joint ODINECET workshop and meeting of Russian aquatic libraries and information centres staff at VNIRO, Moscow in 2013; (iv) organization of ODINECET coordination meeting in 2014; (v) continue submission of documents into CEEMaR and IBSS repositories; (vi) providing technical and equipment support to CEEMaR partners; (vii) installation of Koha software in ODINECET partner institutions; (viii) updating of the ECET

Union catalogue including foreign titles stored in ODINECET partner libraries; (ix) continue to work on the project «Digitization of rare monographs related to marine sciences»; (x) update the ODINECET booklet/leaflet within recent programmemes; (xi) promote the input of the ECET-data to OceanExpert directory of marine and freshwater professionals

165.   **The Group expressed great appreciation** for the work carried out by ODINECET, despite the lack of funds that had been planned within the IODE-XXI work plan and budget. **The Group regretted** that the proposal submitted by ODINECET to the Elsevier Foundation was not approved but **encouraged** ODINECET to continue seeking funds for digitization projects.

5.1.3   ODINCARSA LA (SPINCAM-II, OCEANDOCS)

166.   This Agenda Item was introduced by Ms Linda Pikula on behalf of Ms Andrea Cristiani, ODINCARSA-LA MIM coordinator who could not attend due to het secondment to FAO. It was noted that the report should have been introduced by Ms Muñoz Palma but she was unable to attend the meeting as well. Ms Pikula noted that the report submitted covered only the year 2012 and only OceanDocs.

167.   Ms Pikula reported the following statistics on record entry:

	Oct. 2011	**Oct. 2012**	**Dec. 2012**
Latin America Community	1690*	1855**	1884***
Total OceanDocs	3652	4008	4077

1690 documents belong to Latin America Community: Argentina 362, Chile 79, Colombia 426, Cuba 373, Ecuador 361, Mexico 20, Trinidad y Tobago 15, Uruguay 54.
**1855 documents belong to Latin America Community: Argentina 383, Chile 94, Colombia 484, Cuba 426, Ecuador 373, Mexico 21, Trinidad y Tobago 15, Uruguay 59.*
***1884 documents belong to Latin America Community: Argentina 389, Chile 97, Colombia 485, Cuba 443, Ecuador 375, Mexico 21, Trinidad y Tobago 15, Uruguay 59.*

168.   The statistics revealed an annual input for October 2011-October 2012 of 165 records.

169.   Regarding actions taken to promote and develop OceanDocs in Latin America Ms Pikula reported the following:

(i)   Spanish **version** of the OceanDocs Policy Document / "Politicas del repositorio OceanDocs" available to the OceanDocs SG in May 23, 2012;

(ii)   Marketing efforts included the promotion of OceanDocs within the Latin American IAMSLIC Group through the biblio_latino mailing list and IAMSLIC GL website; the promotion of the inclusion of grey literature in OceanDocs to increase input;

(iii)   Two institutions confirmed interest to the OceanDocs regional manager to participate in the repository: **Museo** Nacional de Historia Natural and Universidad Austral (Chile);

(iv)   One new institution joined OceanDocs and started to upload documents to the repository in Dec. 3, 2012: Centro de Investigaciones Marinas, Universidad de La Habana, Cuba. The person responsible for the upload of documents to OceanDocs is Yuriem Lezcano

López, email: yuriem@cim.uh.cu Community home page: http://www.oceandocs.net/handle/1834/4517

(v) An OceanDocs Training Workshop was organized by the Chile National Coordinator for MIM, Ms Alexandra Smith and sponsored by IODE at Universidad de Magallanes, Punta Arenas, Chile, 25-26 de October 2012. The trainer was Ms Gabriela Silvoni, INIDEP, Mar del Plata, Argentina. The workshop welcomed 7 participants from Chile.

170.   Ms Pikula then reported a number of issues with OceanDocs in the ODINCARSA-LA region:

(i) **Lack of commitment** of existing partners/participating institutions: there are 6 institutions of a total of 23 in Latin America Community which never submitted any document to the repository. Some of these institutions joined the Project many years ago.

(ii) Personnel changes at institutional level affect the continuity of the work (re-establishing contact, training in OceanDocs procedures and follow up).

(iii) Training/technical Difficulties reported by Latin America participating institutions since the update of version of OceanDocs to AgriOcean DSpace (August 25, 2011): (a) Need of training: many partners asked about how to input metadata in the new fields that appeared after new version was installed; (b) Statistics module has a lack of previous statistical data (since 2007 to August 2011). The problem appeared when the new version was installed; (c) No access to graphic module for displaying statistics.

(iv) Problems regarding the efficiency in metadata input: librarians are preparing records of the same documents for various information products: local databases, ASFA, Aquatic Commons, OceanDocs, SciELO. It is necessary to avoid multiplying efforts.

171.   **The Group**, while welcoming the progress with OceanDocs, **expressed its disappointment** with the lack of activity in other IODE MIM activities such as OceanExpert.

172.   **The Group requested** the IODE Project Office (Mr Aditya Kakodkar) to address the OceanDocs technical issues mentioned and to provide the necessary assistance to resolve them.

173.   Regarding double input in ASFA and OceanDocs **the Group recalled** that a proposal had been submitted to the ASFA Advisory Board in 2012 but this proposal was rejected.

174.   **The Group recommended** that a new proposal for the export/import of records from/to OceanDocs from/to ASFA should be submitted to the 2013 ASFA Advisory Board, but called for a proposal that would be more focused on ASFA interests. In this regard **the Group requested** the GE-MIM Chair to contact the Chair of SG-OceanDocs to discuss this matter further, and for the SG-OceanDocs prepare a revised proposal, circulate it to the GE-MIM members for feedback, and **recommended** that Mr James Macharia (Kenya) + Saida Messaoudi (Tunisia) possibly assist with clarifying the new proposal at the 2013 ASFA Advisory Board, following its submission to the ASFA Secretariat by the IODE Secretariat.

5.1.4 ODIN-PIMRIS

175.   This Agenda Item was introduced by Ms Linda Pikula on behalf of Ms Susana Macanawai, ODINPIMRIS coordinator. She referred to Document IOC/IODE-XXII/17, prepared for the 22nd Session of the IODE Committee. She recalled that during the 21st Session of the IODE that was held in Liege, Belgium from 23-26 March 2011, the IODE committee adopted a

work plan and budget for 2012-13 including financial support for ODIN-PIMRIS. However, following the 2012 meeting of the IODE officers, which revised the workplan and budget, an amount of US$ 15,000 for ODINPIMRIS's regional meeting in 2013 was retained. This decision was commended as they are unable to coordinate video conferencing in the ODINPIMRIS region, due to the lack of or unreliable Internet connectivity.

176.   The ODIN-PIMRIS pilot project (2009-2010) was reviewed during a regional meeting in May 2011 which was also attended by the GE-MIM representative, Suzie Davies. The meeting noted the achievement of all project objectives and acknowledged the support of the IODE Project Office in Ostend, Belgium.

177.   Pilot project partners Cook Islands, Fiji, Kiribati, Samoa and Solomon Islands were acknowledged for their contributions. Technical and advisory support by the project office on the maintenance of e-repositories and improvement of services within these countries is ongoing.

178.   The project review meeting confirmed the inclusion of Tonga Fisheries library in the project for the next phase (2011-2012). However, this has been deferred to 2013-2014 due to staffing issues within the Tonga Fisheries division. E-repository development, internal training and project awareness promotion for Tonga fisheries staff commences in 2013.

179.   The meeting had also recommended a regional meeting and training in 2013 in Suva, Fiji to review project progress and train participants on e-repository/database development and maintenance (Greenstone & DSpace software).

180.   **The Group welcomed** the progress made, despite the very limited financial support provided by IOC/IODE.

5.1.5 ODIN-WESTPAC

181.   This Agenda Item was introduced by Ms Linda Pikula on behalf of Prof. Shaohua Lin (ODINWESTPAC regional coordinator), referring to Document IOC/IODE-XXII/17). She reported that China has continued to coordinate ODINWESTPAC since IOC/WESTPAC-VII held in Malaysia in May 2008. She then reported on the activities carried out by the host centre during the inter-sessional period: (i) collection of information on ODINWESTPAC contact points in 15 Member States (Australia, Cambodia, China, Fiji, France, Indonesia, Japan, Korea, Malaysia, New Zealand, Russia, Thailand, United Kingdom, United States and Vietnam); (ii) upgrade and update of the official website for ODINWESTPAC (http://www.odinwestpac.org.cn) with a great amount of data uploaded, and data products and/or graphic products provided; (iii) development of data processing techniques, quality control techniques, and standard operating procedures for data collection, processing and management; (iv) development of data services including Chinese coastal station data, other regional and international cooperation programmeme and project data, marine data products; (v) contacted with NEAR-GOOS and SEAGOOS and an official agreement to guarantee the data source from NEAR-GOOS. She further reported that most proposed activities were progressing slowly due to limited interest shown by the Member States. In addition Member States were slow to provide data to be made available through the ODINWESTPAC web site. Additional training also needed to be provided. She further noted that it has been difficult to implement marine information management in the region since few Member States have designated MIM coordinators.

182.   Ms Pikula then reported on the proposed work plan that focuses on accelerating the development of ODINWESTPAC with the following elements: (i) re-confirmation of the national focal points for data and information management. In this regard the secretariats for both IODE and the IOC's Sub Commission for WESTPAC will be requested to assist in getting the Member States from the region to identify/confirm the national focal points for data and information management to reconstitute the coordination working group for the ODINWESTPAC; (ii)

organization of ODINWESTPAC Capacity Building workshop (second regional coordination working group meeting), to collect the training requirements for the region, to be hosted by China in early 2013; (iii) organization of training course(s) based on regional requirements, as identified during the workshop, and approved by the ODINWESTPAC regional coordination meeting, to be hosted by China in later 2013.

183.   **The Group welcomed** the development of a regional repository based on DSpace (http://221.239.0.193:8080/jspui/) but **regretted** that it contains only Chinese publications. **The Group recommended** that ODINWESTPAC focus on bringing in materials from other countries in the region. **The Group also requested** the ODINWESTPAC coordinator to inform the Chair GE-MIM of the details of the planned meeting, to be held in 2013.

5.2   MENTORING PROGRAMMEMES AND INTERNSHIPS

184.   This Agenda Item was introduced by Ms Linda Pikula who referred members to the excellent report for GE-MIM-XI, document 8 authored by Ms Suzie Davies, former Australian GE-MIM representative and former Chair GE-MIM. As an example of the way forward in mentoring, Ms. Davies was successful in obtaining funding for the ODIN-PIMRIS group from AUSAID. Three ODINPIMRIS members participated in the twinning programmeme organized by Suzie Davies of Great Barrier Reef Marine Park Authority (GBRMPA) in February 2012. The twinning programmeme aims at helping Pacific Island partners gain experience and knowledge from marine libraries (twins) in Australia for the improvement of national marine information services. Ms Pikula invited the Group to examine GEMIM-IX doc.8 options for GE-MIM:

1.   IODE to develop formal mentoring programme for marine information management.

    a. Should GEMIM develop a formal proposal to IODE?

