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Report of the ICES-IOC Steering Group on GOOS (SGGOOS)

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ICES

International Council for
the Exploration of the Sea

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Conseil International pour
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Contents

Contents	i
Executive summary	1
1 Opening of the meeting.....	2
2 Adoption of the agenda	2
3 ToR (a) Identify and steer the development of global and regional linkages between ICES and GOOS bodies.....	2
3.1 ICES-IOC relationships through SGGOOS	2
3.2 Review of IGOOS-VIII Meeting.....	4
4 ToR (b) Identify and steer the development of components and activities of ICES contributing to GOOS, as well as GOOS products relevant to ICES	5
4.1 ICES Data Centre Survey (A. Kellermann)	5
4.2 ICES CTD/VOS and other real-time data	6
4.3 ICES Status Reports (A. Bode)	6
5 ToR (c) Identify and steer the development of regional ICES, PICES and GOOS pilot projects to demonstrate the benefits of taking a GOOS approach in the ICES context	7
5.1 IBIROOS (L. Ferrer)	7
5.2 Ferry Box (H. Dahlin)	9
5.3 US GOOS (J. Manning)	9
5.4 Ecosystem Overview and Assessment Reports (EOARs) in Canada (sent by G. Harrison).....	9
5.5 SEPRISE and other developments at European level (H. Dahlin)	11
5.6 Plans for the demonstration Workshop (WKOOP).....	11
6 ToR (d) Identify and steer the development of appropriate outreach activities to disseminate information about ICES and GOOS and to articulate the benefits of taking a GOOS approach in the ICES context	12
6.1 Proposals for Plenary Lectures and Special Sessions.....	12
6.2 Information in the web	12
7 Plans for 2008–2009.....	12
7.1 Proposal of new SGGOOS Chairs	12
7.2 Next meeting	13
7.3 Action points	13
Annex 1: List of participants.....	14
Annex 2: Agenda.....	15
Annex 3: SGGOOS/IGSG terms of reference for the next meeting.....	16

Annex 4: Recommendations18

Executive summary

- Under the name of ICES GOOS Steering Group (IGSG) this group will continue its role as an ICES steering group promoting cooperation between IOC-GOOS and ICES Working Groups. The creation of a North Atlantic GOOS Regional Alliance will be encouraged but, in the meantime, IGSG will not be a formal part of IOC-GOOS. GOOS Regional Alliance. The need for an IOC appointed Co-Chair of IGSC is not required any longer although IOC participation in IGSG is welcomed. ICES may be represented at GOOS bodies (GSSC, I-GOOS).
- The review of operational projects and products confirmed that the ICES community has now enough capacity to undertake coordinated operational activities facilitating the use of the ecosystem approach in fisheries and ecosystem management. In this way, a North Atlantic GOOS Regional Alliance taking advantage of similar programs and activities of ICES members in both Europe and North America is envisaged for the medium term future. The outcome of WKOOP and the formation of the new Working Group on GOOS are awaited with expectation.

1 Opening of the meeting

The group was welcomed by T. Aarup, who kindly acted as host of the meeting at IOC. Despite the coincidence of several meetings relevant to GOOS activities, 10 people attended the meeting, including the GOOS Director and three members of GOOS staff at IOC (see Annex 1). After a short round of presentations, the Chair opened the meeting for discussion of the ToRs in the agenda.

2 Adoption of the agenda

The proposed agenda (Annex 2) was approved and J. Manning kindly accepted to act as the rapporteur.

3 ToR (a) Identify and steer the development of global and regional linkages between ICES and GOOS bodies

3.1 ICES-IOC relationships through SGGOOS

One important issue carried over recent meetings was the relationship between ICES and GOOS through the steering group. In the past, both IOC and ICES nominated one chairperson each to stress the relevance of steering efforts to both organizations. However, as noted by the GOOS Director, the role of the group needs to be clarified, particularly by having a clear report line versus GOOS bodies. Also, the role of a “steering group” meant different for both ICES and GOOS.

H. Dahlin (who originally proposed this steering group as an ICES effort to coordinate its observing activities with GOOS) initiated the discussion. He noted that many datasets produced by ICES can be used by GOOS. Products such as the quarterly reports by the NORSEPP project, for example, are especially useful for fisheries management issues. These are now available on both the ICES and EuroGOOS web pages. NORSEPP was a successful pilot project that will be implemented in other ICES regions. While the integration of ICES observing activities within GOOS has been slow, the present coordination between ICES and IOC on GOOS has helped both parties. The GOOS ideas on operational oceanography have spread to ICES as indicated by the success of specific thematic sessions on GOOS topics during ICES Annual Science Conferences or the planned Demonstration Workshop of Operational Oceanographic Products (WKOOP) for April 2008.