2.   IODE/GEMIM to approach IAMSLIC to develop a joint IODE/IAMSLIC programme under the new MOU

3.   GEMIM encourage informal mentoring opportunities

    a. Provide range of bibliographic resources on mentoring into OceanTeacher

    b. Provide web links to existing mentoring programmemes

    c. Have a contact person responsible for directing interested people to particular programmemes

4.   IODE/GEMIM to support existing proposal of Pacific Marine & Environmental Library Twinning Programme

5.   GEMIM to identify internships & work experience opportunities in IODE/IAMSLIC marine libraries and make the information available via IODE web site

6.   Do none of these!

185.   The Group was informed that IAMSLIC was currently not providing any "formal" mentoring. Instead it has an "informal", networking based mentoring practice. ODINPIMRIS has a twinning programmeme with Australia. It was noted that IAMSLIC has many skilled members who could be contacted by other members to share their experience. It was suggested that OceanExpert should be the tool to facilitate this. **The Group recommended** that IODE national coordinators for MIM as well as IAMSLIC members should create or update their OceanExpert record to include specific skills and interests. **The Group recommended** that the "expertise" field should be used. **The Group further recommended** that IAMSLIC create a "mentoring" page that will link to OceanExpert and OceanTeacher. **The Group recommended** that ODINs should create a "mentoring" page that will link to OceanExpert and OceanTeacher.

5.3   OCEANTEACHER AND MIM

186.   This Agenda Item was introduced by Ms Linda Pikula who referred members to the report 16 produced for IODE-XXII, Ensenada, Mexico. OceanTeacher MIM courses offered 2010-2012 and number of countries and participants are available in this report. The schedule of 2013 courses is also made available. A survey was circulated amongst the IODE, IAMSLIC and other interested professional communities to determine future course offerings. GEMIM-XII attendees were invited to discuss future MIM course offerings, modes of lecturing and Instructors. IAMSLIC experts were invited to express their ideas and to volunteer as Instructors. IAMSLIC student participation was also encouraged.

187.   **The Group recommended** that detailed statistics on course participation by country be included in future reports for the SG-OceanTeacher and IODE Committee meetings. **The Group recommended further** that detailed website statistics should be included in future reports for the SG-OceanTeacher and IODE Committee meetings. This concerns the OceanTeacher homepage, the OceanTeacher Classroom, the OceanTeacher Digital Library and the Vimeo sites.

188.   The Group discussed the possibility to organize a course prior to the 2013 IAMSLIC annual conference. **The Group recommended** organizing a 1-day training course prior to the IAMSLIC Conference. **The Group asked** the Chair to discuss the details: topic, practical arrangements and financial implications with the IAMSLIC 2013 Conference convenor and the 2013 Conference local host.

189.   **The Group requested** that IAMSLIC should link to MIM related pages in the IODE website, including OceanTeacher. **The Group requested** that IAMSLIC should advertise the courses as open to the entire IAMSLIC community (and not restricted to students from developing countries). **The Group requested** IAMSLIC to help with a list of possible listservs to advertise the OceanTeacher courses.

6.   IODE/MIM PRODUCTS AND TOOLS

6.1   GE-MIM INVOLVEMENT IN IODE PRODUCT DEVELOPMENT

190.   This **Agenda** Item was introduced by Ms Linda Pikula.

6.2   E-REPOSITORIES (OCEANDOCS, AQUATIC COMMONS) AND RELATED (EG AVANO)

6.2.1   OCEANDOCS

191.   Mr Aditya Kakodkar introduced this Agenda Item. OceanDocs started in 2004 as a project in the framework of OdinAfrica. In 2007 the OdinPubAfrica repository became OceanDocs, a repository for the IODE-related communities. Future projects such as the new AFRILIB (AgriOceanDSpace) will be a federated catalogue of ODINAFRICA, and will use OAI-compatible software, including AgriOcean Dspace, making it possible to exchange metadata between the local ODINAFRICA partners, the AFRILIB catalogue and the OceanDocs repository. At present students of Hasselt University, are working on an alternative submission module and on a thesaurus plug-in for future DSpace versions (or other repository software). There is also a Windows-based version of AgriOcean DSpace, which is specifically created for small marine science libraries in developing regions of the world. He reported that as on 26th Dec 2012, OceanDocs (OD) contains 3973 items.

192.   Regarding AFRILIB the software will first need to be implemented at the national level. Subsequent to this technical support can be provided by Mr Kakodkar.

193. It was noted that the first meeting of the SG-OceanDocs had taken place in Ostend, 24-27 January 2012. A virtual meeting is planned to be held in February 2013. Ms Simpson has been collecting information on actions implemented but few have been completed. **The Group requested** that Mr Kakodkar takes over the technical management of OceanDocs immediately.

194. It was noted that Mr Goovaerts had indicated his wish to step down as Chair of the Steering Group. **The Group recommended** that the Steering Group for OceanDocs, at its virtual meeting, discuss the election of a new Chair.

195. Referring to the issues mentioned by ODINCARSA-LA **the Group stressed the need** to communicate issues directly to the Steering Group for OceanDocs.

196. **The Group thanked** Mr Goovaerts, as well as the other members of the Steering Group for their efforts in developing OceanDocs.

6.2.2 AQUATIC COMMONS

197. This Agenda Item was introduced by Mr Aditya Kakodkar. He explained that Aquatic Commons migration from University of Florida to IODE was started in October 2010 and was completed on 15th December 2010 (final redirection of URL). A database dump of 203MB and files dump of 18GB was provided by UFL. IODE supports Aquatic Commons in trouble shooting, technical user support and custom modifications to Eprints core on request from the Aquatic Commons community.

198. As on 26th Dec 2012, Aquatic Commons (AQ) contained 8584 items. Total number of download in the past year was 208787, with highest number of downloads from USA (41520) and least from Denmark (328). Aquatic Commons runs on Eprints 3.2.9.

199. The Group was informed that the current level of support (1 day per month) will be maintained. The Group was informed further that an upgrade to the next version 3.3 is planned for the second semester of 2013. This will be a major release so the upgrade will take approximately 10 days. It was noted that Mr Kakodkar will be on leave in November so it is planned to implement the migration between July and end of October. It was noted that some of the technical issues require assistance from the Eprint developers. **The Group requested** that the migration to version 3.3 be scheduled between July and October, without additional expenses to IAMSLIC. **The IAMSLIC invited experts and the Group expressed their appreciation** for the hosting and technical support provided by Mr Aditya Kakodkar.

200. **The Group noted with regret** that AVANO would be closed down. **The Group thanked** Mr Fred Merceur (IFREMER, France) for his commitment to the development and management of this valuable service.

6.3 OCEANEXPERT

201. This Agenda Item was introduced by Mr Aditya Kakodkar. He reported that on 26th Dec 2012, the OceanExpert (OE) database contained 13246 individual records from 6070 institutions, with ODINWESTPAC representing 3662 individuals, ODINCARSA with 1151, ODINAFRICA with 896, ODINCINDIO with 666, ODINECET with 270, ODINBLACKSEA with 248, and ODINPI with 75. Google analytics is used to gather statistics for OE since February 2011. As on 25th Dec 2012, OE has 77,344 (unique visitors: 64,726) with 266,326 page views and 16.49% returning visitors. Maximum visits (18.01%) were from USA.

202. In the second half of 2012 Project Office started working with "Destin Informatique" (Belgium), to implement Linked Open Data (LOD) based unique identifiers for each individual record in OceanExpert. At present we have a working model of the implementation wherein

concepts from OceanDocs (OD) are indexed for each individual from OE by ASKOSI. A unique identifier is provided to each individual in ASKOSI. This is hosted on an ASKOSI demo server at Destin Informatique. We plan to install an ASKOSI server at IODE project office by the end of March 2013.

203.   Micro-tags have already been inserted in the OceanExpert template. This is to allow machines to read these micro-tags and index information easily. These tags are called rich-snippets. To simplify accessing accurate information an schema.org was created. Wherein certain tags are created for each resource type and machines could read these micro-tags and index information easily. These tags are called rich-snippets. To create a solution to this issue, we have created sitemaps for all the records of OceanExpert people. We crawl these sitemaps using Any23, for the rich snippets we inserted in OceanExpert and retrieve individual names in the rdfxml format . The names are then indexed using ASKOSI (http://askosi.org/). This is also stored in a triple store called Sesame. The names are then indexed using ASKOSI. This is also stored in a triple store called Sesame. In the future if authors change or abbreviate their name or change part of their name or write it in a different script, it can be added to ASKOSI so that concepts matching new names can be added to authors original name.

204.   **The Group welcomed** the development of advanced functionality in OceanExpert. **The Group called on** the ODINs to ensure that all national experts are included in OceanExpert and that records are updated annually.

6.4   OPEN SCIENCE DIRECTORY

205.   This Agenda Item was introduced by Mr Aditya Kakodkar. He explained that at present OpenScienceDirectory (OSD), is developed in collaboration with EBSCO. It contains access to 13000 scientific journals. Once the special programmeme journals are included the total number will increase to 20000.

206.   **The Group recalled** that the idea of the Open Science Directory started with a request of IOC/IODE to create a database of all accessible journals in oceanography and marine science. The A-to-Z-list of EBSCO was the perfect tool to organize this collection. It was an easy step to extend this collection to a general directory of journals accessible in developing countries. With the help of EBSCO, it was possible to create the Open Science Directory, which started on February 14, 2008.

207.   Access to scientific literature is very important for the scientific work of every scientist but is often extremely difficult to obtain in developing countries. As a result of different projects a large collection of e-journals is now available for researchers in developing countries. The number of Open Access Journals is growing steadily as we can see in the Directory of Open Access Journals. The UN organizations WHO, FAO and UNEP have specific programmemes for scientific institutions in low-income countries: HINARI, AGORA, OARE and ARDI, which are now brought under the Research4Life umbrella. Universities, institutes and publishers have programmemes for access to scientific literature in the developing world. The most important are INASP-PERii, eIFL, Highwire, JSTOR's Developing Nations Access Initiative, EBSCOhost Open Access collections and eJDS.

208.   All these programmemes and projects have their own website and/or search engine. IOC/IODE and Hasselt University Library, with the support of EBSCO, is creating a single access point to all the journals contained in the different programmemes: **The Open Science Directory** – www.opensciencedirectory.org.

209.   **The Group requested** the Secretariat to investigate moving forward on linking additional journal access through OSD and communicating its availability to the IODE community (possibly through the ODINs).

6.5   NEW INITIATIVES

6.5.1   IODE CLEARING HOUSE FOR DATA AND INFORMATION PRACTICES

210.   This Agenda Item was introduced by Mr Pissierssens. He explained that the idea to develop an "IODE Clearing House for Data and Information Practices" is closely related to the proposal to create a new type of IODE stakeholder, i.e. the Specialized Ocean Data Centre (SODC). This proposal has been prompted by the continuing development of ocean research and observation projects that have their own data and information systems but are not linked to IODE. Many of these then develop their own practices, which may not be interoperable with adopted IODE practices. SODCs can be small groups of scientists or national, regional or even international projects or organizations that are active in ocean research and/or observation. After they declare themselves as SODC they can inform IODE on practices they use and/or developed. These will then be added to a web-based document repository, similar to the "JCOMM Catalogue of Practices and Standards" (see http://bestpractice.iode.org/). In return the SODCs will be included in a dedicated mailing list reporting all new additions to the repository (Clearing House). It is hoped that through the Clearing House IODE and the ocean research and observation community may achieve a more homogenous use of practices. The proposal is further described in Document IOC/IODE-XXII/21. The repository would also be of benefit to OceanTeacher as it would constitute a source of "manuals and guides" to which courses could point from OceanTeacher.

211.   **The Group welcomed** the proposal. **The Group offered** to further investigate this initiative as a GE-MIM project, in close collaboration with the SG-OceanDocs.

6.5.2   VISUALIZING GEOSPATIALLY ENABLED BIBLIOGRAPHIES: USING GOOGLE EARTH AND GEOCOMMONS

212.   This Agenda item will be introduced by Ms Pauline Simpson. She will recall that at GE-MIM-XI the Group agreed 'that more attention should be given to monitoring programmemes and outcomes of international library and information conferences to identify emerging issues and technologies that are of relevance to marine information managers'. In 2012 the emerging focus for data managers is the acknowledgement that for maximum exposure and understanding, visualization of data is an ideal delivery mechanism. Libraries are often at the forefront of innovative information products and in 2002 at the IAMSLIC Annual Conference in Mazatlan, Mexico a presentation was made entitled 'MARC and ARC: geospatially enabling bibliographic records' by Stephanie Haas; Joe Aufmuth; David Coleman and Eleanor Uhlinger. http://hdl.handle.net/1912/692. Unfortunately, how to do this was not transparent and most importantly it was necessary to purchase a license for ARC (GIS software).

213.   In 2012 a paper was published 'Creating geo-referenced bibliographies using Google Earth and GeoCommons:the Coos Bay Bibliography' by Jenni Schmitt and Barb Butler. Issues in Science and Technology Librarianship, No. 71, 2012. www.istl.org/12-fall/article1.html . The logistics appear straightforward and the software is freely available. Creating bibliographies is a very standard exercise for Librarians and Information Managers and this article demonstrates how librarians can create a new information product by visualizing geo-referenced bibliographies.

214.   **The Group noted** that this technology would be useful for adding geo-referenced bibliographies to Atlases. **The Group recommended** that a training module could be included in OceanTeacher on this emerging technology.

6.5.3   OCEANKNOWLEDGE PLATFORM

215. This agenda item was introduced by Ms Pauline Simpson. She recalled that IODE and the University of Hasselt had been in partnership with FAO and a total of 14 partners in the design and implementation of VOA3R; Virtual Open Access Agriculture and Aquaculture Repository. The VOA3R Community Project began in 2010 and is now operating in beta mode (http://voa3r.cc.uah.es/). VOA3R is a social platform for researchers in agriculture & aquaculture integrating open access institutional research repositories and using the AGROVOC thesaurus combined with terminologies specific to research methods. VOA3R allows you to:

- Locate and <u>connect with your peers</u>

- <u>Describe the research you are doing</u> and get recommendations based on it.

- Find open access <u>journals</u> related to your profile

- Find relevant <u>papers or other scholarly content</u> (e.g. datasets) using the terminologies or your profile.

- Join groups related to your topics

- See other features

216. The VOA3R online portal has pioneered a sophisticated software infrastructure (as open source software based on JOOMLA) which VOA3R partners are now able to re-configure and re-use for other projects of their own (Marc Goovaerts, personal communication).

217. Ms Simpson further informed the Group that Marc Goovaerts was already involved in plans to set up a similar portal utilising the VOA3R infrastructure for 6 universities in Cuba.

218. The Group then discussed the proposal to establish an IODE OceanKnowledge Platform pilot project (OceanKnowledge), which will bring together, in a social networking environment, a number of IODE Data and Information Products as well as IAMSLIC's Aquatic Commons.

219. The Group, while reviewing the draft Recommendation, was informed that all equipment required was already available at the IOC Project Office. It was therefore expected the cost of the Pilot Project would be limited to staff time and the cost of meetings of the Steering Group, if required.

220. **The Group adopted** Recommendation MIM-XII.2

7. GE-MIM-XII WORK PLAN FOR THE NEXT INTERSESSIONAL PERIOD

221. **The Group adopted** its work plan for the next inter-sessional period through Recommendation MIM-XII.4 (Annex II)

8. ELECTION OF GE-MIM CHAIRPERSON

222. The Group was informed of the "Guidelines for the Structure and Responsibilities of the Subsidiary Bodies of the Commission" published as Document IOC/INF-1192:

> *Unless nominated by the parent body, the Chairperson and a Vice-Chairperson shall be elected by the subsidiary body itself. Both <u>shall normally serve for one intersessional period and the next session, if any, of the subsidiary body</u>; if there is no such session (e.g., in the case of a Task Team working by correspondence), the intersessional period shall be that of the parent body. The*

Chairperson and the Vice-Chairperson shall be eligible for re-election for only one more intersessional period and subsequent session as just defined; however, on an exceptional basis and in the interest of the Commission, both may be eligible for re-election for one further term.

223.   It was noted that the current Chair had been elected at the 10th Session of the GE-MIM (6 November 2008). The Chair could therefore be re-elected on an exceptional basis.

224.   **The Group unanimously** re-elected Ms Linda Pikula as Chair of the Group for an additional inter-sessional period and one Session, taking into account that the GE-MIM was in a period of transition and the continuity could be best assured by maintaining the current Chair. **The Group expressed its great appreciation** for the commitment and hard work of Ms Pikula.

9.   DATES AND PLACE OF THE NEXT SESSION

225.   **The Group recommended** that the Thirteenth Session of the GE-MIM should be held in 2015 as the First Session of the Joint IODE/IAMSLIC Group of Experts on Marine Information Management (IODE/IAMSLIC GE-MIM) and that it should be held back-to-back with the 2015 IAMSLIC Annual Conference. In addition **the Group recommended** that, subsequent to the selection of members by IAMSLIC, the new Group should meet virtually (as an *ad hoc* Session) before IAMSLIC 2013 (20-24 October 2013).

10. ADOPTION OF SUMMARY REPORT

226.   **The Group adopted** the draft Summary Report of the Session and Recommendations as presented in Annex II.

227.   **The Group requested** the Secretariat and Chair to make editorial corrections as necessary, taking into consideration the discussions held at the Session.

228.   **The Group requested** the Chair to present the Report of the Session to the Twenty-Second Session of the IODE Committee that will be held in Ensenada, Mexico between 11-15 March 2013.

11. CLOSURE

229.   The Session was closed by the Chair, Ms Linda Pikula. In her closing words Ms Pikula thanked the Members and invited experts for their active participation and she looked forward to the new era of cooperation between IODE and IAMSLIC. She further thanked the outgoing members of the Group for their active participation during the past Sessions and inter-sessional periods. She then thanked Mr Peter Pissierssens for his reporting of the Meeting.

230.   Ms Pikula closed the Session at 16h10 on 25 January 2013.

ANNEX I

AGENDA

1.   OPENING OF THE SESSION

2.   ADMINISTRATIVE ARRANGEMENTS

3.   REPORT ON INTERSESSIONAL ACTIVITIES

3.1   IMPLEMENTATION STATUS OF THE GE-MIM-XI WORK PLAN

3.2   MATTERS ARISING FROM IODE-XXI AND THE IODE OFFICERS MEETING (2012)

   3.2.1 Matters arisen from IODE-XXI

   3.2.2 Matters arisen from the 2010 Officers Meeting

4.   STRATEGIC ISSUES

4.1   POSSIBLE IMPACT OF CHANGES IN IODE STRUCTURE AND TERMS OF REFERENCE ON MIM

4.2   PROPOSAL FOR THE ESTABLISHMENT OF THE JOINT IODE-IAMSLIC JOINT GROUP OF EXPERTS ON MARINE INFORMATION MANAGEMENT (IODE-IAMSLIC GE-MIM)

4.3   GE-MIM MEMBERSHIP ISSUES

4.4   IODE NATIONAL COORDINATORS FOR MIM: STATUS

4.5   MIM COMMUNICATION STRATEGY (REVISION 2014-2015)

4.6   IOC STRATEGIC PLAN FOR OCEANOGRAPHIC DATA AND INFORMATION MANAGEMENT

4.7   MIM AT IODE-XXII

4.8   COOPERATION WITH DATA MANAGEMENT

   4.8.1 SCOR/IODE/MBL WHOI data publication project

   4.8.2 Research Coordination Network (RCN):OceanObs

   4.8.3 Cooperation OBIS with MIM

5.   CAPACITY BUILDING

5.1   ODINS

   5.1.1 ODINAFRICA

   5.1.2 ODINECET

   5.1.3 ODINCARSA LA (SPINCAM-II, OceanDocs)

   5.1.4 ODIN-PIMRIS

   5.1.5 ODIN-WESTPAC

5.2   MENTORING PROGRAMMEMES AND INTERNSHIPS

5.3   OCEANTEACHER AND MIM

6.   IODE/MIM PRODUCTS AND TOOLS

6.1   GE-MIM INVOLVEMENT IN IODE PRODUCT DEVELOPMENT

6.2   E-REPOSITORIES (OCEANDOCS, AQUATIC COMMONS) AND RELATED (EG AVANO)

ANNEX II

RECOMMENDATIONS

Recommendation MIM-XII.1: ESTABLISHMENT OF THE JOINT IODE/IAMSLIC GROUP OF EXPERTS ON MARINE INFORMATION MANAGEMENT (IODE/IAMSLIC GE-MIM)

Recommendation MIM-XII.2: THE IODE OCEAN KNOWLEDGE PLATFORM PILOT PROJECT (OceanKnowledge

Recommendation MIM-XII.3: REVISION OF THE TERMS OF REFERENCE OF THE IODE NATIONAL COORDINATORS FOR MARINE INFORMATION MANAGEMENT

Recommendation MIM-XII.4: ACTION PLAN FOR THE GROUP FOR 2013-2015

Recommendation MIM-XII-1

ESTABLISHMENT OF THE JOINT IODE/IAMSLIC GROUP OF EXPERTS ON MARINE INFORMATION MANAGEMENT (IODE/IAMSLIC GE-MIM)