Despite the increase in operational oceanography activities in recent years, several participants conceded that progress has been slower than expected. G. Parilla noted that since this group started its activities nearly 10 years ago a multiplicity of groups/committees appeared and the final consolidation is still waiting. This was followed by a general agreement that, while progress is slow, there is some momentum at both sides of the Atlantic. In this regard, A. Kellermann noted that ICES is contributing to GOOS as much as it can with its current resources. He noted that during the recent discussions of the new ICES Science Plan, “operational oceanography” was a prominent topic in most of the top eight priorities. H. Dahlin argued that some of that merit can be attributed to this steering group.

New opportunities of collaboration for both organizations appeared in recent years. For instance, H. Dahlin noted that the EU Maritime Policy group has a significant ocean observing and data exchange component and they should consider both the ICES and GOOS experience. The various ecosystem and environmental indicators

developed by ICES WGs, for example, should be considered in their efforts. He also noted that programs like this and others like GMES often take resources (brain power and money) away from the GOOS effort.

K. Alverson, on the side of the IOC secretariat, responded to the above discussion with a number of points. He noted that there are many dichotomies (coastal vs. blue water, global vs. regional, fisheries/biology vs. physical, and others) but GOOS should be involved in all. Observations and products in support of fisheries management are also important elements of GOOS. His second major point was that this SGGOOS unfortunately does not report formally to any GOOS advisory or governing body. In his view, this is a problem as no panels have received any steering from SGGOOS. While ICES is apparently involved with the GOOS Scientific Steering Group (GSSC), it does not attend GOOS meetings regularly and does not submit reports. He noted that ICES was primarily a set of coastal/regional groups and is therefore typically left out of the open ocean module of GOOS that mainly deals with physical observations.

A. Kellermann agreed that ICES as a “regional” group need to put weight on a stronger interface with GOOS, especially with respect to EuroGOOS as a global regional alliance. Some discussion followed here about whether there is a need for an IOC appointed Co-Chair in the SGGOOS group. K. Alverson noted, with agreement from other GOOS colleagues, that the important thing is that there is a clear reporting line. The product of this group needs to become more visible. T. Aarup, for example, noted that there is not much need for a Co-Chair as no one of the other regional alliances have an IOC Co-Chair but the reporting does need to be formalized. The purpose of originally having a Co-Chair was to better formalize things on the GOOS side (i.e. having a “GOOS stamp”) but it was generally agreed that we just need to formally report at the GOOS meetings. H. Dahlin noted that SGGOOS was originally an ICES group but later made into an IOC group in order to make it more open to all. Its purpose was to define both what ICES can give to GOOS and also what it can get from GOOS.

At this stage (and few more times during the course of the day’s discussion) the possibility of SGGOOS taking the lead on developing a “North Atlantic GOOS Regional Alliance” was mentioned but it was generally agreed that this might be too big an undertaking for an ICES Steering Group (where “steering” has a different meaning for ICES or GOOS). It was also noted that SGGOOS may overlap considerably with the upcoming WKOOP group. In any case, the consolidation of a possible large ICES GOOS Regional Alliance was considered by all participants as a desirable, long-term objective.

T. Aarup pointed out that GOOS is not intended to be “be everything to everyone”. The design plans for the coastal module of GOOS recommends a provisional list of 18 common variables to measure. However, the plans also stress very clearly that GOOS Regional Alliances likely (due to special regional/local user needs) require monitoring of additional variables or observe the common variables with different time and space scales than envisioned for global coastal GOOS monitoring.

In order to find a clear report line for SGGOOS into GOOS, the following alternatives were discussed:

- attendance and report to the Intergovernmental Committee for GOOS [I-GOOS] meetings (K. Alverson)

- report directly to the Panel for Integrated Coastal Observations [PICO] (K. Alverson)
- report as GOOS Regional Alliance to GOOS Regional Forum (T. Aarup)
- attendance and report to GOOS Scientific Steering Committee [GSSC] (H. Dahlin, A. Kellermann)

As ICES GOOS activities are built more by “national commitments” than by grant-funded “pilot projects”, it may be not appropriate to report them to I-GOOS. Besides, ICES is a scientific, inter-governmental organization, and most of the activities related to GOOS of the individual members may be already reported through national GOOS delegates. Therefore, ICES attendance and report to GSSC appeared as the most appropriate for the immediate future. In addition, the SGGOOS reports will be sent directly to T. Gross at IOC to include as information documents in relevant GOOS bodies.