The IODE Group of Experts on Marine Information Management of the IOC Committee on International Oceanographic Data and Information Exchange,

Recognizing that the International Association of Aquatic and Marine Science Libraries and Information Centers (IAMSLIC) is non-profit volunteer association of individuals and organizations having an interest in library and information science, especially as these are applied to the recording, retrieval and dissemination of knowledge and information in all aspects of aquatic and marine sciences and their allied disciplines;

Recognizing further that there exist substantial synergies between the objectives and activities of IAMSLIC, the objectives of the IODE's Group of Experts for Marine Information Management and the IODE's marine information management programmeme activities;

Recalling the establishment of the IODE Group of Experts on Marine Information Management by IODE-IX (New York, 9-18 January 1984) through Recommendation IODE-IX.4 (IODE's role in marine information management);

Convinced that joint work between the IODE programmeme and IAMSLIC in the field of marine information management will be mutually beneficial to both Organizations and to the marine research community as a whole;

Recommends establishing the Joint IODE/IAMSLIC Group of Experts on Marine Information Management with the following Terms of Reference:

1.   Advocate marine information managers as essential partners in the knowledge cycle, that includes observation, management, sharing and product/service provision, contributing to the marine related decision making process;

2.   Advise the IODE Committee on the policy, development and further implementation of an effective international system for scientific and technical information about the

marine environment by keeping user requirements under continuing review and ensuring that these requirements can be met adequately;

3.   Identify the policy, technical and financial issues involved in the development and implementation of marine information systems, and make recommendations concerning their solution;

4.   Develop activities and information products to improve the capability of the marine information management community, particularly within developing countries, to benefit from and participate in marine information systems and keep the marine information management community informed on how they might best have access to such systems through the application of new technology;

5.   Provide expertise to, and participate in other organizations, programmemes, projects and activities where a marine information management component has been identified;

6.   Foster collaboration between the marine information management community and other knowledge managers such as data managers, informaticists and archivists to create new knowledge systems.

Encourages IOC Member States and IAMSLIC to nominate experts having expertise in marine information management to the Group of Experts.

Further requests that a progress report be submitted regularly to the IODE Officers, the IODE Committee and the IAMSLIC Executive Board.

Recommendation MIM-X11.2

THE IODE OCEAN KNOWLEDGE PLATFORM PILOT PROJECT (OceanKnowledge)

The IODE Group of Experts on Marine Information Management of the IOC Committee on International Oceanographic Data and Information Exchange,

Acknowledging the importance and success of IODE Data and Information Products such as OceanExpert, OceanDocs, OceanDataPortal, OpenScienceDirectory, OBIS, as well as its partner IAMSLIC Aquatic Commons,

Noting the ongoing efforts in initiating and maintaining the products and the need to expand their utilization,

Noting further the rapid development of social platforms that integrate multiple knowledge sources, such as the Virtual Open Access Agriculture and Aquaculture Repository (VOA3R), and the availability of related open source applications,

Recommends the establishment of the IODE OceanKnowledge Platform Pilot Project to bring together in an interactive, interoperable and dynamic environment all IODE Data and Information Products, with Terms of Reference attached as Annex A,

Recommends further the establishment of the IODE Steering Group for the IODE OceanKnowledge Platform Pilot Project with Terms of Reference attached as Annex B**.**

Annex A to Recommendation IODE-GEMIM-XII.2

Terms of Reference of the IODE OceanKnowledge Platform Pilot Project

Objectives of the Project

The OceanKnowledge Platform will offer the user a single access point to various underlined linked IODE information and data products such as researcher profiles, publications, data, learning objects, etc. and will furthermore facilitate social networking between specialized research communities.

The strategic goal of the IODE Ocean Knowledge Platform Pilot Project:

- Combining multiple inter-linked IODE (and partner) Data and Information knowledge sources and making them discoverable and accessible through a single access point with social networking functionality;
- Linking IODE (and partner) Data and Information Products through semantic web technologies;
- Promoting IODE (and partner) Data and Information Products within the ocean research and observation community;

Duration

The duration of the Project will be two years.

Financial Implications

Staff time (Project Office and Participants) and the cost of meetings of the Steering Group, if required (i.e. approx.. US$ 20,000/meeting)

Annex B to Recommendation IODE-MIMXII.2

Terms of Reference of the Steering Group for the IODE OceanKnowledge Platform Pilot Project

Objectives

The SG-OceanKnowledge shall:

(i) Develop the work plan and timetable for the Pilot Project;
(ii) Identify, install and test the required technologies;
(iii) Promote the system to its target user communities and obtain feedback;
(iv) Evaluate results of the Pilot Project;
(v) Based upon the experience obtained and the evaluation, develop a detailed proposal for a sustained IODE/OceanKnowledge project, including identification of required resources;
(vi) Submit the proposal for an IODE/OceanKnowledge project to the 23rd Session of the IODE Committee

Membership

The Project will be managed by an IODE Steering Group for IODE OceanKnowledge, initially composed of ….

<u>**Recommendation MIM-X11.3**</u>

**REVISION OF THE TERMS OF REFERENCE OF THE IODE NATIONAL COORDINATORS
FOR MARINE INFORMATION MANAGEMENT**

The IODE Group of Experts on Marine Information Management of the IOC Committee on International Oceanographic Data and Information Exchange,

Recalling that the 7th Session (2002) of the IODE Group of Experts recommended (Recommendation MIM-VII.1) the nomination of IODE National Coordinators for Marine Information Management, in addition to IODE National Coordinators for Ocean Data Management,
Recalling further that the 9th Session (2007) of the of the IODE Group of Experts recommended a revision of the Terms of Reference of the IODE National Coordinators for Marine Information Management,

Noting the increased convergence between marine information management and data management in areas such as data publication and data citation, as well as knowledge integration,

Recommends the revision of the Terms of Reference of the IODE National Coordinators for Marine Information Management as follows:

1.   Act as a point of contact for marine librarians and marine information managers in their country, in order to liaise with the IODE community (via the GE-MIM) on matters of importance to MIM;
2.   Act as a communicator of IOC activities and initiatives to the national MIM community and beyond;
3.   Provide assistance and support to the GE-MIM on IODE programmeme activities at the national or international level;
4.   Establish a national working group that will create a national network of marine related libraries/marine information centres for their country or participate in existing related networks;
5.   Highlight and identify issues and participate in discussions of national importance relating to MIM with the GE-MIM and the national MIM community (such as capacity building and professional standards, technological innovations and policy, communications and collaboration, national and international MIM resources);
6.   Liaise with the IODE national coordinators for data management, the NODCs and SODCs, taking into account the role and expertise of marine information managers in data management;
7.   Provide reports to the IODE Committee (or IODE Officers), highlighting needs and issues that should be addressed by GE-MIM, for consideration by the IODE Committee or IODE Officers. The Committee or IODE Officers can then instruct the GE-MIM to deal with these needs and issues;
8.   Participate in Sessions of the IODE Committee.

Invites IOC Member States to nominate experts with relevant expertise in marine information management,

Urges IOC Member States to promote active collaboration and coordination between data and information managers as well as their equitable participation in IODE Committee meetings and projects.

Recommendation MIM-XII.4

ACTION PLAN FOR THE GE-MIM FOR 2013–2015

The IODE Group of Experts on Marine Information Management,

Having reviewed its completed and on-going activities since its tenth Session,

Being aware of the resource constraints (staff and funding) under which IOC and its IODE are operating in terms of the UNESCO Regular Programmeme,

Expressing its appreciation for the considerable extra-budgetary support provided by IOC Member States to the IODE programmeme,

Stressing the importance of Marine Information Management (MIM) as an important activity of IODE towards improving access to marine information,

Adopts a plan of action for the inter-sessional period 2013-2015, as given in the Annex to this Recommendation.

Agenda item	Para	Description	By whom	By when
3.1	8	**The Group tasked the Secretariat** to design and distribute certificates for "IODE National Coordinator for Marine Information Management"	Secretariat	1/3/13
3.1	9	"attention should be given to monitoring programmemes and outcomes of international library and information conferences to identify emerging issues and technologies that are of relevance to marine information managers.": - **The Group decided** that this should be coordinated with IAMSLIC. It was noted that publications, issues, initiatives, events or conferences of both national and international nature should be considered. **- The Group also recommended** to seek contact with other library associations such as SLA, CILIP. - In order to ensure MIM training is in sync with current curricula **the Group further recommended** to seek contact with university courses of library and information science. In this regard the need was stressed to communicate actively with the IODE national coordinators for MIM through an email list. This list could include both the IODE NCs for MIM and IAMSLIC members. - **The Group recommended** that IODE NCs for MIM (who are not IAMSLIC members) should be invited to subscribe to the IAMSLIC mailing list. - **The IAMSLIC invited experts were requested** to discuss this proposal with the IAMSLIC Exec and, if there is agreement, provide subscription information/instructions to the IODE Secretariat. It was recalled that the list of IODE NCs for MIM is available through http://www.iode.org/nc-mim	All GEMIM members All GEMIM members All GEMIM members IODE Sec + M.K+S.T See above	Inter-sessional Inter-sessional Inter-sessional 1/3/2013
3.1	12	**The Group welcomed this initiative** and **urged** the inclusion of MIM in the terms of reference of the new (PERSIAN GULF) ODIN, if established.	IODE Sec	As needed
3.1	15	The Group noted that Vimeo allows the following metadata fields: Title, Description, Tags, Credits. The Group decided that it is necessary to "clean up" the metadata for all 328 videos. The Group decided that the following rules should be used to fill the fields: Create an Album for each course and Title as: OTA – name of course - YYYY/MM - venue code: Ostend, Hyderabad,…	Claudia Delgado,	1/9/2013