3.2 Review of IGOOS-VIII Meeting

The 8th session of the Intergovernmental Committee for GOOS (Paris, France, from 13–16 June 2007), reviewed the progress of GOOS over the past biennium and discussed implementation and sustainability strategies, and reviewed the GOOS National Reports. A complete report of the meeting can be found at <http://www.ioc-goos.org> (under: documents, GOOS reports). G. Parrilla and H. Dahlin summarized their opinions on the meeting. Both agreed that there was one of the best meetings to date, although most of the discussion was captured by budget. The I-GOOS meeting was attended by some 35 member states.

GOOS has gained international recognition in particular through programs like Argo, but it still rests on funds mainly from research. The request to GOOS has surpassed the committed resources, as the implementation level of the open ocean module of GOOS has reached about 58% of the total. Therefore, an increase in the national commitments is needed, while achievement and progress should be assigned to international body (e.g. IOC) to achieve a systematic and perennial activity.

I-GOOS stressed the importance of the continued promotion of GOOS as the ocean component of the Global Earth Observing System of Systems (GEOSS), its leadership role in open ocean and coastal planning, and emphasized the need for: (i) continuity, sustainability, and for the development of in-situ and satellite instruments; (ii) access to real-time in-situ data for hazard monitoring; (iii) data exchange, particularly satellite data. This aspect was discussed by SGGOOS members in some detail as it affected the possible ICES representation in GEOSS. It was concluded that the direct representation of ICES at GEOSS is not necessary as long as operational oceanography is represented by GOOS and fisheries management by FAO.

Cooperation with the IOC Advisory Body of Experts of the Law of the Sea (IOC/ABE-LOS) was also a subject of concern, because of the different language spoken by scientists and lawyers. The ABE-LOS is a subsidiary body of the IOC tasked to design a legal framework for oceanographic data collection throughout the world within the UN Law of the Sea. I-GOOS decided it will commission a study of the technical aspects related to a standard set of routine underway measurements (such as sea surface temperature and current measurements) taken by research vessels in coastal waters for storage in international databases. This will then be presented to ABE-LOS for advice on legal aspects.

The I-GOOS encourages partnerships between GOOS Regional Alliances and other regional programmes such as Large Marine Ecosystem projects and Regional Seas Conventions. In this regard, the eventual formation of a North Atlantic GGOS Regional Alliance through ICES, suggested in the preceding discussion, should be welcomed.

Several countries and agencies expressed support for the formation of an Arctic GOOS Regional Alliance (Arctic GRA) to promote and coordinate observing and other related activities undertaken by many organizations. However, Russia considered it premature to form an Arctic GRA until the acquisition of experience and results from the activities of the International Polar Year were examined. Given the support from other countries, however, the Committee decided to convene an intergovernmental Arctic GOOS meeting in 2008 and requested the I-GOOS board to take on this task in collaboration with the GOOS Project Office.

The I-GOOS agreed to continue national reporting of quantitative and qualitative participation in GOOS in the form of “living document”, with a simplified template.

In this way, A. Fischer and other IOC representatives suggested that ICES could start reporting to GOOS using the templates adopted for national reports. A. Kellermann agreed to discuss this with the ICES Data Centre and the group suggested this task also being part of ToRs of WKOOP. T. Gross noted that there is a GOOS Regional Forum planned for 18 November 2008 in Guayaquil (Ecuador).

4 ToR (b) Identify and steer the development of components and activities of ICES contributing to GOOS, as well as GOOS products relevant to ICES

4.1 ICES Data Centre Survey (A. Kellermann)

There has been a change of people recently with Neil Holdsworth (from private business world) taking over. He has successfully motivated the data centre to be one of the largest activities in ICES. The survey/questionnaire in 2005 has been compiled and responses included 124 surveys from people of 24 countries, 85% were scientists (among which 62% were from National Government Organizations and 32% from universities). 66% of respondents were expert users of data and more than 60% participated in evaluation groups, symposia or make use of scientific publications. The study revealed that only 33% of participants admitted to contribute with data while most users downloaded the data from the ICES web page. Only 21% of participants were neither contributors nor users of data and only 33% were familiar w/data policies. Some discussion followed here about the visibility of data policy and all SGGOOS member agreed that such policy should be prominent on main web pages, as it is the case with ICES. Except for a few respondents, the general feeling is that the data is open to all. The most popular dataset were the fish survey, CTD, and biological community (see Figure 1). Other conclusions were that platform (web browser) independence is necessary, that there are no strong preferences for centralized vs. distributed data, and that ICES tools such as “ocean data maps” were most popular along with forms of data. The action items after this survey were to focus on:

- products (trends, gridded, map based)
- web monitoring, and
- platform independence

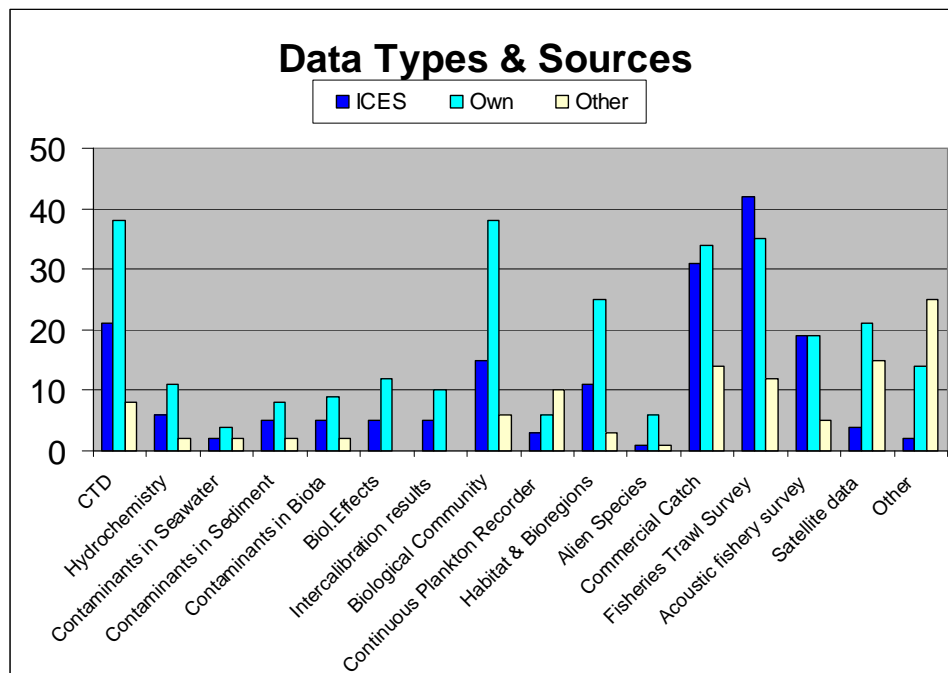


Figure 1. Data types and sources downloaded by users of the ICES Data Centre, according to the 2005 Data Centre User Survey.

A full report on this survey will be soon available on the ICES website (<http://www.ices.dk>)

4.2 ICES CTD/VOS and other real-time data

This item was not discussed in length but only to say it is in good shape through the Coriolis System. H. Dahlin noted that real-time data is available on web servers. EuroGOOS has shown that this is possible with ca. 350 stations in Europe (see below report on SEPRISE).

4.3 ICES Status Reports (A. Bode)

ICES Status Reports may be considered as true GOOS products. Examples of the Harmful Algal Bloom (where each country supplied a report), Zooplankton, and Ocean Climate Reports for 2006, along with the latest Quarterly Status Report for the North Sea from NORSEPP, were presented. These are very active groups and have been for a long time. ICES improved the visibility of these products, while supporting their continuity, by including some of them in its series of Cooperative Research Reports. Products of general interest, as maps or tables, are picked out from these reports. J. Manning noted that it is hard to decide how much effort to put into real-time web served data vs. this grey literature reports. T. Aarup, however, stressed that GOOS should be more a "sustained" observing system rather than operational. Real-time time data is not always the priority, and all members agreed that aggregated products like Status Reports often lead investigators to other more detailed studies.