Agenda item	Para	Description	By whom	By when
		For each lecture: Title: title of lecture Description: link to OceanTeacher course page Tags: oceanteacher, marine information management, MIM, librarian Credits: instructor Surname, Firstname – link to OceanExpert record for that person; IODE OceanTeacher; http://www.iode.org http://www.oceanteacher.org It was noted that all OceanTeacher videos are combined under the channel https://vimeo.com/channels/oceanteacher (74 videos) In each OTA course (Moodle) a link needs to be added to the Album in Vimeo for that particular course. It was noted that the field length of the Title field is 150 characters.		
3.1	26	**The Group requested** to ensure that a GE-MIM expert is included (as observer or invited expert) in sessions of the GE-OBIS and **called on** the OBIS Secretariat to take this into account when planning the first Session of the GE-OBIS.		
3.1	28	**The Group recommended** that ODIN MIM Coordinators approach the ASFA Board referring to the substantial archives of grey material available in their libraries. Local experts could visit national institutions with portable equipment to undertake the scanning. **The Group invited** the ODIN coordinators present at the Session to report on this subject. Ms.Linda Pikula attended the ASFA session in Morocco and presented a proposal for a joint digitization collaborative initiative. Richard Pepe recorded this as a recommendation. The Group was informed that Mr Pepe had meanwhile retired. There was no further communication on this topic between the ASFA and IODE secretariats. Due to the absence of Ms Noble (GE-MIM member and ASFA Board member) no further information was available. Ms Kalentsits reported that IAMSLIC had successfully submitted a proposal for digitization of documents (the work was subsequently implemented by FAO, Fisheries and Aquaculture Branch Library) and would submit another proposal in 2013. **The Group called on** member states participating in ODINs (and who are also ASFA input centres) to prepare and submit digitization proposals to the ASFA Board. **The Group noted** that due to the venue of the 2013 ASFA Board (Peru) the cost of sending a GE-MIM member to the meeting would be high.		
3.1	45	**The Group requested** Ms Pikula to make the list available to the IODE Secretariat for possible inclusion in the ODINWESTPAC web site and to assist with the identification of IODE national coordinators for MIM in the WESTPAC region	L. Pikula	1/2/2013
3.1	53	**The Group recommended** that regular (e.g. every two years) assessments should be made of the career progress of former students. **The Group also stressed** the need for former trainees to report back on their activities as trainer, possibly through online surveys.	C. Delgado "	Every 2 years as from 2013
3.1	54	**… the Group requested** that the ODIN coordinators should carry out the regular surveys on former students (and on their training activities). **The Group decided** to develop some guidelines on the assessments. **The Group also called** for "success stories" which could promote OceanTeacher and assist with future mobilization of funds.	ODIN coordinator GE-MIM	31/12/2013
3.1	56	**The Group recommended** that a formal contact should be established for the ODINWESTPAC repository.	IODE Sec	1/3/2013

Agenda item	Para	Description	By whom	By when
3.1	61	**The Group decided** that the [OceanDocs Policy Document]document should be published in the IOC/INF series and **instructed** the Secretariat to do the necessary.	IODE Sec	1/5/2013
3.1	68	**The Group also recommended** that ODINAFRICA investigates whether a web crawler could extract content.[from the African OceanPortal web site]	ODINAFRIC A Sec	1/4/2013
3.1	71	**The Group recommended** to distribute the ['Contribution of Information Managers to Marine and Coastal Atlases']document to the ICAN steering group. (see http://www.iode.org/ican	P. Simpson	1/3/2013
3.1	72	**The Group re-iterated** the need to include a MIM expert in the regional African Marine and Coastal Atlas team as well as in national marine atlas teams.	A. Keita to contact AMA	1/3/2013
3.1	72	**The Group**, taking into account the proposed establishment of the IODE ICAN Project and its Steering Group, **recommended** including a MIM expert in the SG-ICAN.	L. Pikula to contact SG-ICAN Chair	1/3/2013
3.1	76	**The Group invited** IAMSLIC members and other marine information management and related experts to actively contribute to OceanTeacher as lecturers.	S.T, M.K and L.Pikula to discuss topics, then consult IAMSLIC community	1/4/2013
3.2.2	82	**The Group instructed** the Secretariat to keep contacting Mr de Villéon for the inventory.[*of publications prepared after French Scientific research cruises]*	IODE Sec	1/2/2013
3.2.2	83	The Committee proposed that the over 4000 institutions referred to in the OceanExpert database should be linked to the SeaDataNet EDMO codes. Mr Kakodkar was requested to investigate this. The number of institutions is 5122. Mr Kakodkar informed the Group that, IODE had contacted SeaDataNet group and discussed collaboration for linking EDMO with OceanExpert Institutions, but we did not receive any fruitful response. SeaDataNet wanted to discuss this more within their group and with IODE. **The Group requested** that the GE-MIM Chair should also be involved in the further discussions with SeaDataNet on this topic.	A. Kakodkar	1/2/2013
3.2.2	85	**The Group recommended** however that OceanTeacher videos (Vimeo files) should be made available on CD/DVD upon request.	C. Delgado	As needed
3.2.2	86	**The Group invited** IAMSLIC to evaluate the need for a revision of IOC Manuals and Guides No. 30 Volume 1 and, if necessary, identify authors.	M.K + S.T	1/7/2013
3.2.2	86	**The Group considered** IOC Manuals and guides No. 30 - Volume 2 as a suitable candidate for a revision taking into account the experience with ODINAFRICA and other ODINS during the past 20 years.	Secretariat + ODIN coordinators	1/12/2014
3.2.2	86	**The Group considered** IOC Manuals and guides No. 30 - Volume 3 as a suitable candidate for a revision, taking into account adopted standards, persistent identifiers for individuals, e-repositories, data publishing, OceanExpert, etc.	A. Kakodkar	1/12/2013
3.2.2	86	**The Group decided** that IOC Manuals and guides No. 30 - Volume 4 manual is no longer relevant as most of the directories have disappeared**. The Group invited** Ms Taylor to identify any current substitutes.	S. Taylor	1/7/2013

Agenda item	Para	Description	By whom	By when
4.1.	92	**The Group recommended** that the newly established SODCs actively and systematically collaborate and seek cooperation from the library at their host institution, taking into account that libraries have a role and skills in data management in the area of ocean data management policy and planning, controlled vocabularies, data publication/citation, data discovery/access/mining, data preservation and client training. **The Group recommended further** that this should be included in the terms of reference of the SODCs.	SODCs, IODE committee	IODE-XXII
4.1	94	**The Group stressed the need** for the marine library community to be pro-active in defining its future role and **recommended** that this topic should be discussed jointly with IAMSLIC and should result in a position paper.	GE-MIM, IAMSLIC 2013	Early 2014 (1st draft paper), then IODE-XXIII
4.2	99	**The Group recommended** that the first Session of the joint GE-MIM should be held back-to-back with the 2015 IAMSLIC Annual Conference to test the format. It was noted that GE-MIM Sessions are normally held prior to an IODE Committee Session and then followed by an IOC Assembly but the Group considered that establishing the joint GE should be a priority.	IODE Sec + IAMSLIC	10/2015
4.2	101	**The Group agreed** that IAMSLIC will seek interest from its membership for either long-term or short-term membership and identify their members of the Group accordingly	S.T+M.K	15/7/2013
4.2	102	**the Group recommended** to submit the summary report of GE-MIM-XII to the IAMSLIC President prior to the 2013 Conference to enable experts to come forward. **The Group also stressed** the importance for GE-MIM members to commit time and effort to the work of the Group, which always includes inter-sessional tasks.	IODE Sec	1/3/2013
4.2	107	**The Group decided** that Membership in the GE-MIM is open also to freshwater librarians.	IODE Sec + IAMSLIC	n/a
4.2	109	**The Group decided** that priority will be given to marine science librarians but, dependent upon the availability of funds, freshwater librarians can participate in OceanTeacher Academy courses as students. Such decision could be made on an *ad hoc* basis. Participation of self-funded students is welcomed	OceanTeacher + IAMSLIC (advertising)	continuously
4.2	115	**The Group recommended** that the new MoA should be discussed by email between the IAMSLIC President, GE-MIM Chair and IODE Secretariat, taking into account that the current MoA is expiring in December 2013 and the new MoA should be signed preferably before end of December 2013	IAMSLIC Pres., Chair GE-MIM, IODE Sec	1/5/2013 (discussions) 31/12/2013 (signing)
4.5	126	**The Group decided** to revise the MIM Communication Strategy's implementation plan and included this item in the work plan. Ms Goodman and Ms Simpson offered to revise the document for review by the members	J. Goodman P. Simpson	1/9/2013
4.5	127	**The Group** further recommended that**:** (6) For each event planned by a project, information on the event is sent to the IODE Secretariat prior to the date of the event (at least 1 month in advance). The IODE Secretariat will then post the information on the IODE web site calendar; (7) For each event implemented by a project, a brief summary (news item) on the event should be sent to the IODE Secretariat (not later than 1 week after the event). The IODE Secretariat will then post the information on the IODE web site; (8) For each event implemented by a project, the report of the event will be sent to the IODE Secretariat (not later than 1 month). The IODE Secretariat will then post the report on the IODE web site. The report	All + IODE Sec	As needed

Agenda item	Para	Description	By whom	By when
		will also be added to OceanDocs; (9) For each of the above the IODE Secretariat will send an email to the IODE community (IODE group mailing list); (10) The same process can be applied for new products or services released by projects.		
4.5	128	**The Group recommended** that IODE should develop a Communication Strategy or adopt the MIM Communication Strategy as the IODE Communication Strategy.	Chair GEMIM	At IODE-XXII
4.6	130	**The Group noted with regret** that the suggestions for amendments of the last draft made by Ms Simpson had not been taken into account in the version prepared for IODE-XXII. **The Group requested** Mr Reed to amend document taking into account the submitted amendments.	G. Reed	15/2/2013
4.6	142	**The Group suggested** that the Cookbook should be published as an IOC Manuals and Guides	IODE Sec + L. Raymond	After next meeting of project (publishing)
4.8.1	143	**The Group recommended** that the *SCOR/IODE/MBL WHOI data publication project* should be continued with a focus on promoting data publication in the ocean research community.	IODE Sec + SCOR + WHOI MBL + BODC	ongoing
4.8.3	147	**The Group recommended** that a marine information management expert should be a member of the SG-OBIS in order to e.g. provide guidance related to the citation metrics (as a performance measure) of OBIS-related publications, media, and other knowledge sources.	IODE/OBIS Sec, SG-OBIS	As needed
5.1.1	161	**The Group called** for improved communication between the ODINAFRICA project office and the IODE Project Office. **The Group also called** for better communication between the ODINAFRICA MIM coordinator and the GE-MIM members during the inter-sessional period.	ODINAFRICA Sec, IODE Sec, GE-MIM	continuously
5.1.1	162	**The Group welcomed** the creation of a new ODINAFRICA web site which would be launched shortly. **The Group called** on the ODINAFRICA project office to maintain the site more actively than the previous site and to add more MIM sources	ODINAFRICA Sec	continuously
5.1.2	165	**The Group regretted** that the proposal submitted by ODINECET to the Elsevier Foundation was not approved but **encouraged** ODINECET to continue seeking funds for digitization projects.	ODINECET	31/12/2013
5.1.3	172	**The Group requested** the IODE Project Office (Mr Aditya Kakodkar) to address the OceanDocs technical issues mentioned and to provide the necessary assistance to resolve them.	A. Kakodkar	30/6/2013
5.1.3	174	**The Group recommended** that a new proposal for the export/import of records from/to OceanDocs from/to ASFA should be submitted to the 2013 ASFA Advisory Board, but called for a proposal that would be more focused on ASFA interests. In this regard **the Group requested** the GE-MIM Chair to contact the Chair of SG-OceanDocs to discuss this matter further, and for the SG-OceanDocs prepare a revised proposal, circulate it to the GE-MIM members for feedback, and **recommended** that Mr James Macharia (Kenya) + Saida Messaoudi (Tunisia) possibly assist with clarifying the new proposal at the 2013 ASFA Advisory Board, following its submission to the ASFA Secretariat by the IODE Secretariat.	Chair GE-MIM, SG-OceanDocs, J. Macharia + S. Messaoudi + IODE Sec	By ASFA Board 2013
5.1.5	183	**The Group welcomed** the development of a regional repository based on DSpace (http://221.239.0.193:8080/jspui/) but **regretted** that it contains only Chinese publications. **The Group recommended** that ODINWESTPAC focus on bringing in materials from other countries in the region. **The Group also requested** the ODINWESTPAC coordinator to	Chair to contact Prof Lin	IODE-XXII