Links for the latest reports are listed below:

Climate: <http://www.ices.dk/pubs/crr/crr289/CRR289.pdf>

NORSEPP: <http://www.ices.dk/marineworld/norsepp.asp>

Zooplankton: <http://www.ices.dk/pubs/crr/crr281/CRR281.pdf>

HAB: <http://www.ices.dk/reports/OCC/2007/WGHABD07.pdf>

5 ToR (c) Identify and steer the development of regional ICES, PICES and GOOS pilot projects to demonstrate the benefits of taking a GOOS approach in the ICES context

5.1 IBIROOS (L. Ferrer)

IBI-ROOS aims to set up an operational oceanography organisation operated by participating partners from the five countries bordering the Iberian-Biscay-Irish maritime area (see Figure 2), (France, Ireland, Portugal, Spain and UK), collaborating to develop and implement ocean observing systems for the IBI-ROOS area, with delivery of real time operational data products and services. Since last meeting the IBI-ROOS strategic plan has been published and 11 institutes signed the Memorandum of Understanding. The IBI-ROOS members have set up four core projects:

- Improving the observing system (consolidation of the existing observing systems, upgrading the observing systems, installation of new ones. Whenever possible the data were shared in real-time with the IBI partners).
- River-discharge (by considering the availability of real-time river discharge data for the IBI-region for operational modelling, the use of hydrological models to quantify flows from rivers in the region where river data are not available or appropriate and the availability of archived river data for model hindcasts).
- Data exchange (to improve data exchange within IBI-ROOS in order to provide an enhanced in-situ dataset to forecasting system both in real-time and delayed mode for assimilation and validation purposes).

Model downscaling (from low to higher resolution systems among regional, coastal and local systems of the IBI region; modelling efforts were also on improving systems and on consolidating R&D systems to pre operational or operational stage).

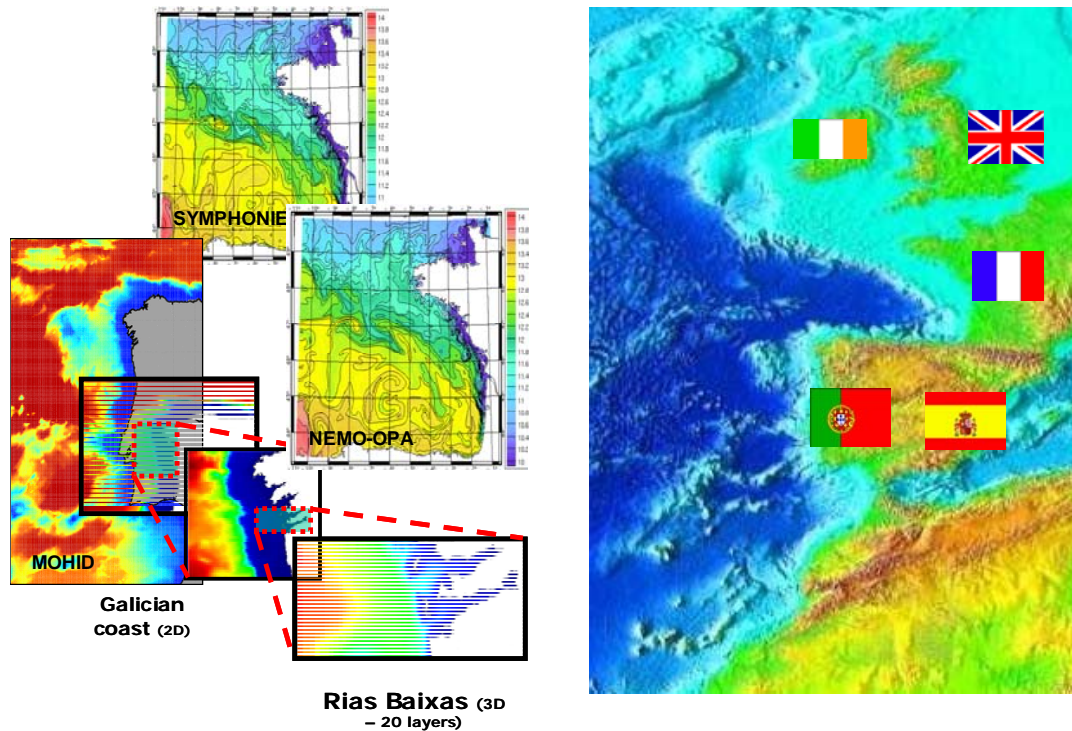


Figure 2. Countries associated to IBI-ROOS and examples of nesting and downscaling circulation models.