Agenda item	Para	Description	By whom	By when
		inform the Chair GE-MIM of the details of the planned meeting, to be held in 2013.		
5.2	185	**The Group recommended** that IODE national coordinators for MIM as well as IAMSLIC members should create or update their OceanExpert record to include specific skills. **The Group recommended** that the "expertise" field should be used. **The Group further recommended** that IAMSLIC create a "mentoring" page that will link to OceanExpert and OceanTeacher. **The Group recommended** that ODINs should create a "mentoring" page that will link to OceanExpert and OceanTeacher.	Members IAMSLIC ODINs	30/6/2013 30/6/2013 30/4/2013
5.3	187	**The Group recommended** that detailed statistics on course participation by country should be included in future reports for the SG-OceanTeacher and IODE Committee meetings. **The Group recommended further** that detailed website statistics be included in future reports for the SG-OceanTeacher and IODE Committee meetings. This concerns the OceanTeacher homepage, the OceanTeacher Classroom, the OceanTeacher Digital Library and Vimeo sites.	SG-OceanTeacher	As needed
5.3	188	**The Group recommended** organizing a 1-day training course prior to the IAMSLIC Conference. **The Group asked** the Chair to discuss the details: topic, practical arrangements and financial implications with the IAMSLIC 2013 Conference convenor and the 2013 Conference local host.	Chair GEMIM, S. Taylor, C. Delgado,	Start arrangements 1/2/2013to have course 19/10/13
5.3	189	**The Group requested t**hat IAMSLIC should link to MIM related pages in the IODE website, including OceanTeacher. **The Group requested** that IAMSLIC should advertise the courses as open to the entire IAMSLIC community (and not restricted to students from developing countries). **The Group requested** IAMSLIC to help with a list of possible listservs to advertise the OceanTeacher courses.	M. Kalentsits	1/2/2013; ongoing
6.2.1	193	**The Group requested** that Mr Kakodkar takes over the technical management of OceanDocs immediately.	A. Kakodkar	1/3/2013
6.2.1	194	**The Group recommended** that the Steering Group for OceanDocs, at its virtual meeting, discuss the election of a new Chair.	SG-OceanDocs	2/2013
6.2.1	195	Referring to the issues mentioned by ODINCARSA-LA **the Group stressed the need** to communicate issues directly to the Steering Group for OceanDocs.	All	immediately
6.2.2	199	**The Group requested** that the migration [of Aquatic Commons software] to version 3.3 be scheduled between July and October, without additional expenses to IAMSLIC.	A. Kakodkar	7-10/2013
6.3	204	**The Group called on** the ODINs to ensure that all national experts are included in OceanExpert and that records are updated annually.	ODINs	continuous
6.4	209	**The Group requested** the Secretariat to investigate moving forward on linking additional journal access through OSD and communicating its availability to the IODE community (possibly through the ODINs).	IODE Sec	continuous
6.5.1	211	**The Group welcomed** the [*IODE clearing house for data and information practices*] proposal. **The Group offered** to further investigate this initiative as a GE-MIM project, in close collaboration with the SG-OceanDocs.	GE-MIM	1/12/2013

Agenda item	Para	Description	By whom	By when
6.5.2	214	**The Group recommended** that a training module could be included in OceanTeacher on this emerging technology [*Visualizing geospatially enabled bibliographies: Using Google Earth and Geocommons]*	P. Simpson to contact Barb Butler + Jenni Schmitt	Contact: 1/3/2013 Module/video/webinar
6.5.3	220	**The Group adopted** Recommendation MIM-XII.2 [OceanKnowledge Pilot Project]	GE-MIM + partners	4/2013-…
9	225	**The Group recommended** that the Thirteenth Session of the GE-MIM should be held in 2015 as the First Session of the Joint IODE/IAMSLIC Group of Experts on Marine Information Management (IODE/IAMSLIC GE-MIM) and that it should be held back-to-back with the 2015 IAMSLIC Annual Conference. In addition **the Group recommended** that, subsequent to the selection of members by IAMSLIC, the new Group should meet virtually (as an *ad hoc* Session) before IAMSLIC 2013 (20-24 October 2013).		

Financial implications:

2013: US$ 30,000 (Course during IAMSLIC Conference)

2014: US$ 20,000 (GE-MIM Session prior to IAMSLIC Conference)

2015: US$ 30,000 (Course during IAMSLIC Conference)

ANNEX III

LIST OF PARTICIPANTS

Long-term member (outgoing membership)

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ANNEX IV

LIST OF ACRONYMS

AMA	African Marine Atlas
ASFA	Aquatic Sciences and Fisheries Abstracts
CMA	Caribbean Marine Atlas
CL	Circular Letter
FAO	Food and Agriculture Organization of the United Nations
GE	Group of Experts
GE-MIM	IODE Group of Experts on Marine Information Management
ICSU	International Council for Science
IAMSLIC	International Association of Aquatic and Marine Science Libraries and Information Centers
ILMS	Integrated Library Management System
IOC	Intergovernmental Oceanographic Commission (UNESCO)
IOCINDIO	IOC Regional Committee for the Central Indian Ocean
IODE	International Oceanographic Data and Information Exchange (IOC)
KMFRI	Kenya Marine and Fisheries Research Institute
MIM	Marine Information Management
MOU	Memorandum of Understanding
MOA	Memorandum of Agreement
NC	National Coordinator
NOAA	National Oceanic and Atmospheric Administration (USA)
ODIN	Ocean Data and Information Network
ODINAFRICA	Ocean Data and Information Network for Africa
ODINBLACKSEA	Ocean Data and Information Network for the Black Sea region
ODINCARSA	Ocean Data and Information Network for the Caribbean and South America (IODE)
ODINCARSA LA	ODINCARSA Latin America
ODINCINDIO	Ocean Data and Information Network for the Central Indian Ocean
ODINECET	Ocean Data and Information Network for European Countries in Economic Transition (ODIN)
ODINWESTPAC	Ocean Data and Information Network for the Western Pacific
ODINPIMRIS	Ocean Data and Information Network for the Small Pacific Islands
ODP	Ocean Data Portal
OE	OceanExpert
OTA	OceanTeacher Academy
PIMRIS	Pacific Islands Marine Resources Information Systems

POGO	Partnership for Observation of the Global Oceans
SCOR	Scientific Committee on Oceanic Research
SG	Steering Group
UNESCO	United Nations Educational, Scientific and Cultural Organization
URL	Uniform Resource Locator
VLIZ	Vlaams Instituut voor de Zee
WESTPAC	IOC Sub-Commission for the Western Pacific
WHOI MBL	Woods Hole Oceanographic Institution Marine Biological Laboratory

[end]

In this Series, entitled

Reports of Meetings of Experts and Equivalent Bodies, which was initiated in 1984 and which is published in English only, unless otherwise specified, the reports of the following meetings have already been issued:

1. Third Meeting of the Central Editorial Board for the Geological/Geophysical Atlases of the Atlantic and Pacific Oceans
2. Fourth Meeting of the Central Editorial Board for the Geological/Geophysical Atlases of the Atlantic and Pacific Oceans S. Fourth Session of the Joint IOC-WMO-CPPS Working Group on the Investigations of 'El Niño' *(Also printed in Spanish)*
4. First Session of the IOC-FAO Guiding Group of Experts on the Programme of Ocean Science in Relation to Living Resources
5. First Session of the IOC-UN(OETB) Guiding Group of Experts on the Programme of Ocean Science in Relation to Non-Living Resources
6. First Session of the Editorial Board for the International Bathymetric Chart of the Mediterranean and Overlay Sheets
7. First Session of the Joint CCOP(SOPAC)-IOC Working Group on South Pacific Tectonics and Resources
8. First Session of the IODE Group of Experts on Marine Information Management
9. Tenth Session of the Joint CCOP-IOC Working Group on Post-IDOE Studies in East Asian Tectonics and Resources
10. Sixth Session of the IOC-UNEP Group of Experts on Methods, Standards and Intercalibration
11. First Session of the IOC Consultative Group on Ocean Mapping *(Also printed in French and Spanish)*
12. Joint 100-WMO Meeting for Implementation of IGOSS XBT Ships-of-Opportunity Programmes
13. Second Session of the Joint CCOP/SOPAC-IOC Working Group on South Pacific Tectonics and Resources
14. Third Session of the Group of Experts on Format Development
15. Eleventh Session of the Joint CCOP-IOC Working Group on Post-IDOE Studies of South-East Asian Tectonics and Resources
16. Second Session of the IOC Editorial Board for the International Bathymetric Chart of the Mediterranean and Overlay Sheets
17. Seventh Session of the IOC-UNEP Group of Experts on Methods, Standards and Intercalibration
18. Second Session of the IOC Group of Experts on Effects of Pollutants
19. Primera Reunión del Comité Editorial de la COI para la Carta Batimétrica Internacional del Mar Caribe y Parte del Océano Pacífico frente a Centroamérica *(Spanish only)*
20. Third Session of the Joint CCOP/SOPAC-IOC Working Group on South Pacific Tectonics and Resources
21. Twelfth Session of the Joint CCOP-IOC Working Group on Post-IDOE Studies of South-East Asian Tectonics and Resources
22. Second Session of the IODE Group of Experts on Marine Information Management
23. First Session of the IOC Group of Experts on Marine Geology and Geophysics in the Western Pacific
24. Second Session of the IOC-UN(OETB) Guiding Group of Experts on the Programme of Ocean Science in Relation to Non-Living Resources *(Also printed in French and Spanish)*
25. Third Session of the IOC Group of Experts on Effects of Pollutants
26. Eighth Session of the IOC-UNEP Group of Experts on Methods, Standards and Intercalibration
27. Eleventh Session of the Joint IOC-IHO Guiding Committee for the General Bathymetric Chart of the Oceans *(Also printed in French)*
28. Second Session of the IOC-FAO Guiding Group of Experts on the Programme of Ocean Science in Relation to Living Resources
29. First Session of the IOC-IAEA-UNEP Group of Experts on Standards and Reference Materials
30. First Session of the IOCARIBE Group of Experts on Recruitment in Tropical Coastal Demersal Communities *(Also printed in Spanish)*
31. Second IOC-WMO Meeting for Implementation of IGOSS XBT Ship-of-Opportunity Programmes
32. Thirteenth Session of the Joint CCOP-IOC Working Group on Post-IDOE Studies of East Asia Tectonics and Resources
33. Second Session of the IOC Task Team on the Global Sea-Level Observing System
34. Third Session of the IOC Editorial Board for the International Bathymetric Chart of the Mediterranean and Overlay Sheets
35. Fourth Session of the IOC-UNEP-IMO Group of Experts on Effects of Pollutants
36. First Consultative Meeting on RNODCs and Climate Data Services
37. Second Joint IOC-WMO Meeting of Experts on IGOSS-IODE Data Flow
38. Fourth Session of the Joint CCOP/SOPAC-IOC Working Group on South Pacific Tectonics and Resources
39. Fourth Session of the IODE Group of Experts on Technical Aspects of Data Exchange
40. Fourteenth Session of the Joint CCOP-IOC Working Group on Post-IDOE Studies of East Asian Tectonics and Resources
41. Third Session of the IOC Consultative Group on Ocean Mapping
42. Sixth Session of the Joint IOC-WMO-CCPS Working Group on the Investigations of 'El Niño' (*Also printed in Spanish)*
43. First Session of the IOC Editorial Board for the International Bathymetric Chart of the Western Indian Ocean
44. Third Session of the IOC-UN(OALOS) Guiding Group of Experts on the Programme of Ocean Science in Relation to Non-Living Resources
45. Ninth Session of the IOC-UNEP Group of Experts on Methods, Standards and Intercalibration
46. Second Session of the IOC Editorial Board for the International Bathymetric Chart of the Caribbean Sea and the Gulf of Mexico
47. Cancelled
48. Twelfth Session of the Joint IOC-IHO Guiding Committee for the General Bathymetric Chart of the Oceans
49. Fifteenth Session of the Joint CCOP-IOC Working Group on Post-IDOE Studies of East Asian Tectonics and Resources
50. Third Joint IOC-WMO Meeting for Implementation of IGOSS XBT Ship-of-Opportunity Programmes
51. First Session of the IOC Group of Experts on the Global Sea-Level Observing System
52. Fourth Session of the IOC Editorial Board for the International Bathymetric Chart of the Mediterranean
53. First Session of the IOC Editorial Board for the International Chart of the Central Eastern Atlantic *(Also printed in French)*
54. Third Session of the IOC Editorial Board for the International Bathymetric Chart of the Caribbean Sea and the Gulf of Mexico *(Also printed in Spanish)*
55. Fifth Session of the IOC-UNEP-IMO Group of Experts on Effects of Pollutants
56. Second Session of the IOC Editorial Board for the International Bathymetric Chart of the Western Indian Ocean
57. First Meeting of the IOC *ad hoc* Group of Experts on Ocean Mapping in the WESTPAC Area
58. Fourth Session of the IOC Consultative Group on Ocean Mapping
59. Second Session of the IOC-WMO/IGOSS Group of Experts on Operations and Technical Applications

122. First Session of the IOC-IUCN-NOAA *Ad hoc* Consultative Meeting on Large Marine Ecosystems (LME), France, 1997
123. Second Session of the Joint GCOS-GOOS-WCRP Ocean Observations Panel for Climate (OOPC), South Africa, 1997
124. Sixth Session of the IOC Editorial Board for the International Bathymetric Chart of the Caribbean Sea and the Gulf of Mexico, Colombia, 1996 *(also printed in Spanish)*
125. Seventh Session of the IODE Group of Experts on Technical Aspects of Data Exchange, Ireland, 1997
126. IOC-WMO-UNEP-ICSU Coastal Panel of the Global Ocean Observing System (GOOS), First Session, France, 1997
127. Second Session of the IOC-IUCN-NOAA Consultative Meeting on Large Marine Ecosystems (LME), France, 1998
128. Sixth Session of the IOC Consultative Group on Ocean Mapping (CGOM), Monaco, 1997
129. Sixth Session of the Tropical Atmosphere - Ocean Array (TAO) Implementation Panel, United Kingdom, 1997
130. First Session of the IOC-WMO-UNEP-ICSU Steering Committee of the Global Ocean Observing System (GOOS), France, 1998
131. Fourth Session of the Health of the Oceans (HOTO) Panel of the Global Ocean Observing System (GOOS), Singapore, 1997
132. Sixteenth Session of the Joint IOC-IHO Guiding Committee for the General Bathymetric Chart of the Oceans (GEBCO), United Kingdom, 1997
133. First Session of the IOC-WMO-UNEP-ICSU-FAO Living Marine Resources Panel of the Global Ocean Observing System (GOOS), France, 1998
134. Fourth Session of the IOC Editorial Board for the International Bathymetric Chart of the Western Indian Ocean (IOC/EB-IBCWIO-IW3), South Africa, 1997
135. Third Session of the Joint GCOS-GOOS-WCRP Ocean Observations Panel for Climate (OOPC), France, 1998
136. Seventh Session of the Joint IOC-JGOFS C02 Advisory Panel Meeting, Germany, 1997
137. Implementation of Global Ocean Observations for GOOS/GCOS, First Session, Australia, 1998
138. Implementation of Global Ocean Observations for GOOS/GCOS, Second Session, France, 1998
139. Second Session of the IOC-WMO-UNEP-ICSU Coastal Panel of the Global Ocean Observing System (GOOS), Brazil, 1998
140. Third Session of IOC/WESTPAC Co-ordinating Committee for the North-East Asian Regional - Global Ocean Observing System (NEAR-GOOS), China, 1998
141. Ninth Session of the Joint IOC-WMO-CPPS Working Group on the Investigations of 'El Niño', Ecuador, 1998 *(Spanish only)*
142. Seventh Session of the IOC Editorial Board for the International Bathymetric Chart of the Mediterranean and its Geological/Geophysical Series, Croatia, 1998
143. Seventh Session of the Tropical Atmosphere-Ocean Array (TAO) Implementation Panel, Abidjan, Côte d'Ivoire, 1998
144. Sixth Session of the IODE Group of Experts on Marine Information Management (GEMIM), USA, 1999
145. Second Session of the IOC-WMO-UNEP-ICSU Steering Committee of the Global Ocean Observing System (GOOS), China, 1999
146. Third Session of the IOC-WMO-UNEP-ICSU Coastal Panel of the Global Ocean Observing System (GOOS), Ghana, 1999
147. Fourth Session of the GCOS-GOOS-WCRP Ocean Observations Panel for Climate (OOPC); Fourth Session of the WCRP CLIVAR Upper Ocean Panel (UOP); Special Joint Session of OOPC and UOP, USA, 1999
148. Second Session of the IOC-WMO-UNEP-ICSU-FAO Living Marine Resources Panel of the Global Ocean Observing System (GOOS), France, 1999
149. Eighth Session of the Joint IOC-JGOFS CO2 Advisory Panel Meeting, Japan, 1999
150. Fourth Session of the IOC/WESTPAC Co-ordinating Committee for the North-East Asian Regional – Global Ocean Observing System (NEAR-GOOS), Japan, 1999
151. Seventh Session of the IOC Consultative Group on Ocean Mapping (CGOM), Monaco, 1999
152. Sixth Session of the IOC Group of Experts on the Global Sea level Observing System (GLOSS), France, 1999
153. Seventeenth Session of the Joint IOC-IHO Guiding Committee for the General Bathymetric Chart of the Oceans (GEBCO), Canada, 1999
154. Comité Editorial de la COI para la Carta Batimétrica Internacional del Mar Caribe y el Golfo de Mexico (IBCCA), Septima Reunión, Mexico, 1998

   IOC Editorial Board for the International Bathymetric Chart of the Caribbean Sea and the Gulf of Mexico (IBCCA), Seventh Session, Mexico, 1998
155. Initial Global Ocean Observing System (GOOS) Commitments Meeting, IOC-WMO-UNEP-ICSU/Impl-III/3, France, 1999
156. First Session of the *ad hoc* Advisory Group for IOCARIBE-GOOS, Venezuela, 1999 *(also printed in Spanish and French)*
157. Fourth Session of the IOC-WMO-UNEP-ICSU Coastal Panel of the Global Ocean Observing System (GOOS), China, 1999
158. Eighth Session of the IOC Editorial Board for the International Bathymetric Chart of the Mediterranean and its Geological/Geophysical Series, Russian Federation, 1999
159. Third Session of the IOC-WMO-UNEP-ICSU-FAO Living Marine Resources Panel of the Global Ocean Observing System (GOOS), Chile, 1999
160. Fourth Session of the IOC-WMO-UNEP-ICSU-FAO Living Marine Resources Panel of the Global Ocean Observing System (GOOS). Hawaii, 2000
161. Eighth Session of the IODE Group of Experts on Technical Aspects of Data Exchange, USA, 2000
162. Third Session of the IOC-IUCN-NOAA Consultative Meeting on Large Marine Ecosystems (LME), France, 2000
163. Fifth Session of the IOC-WMO-UNEP-ICSU Coastal Panel of the Global Ocean Observing System (GOOS), Poland, 2000
164. Third Session of the IOC-WMO-UNEP-ICSU Steering Committee of the Global Ocean Observing System (GOOS), France, 2000
165. Second Session of the *ad hoc* Advisory Group for IOCARIBE-GOOS, Cuba, 2000 *(also printed in Spanish and French)*
166. First Session of the Coastal Ocean Observations Panel, Costa Rica, 2000
167. First GOOS Users' Forum, 2000
168. Seventh Session of the Group of Experts on the Global Sea Level Observing System, Honolulu, 2001
169. First Session of the Advisory Body of Experts on the Law of the Sea (ABE-LOS), France, 2001 *(also printed in French)*
170. Fourth Session of the IOC-WMO-UNEP-ICSU Steering Committee of the Global Ocean Observing System, Chile, 2001
171. First Session of the IOC-SCOR Ocean CO_2 Advisory Panel, France, 2000
172. Fifth Session of the GCOS-GOOS-WCRP Ocean Observations Panel for Climate (OOPC), Norway, 2000 *(electronic copy only)*
173. Third Session of the *ad hoc* Advisory Group for IOCARIBE-GOOS, USA, 2001 *(also printed in Spanish and French)*
174. Second Session of the Coastal Ocean Observations Panel and GOOS Users' Forum, Italy, 2001
175. Second Session of the Black Sea GOOS Workshop, Georgia, 2001
176. Fifth Session of the IOC/WESTPAC Co-ordinating Committee for the North-East Asian Regional – Global Ocean Observing System (NEAR-GOOS), Republic of Korea, 2000
177. Second Session of the Advisory Body of Experts on the Law of the Sea (IOC/ABE-LOS), Morocco, 2002 *(also printed in French)*
178. Sixth Session of the Joint GCOS-GOOS-WCRP Ocean Observations Panel for Climate (OOPC), Australia, 2001 *(electronic copy only)*
179. *Cancelled*

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180. Second Session of the IOC-SCOR Ocean CO_2 Advisory Panel, Honolulu, Hawaii, U.S.A, 2002 *(electronic copy only)*
181. IOC Workshop on the Establishment of SEAGOOS in the Wider Southeast Asian Region, Seoul, Republic of Korea, 2001 (SEAGOOS preparatory workshop) *(electronic copy only)*
182. First Session of the IODE Steering Group for the Resource Kit, USA, 19–21 March 2001
183. Fourth Session of the IOC-IUCN-NOAA Consultative Meeting on Large Marine Ecosystems (LMEs), France, 2002
184. Seventh Session of the IODE Group of Experts on Marine Information Management (GEMIM), France, 2002 *(electronic copy only)*
185. Sixth Session of IOC/WESTPAC Coordinating Committee for the North-East Asian Regional - Global Ocean Observing System (NEAR-GOOS), Republic of Korea, 2001 *(electronic copy only)*
186. First Session of the Global Ocean Observing System (GOOS) Capacity Building Panel, Switzerland, 2002 *(electronic copy only)*
187. Fourth Session of the ad hoc Advisory Group for IOCARIBE-GOOS, 2002, Mexico *(also printed in French and Spanish)*
188. Fifth Session of the IOC Editorial Board for the International Bathymetric Chart of the Western Indian Ocean (IBCWIO), Mauritius, 2000
189. Third session of the Editorial Board for the International Bathymetric Chart of the Western Pacific, Chine, 2000
190. Third Session of the Coastal Ocean Observations Panel and GOOS Users' Forum, Vietnam, 2002
191. Eighth Session of the IOC Consultative Group on Ocean Mapping, Russian Federation, 2001
192. Third Session of the Advisory Body of Experts on the Law of the Sea (IOC/ABE-LOS), Lisbon, 2003 *(also printed in French)*
193. Extraordinary Session of the Joint IOC-WMO-CPPS Working Group on the Investigations of 'El Niño', Chile, 1999 *(Spanish only; electronic copy only)*
194. Fifth Session of the IOC-WMO-UNEP-ICSU Steering Committee of the Global Ocean Observing System, France, 2002
195. Sixth Session of the IOC-WMO-UNEP-ICSU Steering Committee of the Global Ocean Observing System, South Africa, 2003
196. Fourth Session of the Coastal Ocean Observations Panel, South Africa, 2002 *(electronic copy only)*
197. First Session of the JCOMM/IODE Expert Team On Data Management Practices, Belgium, 2003 *(also JCOMM Meeting Report No. 25)*
198. Fifth Session of the IOC-IUCN-NOAA Consultative Meeting on Large Marine Ecosystems (LMEs), Paris, 2003
199. Ninth Session of the IOC Consultative Group on Ocean Mapping, Monaco, 2003 *(Recommendations in English, French, Russian and Spanish included)*
200. Eighth Session of the IOC Group of Experts on the Global Sea level Observing System (GLOSS), France, 2003 *(electronic copy only)*
201. Fourth Session of the Advisory Body of Experts on the Law of the Sea (IOC/ABE-LOS), Greece, 2004 *(also printed in French)*
202. Sixth Session of the IOC-IUCN-NOAA Consultative Meeting on Large Marine Ecosystems (LMEs), Paris, 2004 *(electronic copy only)*
203. Fifth Session of the Advisory Body of Experts on the Law of the Sea (IOC/ABE-LOS), Argentina, 2005 *(also printed in French)*
204. Ninth Session of the IOC Group of Experts on the Global Sea level Observing System (GLOSS), France, 2005 *(electronic copy only)*
205. Eighth Session of the IOC/WESTPAC Co-ordinating Committee for the North-East Asian Regional – Global Ocean Observing System (NEAR-GOOS), China, 2003 *(electronic copy only)*
206. Sixth Meeting of the Advisory Body of Experts on the Law of the Sea (IOC/ABE-LOS), Spain, 2006 *(also printed in French)*
207. Third Session of the Regional Forum of the Global Ocean Observing System, South Africa, 2006 *(electronic copy only)*
208. Seventh Session of the IOC-UNEP-IUCN-NOAA Consultative Meeting on Large Marine Ecosystems (LMEs), Paris, 2005 *(electronic copy only)*
209. Eighth Session of the IOC-UNEP-IUCN-NOAA Consultative Meeting on Large Marine Ecosystems (LMEs), Paris, 2006 *(electronic copy only)*
210. Seventh Meeting of the IOC Advisory Body of Experts on the Law of the Sea (IOC/ABE-LOS), Gabon, 2007 *(bilingual English/French)*
211. First Meeting of the IOC Working Group on the Future of IOC, Paris, 2008 *(Executive Summary in English, French, Russian and Spanish included)*
212. First meeting of the Working Group on Tsunamis and Other Hazards Related to Sea-Level Warning and Mitigation Systems (TOWS-WG), Paris, 3–4 April 2008 *(Executive Summary in English, French, Russian and Spanish included)*
213. First Session of the Panel for Integrated Coastal Observation (PICO-I), Paris, 10–11 April 2008 *(electronic copy only)*
214. Tenth Session of the IOC Group of Experts on the Global Sea level Observing System (GLOSS), Paris, 6–8 June 2007 *(electronic copy only)*
215. Eighth Meeting of the IOC Advisory Body of Experts on the Law of the Sea (IOC/ABE-LOS), Paris, 21–25 April 2008 *(bilingual English/French)*
216. Fourth Session of the Global Ocean Observing System (GOOS) Regional Alliances Forum (GRF), Guayaquil, Ecuador, 25–27 November 2008 *(electronic copy only)*
217. Second Session of the Working Group on Tsunamis and Other Hazards Related to Sea-Level Warning and Mitigation Systems (TOWS-WG), Paris, 27 March 2009 *(Executive Summary in English, French, Russian and Spanish included)*
218. Ninth Meeting of the IOC Advisory Body of Experts on the Law of the Sea (IOC/ABE-LOS), Paris, 30 March–3 April 2009 *(bilingual English/French)*
219. First Session of the IOC-SCOR International Ocean Carbon Coordination Project (IOCCP) Scientific Steering Group (also IOCCP Reports, 3), Broomfield, Colorado, U.S.A., 1 October 2005 *(electronic copy only)*
220. Second Session of the IOC-SCOR International Ocean Carbon Coordination Project (IOCCP) Scientific Steering Group (also IOCCP Reports, 6), Paris, France, 20 April 2007 *(electronic copy only)*
221. Third Session of the IOC-SCOR International Ocean Carbon Coordination Project (IOCCP) Scientific Steering Group (also IOCCP Reports, 10), Villefranche-sur-mer, France, 3–4 October 2008 *(electronic copy only)*
222. Fourth Session of the IOC-SCOR International Ocean Carbon Coordination Project (IOCCP) Scientific Steering Group (also IOCCP Reports, 15), Jena, Germany, 14 September 2009 *(electronic copy only)*
223. First Meeting of the joint IOC-ICES Study Group on Nutrient Standards (SGONS) (also IOCCP Reports, 20), Paris, France, 23–24 March 2010 *(Executive Summary in E, F, R, S included)*
224. Third Session of the Working Group on Tsunamis and Other Hazards Related to Sea-Level Warning and Mitigation Systems (TOWS-WG), Lisbon, Portugal, 5–6 May 2010 *(Executive Summary in English, French, Russian and Spanish included)*
225. Eleventh Session of the IOC Group of Experts on the Global Sea level Observing System (GLOSS), Paris, 13–15 May 2009 *(electronic copy only)*
226. Second Session of the Panel for Integrated Coastal Observation (PICO-II), Paris, 24–26 February 2009 *(electronic copy only)*
227. First meeting of the Task Team on Seismic Data Exchange in the South West Pacific of the ICG/PTWS Regional Working Group for the Southwest Pacific, Port Vila, Vanuatu, 19–20 October 2009 *(electronic copy only)*
228. Fourth Session of the Working Group on Tsunamis and Other Hazards Related to Sea-Level Warning and Mitigation Systems (TOWS-WG), Paris, France, 20–21 March 2011 *(Executive Summary in English, French, Russian and Spanish included)*
229. Second Session of the IODE Steering Group for Ocean Teacher (SG-OT), Miami, Florida, 11–15 April 2011
230. First Meeting of the Inter-ICG Task Team 1 on Sea Level Monitoring for Tsunami (Working Group on Tsunamis and Other Hazards Related to Sea-Level Warning and Mitigation Systems (TOWS-WG), Seattle, USA, 29 November–1 December 2010

231. First Meeting of the Inter-ICG Task Team 2 on Disaster Management and Preparedness (Working Group on Tsunamis and Other Hazards Related to Sea-Level Warning and Mitigation Systems (TOWS-WG), Seattle, USA, 29 November–1 December 2010

232. First Meeting of the Inter-ICG Task Team 3 on Tsunami Watch Operations (Working Group on Tsunamis and Other Hazards Related to Sea-Level Warning and Mitigation Systems (TOWS-WG), Seattle, USA, 29 November–1 December 2010

233. Primera Reunión del Grupo de Trabajo Regional para América Central del Grupo Intergubernamental de Coordinación del Sistema de Alerta contra los Tsunamis y Atenuación de sus Efectos en el Pacífico (ICG/PTWS), Managua (Nicaragua) del 4 al 6 de noviembre de 2009 *(Resumen dispositivo en español e inglés)*

234. Segunda Reunión del Grupo de Trabajo Regional para América Central del Grupo Intergubernamental de Coordinación del Sistema de Alerta contra los Tsunamis y Atenuación de sus Efectos en el Pacífico (ICG/PTWS), San Salvador (El Salvador) del 28 al 30 de septiembre de 2011 *(Resumen dispositivo en español e inglés)*

235. First Session of the Joint IODE-JCOMM Steering Group for the Global Temperature-Salinity Profile Programme (SG-GTSPP), 16–20 April 2012, Ostend, Belgium

236. Ad hoc Session of the Joint JCOMM-IODE Steering Group for the Ocean Data Standards Pilot Project (SG-ODSPP), 23–25 April 2012, Ostend, Belgium

237. First Meeting of the Regional Working Group on Tsunami Warning and Mitigation System for the South China Sea Region (SCS-WG), Sanya, China, 12–14 December 2011

238. First Meeting of the IODE Steering Group for OceanDocs (SG-OceanDocs), 24–27 January 2012, Ostend, Belgium

239. Fifth Session of the Working Group on Tsunamis and Other Hazards Related to Sea-Level Warning and Mitigation Systems (TOWS-WG), Tokyo, Japan, 15 February 2012 *(Executive Summary in English, French, Russian and Spanish included)*

240. Ad hoc Session of the IODE Group of Experts on Biological and Chemical Data Management and Exchange Practices (GE-BICH), Ostend, Belgium, 25 October 2012

241. Twelfth Session of the IODE Group of Experts on Marine Information Management (GE-MIM), Miami, USA, 22–25 January 2013