The plans for the next year for the observing system include two types of activities: on one side they will continue to add new instruments (Codar HF radars by Spain and Portugal, deployment of Pagode and TS sensor on fishing boat by France, renovation of the Spanish REDMAR tide gauge network) and share the data, and on the other side they will improve several aspects of the design of the observing systems by using recently developed objective criteria based on ensemble modelling. Data Exchange will improve from moving from real-time data exchange ftp site to a real IBI-ROOS portal to data provided by the partners (this will be achieved under the new EU Project MyOcean), enhancing data quality control and integrating all existing data in the region from the different partners. Modelling activities will progress in the framework of existing projects (e.g. ECOOP and MyOcean). In parallel, using MyOcean products, the modelling group plans to identify regions of retentive hydrodynamic structures for HAB species and calculate the likely transport pathways of these HABs within the IBI area.

The main challenges identified are, first technological, as the IBI area is not an easy area to observe and to model, and secondly organizational, as they have to set up the appropriate links between national programs that have their own constraints and deadline in order to improve to overall system. An example of the latter is the number of existing models and data within the region. Finally it is necessary to connect all this information to provide high quality information for the area, and to work together with users to improve the service to applications that have trans-national connections.

IBI-ROOS annual meeting in 2008 scheduled for the same dates as SGGOOS meeting. More details and documentation on the project can be downloaded from <http://www.ibi-roos.eu>

5.2 Ferry Box (H. Dahlin)

The success of this former EU Project on ocean observations on ships of opportunity extended well after its official termination. EuroGOOS now has guidelines on how to develop similar systems such as those existing and apparently sustained along the UK and Spain line, North Sea, and Baltic (see <http://www.eurogoos.org/publications/FerryBoxlow.pdf>). These were successful projects sustained by national funding. They all report to on their respective web pages and to the FerryBox web (<http://www.ferrybox.org>). One major problem for the continuity of measurements is to recover the instruments when the industry sells or moves the original ferry to another place of the world. EuroGOOS acknowledges FerryBox-type lines as a sustained part of a European ocean observing system, and encourages the partners to continue to establish new lines to fill gaps in the observations.

5.3 US GOOS (J. Manning)

J. Manning reviewed some of the developments on the US side. He noted there are actually two endeavours:

- The Ocean Observatories Initiative (OOI), primarily funded by the National Science Foundation, sometimes referred to as ORION project, (http://www.joiscience.org/ocean_observing/initiative)
- The Integrated Ocean Observing System (IOOS), primarily funded by NOAA (<http://ioos.noaa.gov/>)

The OOI program is slightly more science-based and includes a set of community resources (i.e. instrumentation arrays) some of which can be moved around in space to investigate particular processes. The IOOS project, which actually comes under a multi-agency umbrella called "Ocean.US", is on the other hand is more focused on sustained observations on an operational basis. Ocean.US has a few subsystems including not only observations but a very important data management group and a modelling and analysis group. It was noted that there are several "Regional Associations" under IOOS along different sections of the US Coast including the "Northeast Regional Association of Coastal Ocean Observations (NERACOOS)" of which the Northeast Fisheries Science Center, J. Manning's laboratory, is a member. He demonstrated the Northeast Fisheries Science Center (NEFSC) oceanography website (<http://www.nefsc.noaa.gov/epd/ocean/MainPage/>) and the process by which they serve data to other partners. One of the observation networks he works on himself is the "Environmental Monitors on Lobster Traps" described at <http://eMOLT.org>.

5.4 Ecosystem Overview and Assessment Reports (EOARs) in Canada (sent by G. Harrison)

A. Bode summarized the report sent by G. Harrison on OOS activities in Canada, leaded by the Canadian Department of Fisheries and Oceans (DFO) and related to its mandate on developing and implementing an ecosystem approach to resource management (Ecosystem-based Management, EBM). DFO's EBM strategy involves, initially, a full ecosystem overview (what is known about the system) and inventory, and thereafter an assessment of threats/pressures posed by human activity or major natural events, before management strategies can be developed. DFO has as one of its major science activities over the next several years, the delivery of Ecosystem

Overview and Assessment Reports (EOARs) for all of the marine waters under Canadian jurisdiction. An EOAR brings together scientific information and knowledge to describe the current understanding of the ecosystem for use by oceans managers, partners, and stakeholders. The Ecosystem Overview (EO) component presents information on current status and recent trends for as many ecosystem components and human activities as possible, the inherent variability in the components, and address issues of ecological scale. The Ecosystem Assessment (EA) component integrates the descriptive information presented in the EO with information on human activities known or expected to occur in the area by the pressures which each activity puts on ecosystem, and information on the pressures relative to the ecosystem components (or “states”) identified as important in the first part of the assessment. In its entirety, the EOAR provides the scientific knowledge needed to support the advancement of the ecosystem approach and is a necessary prerequisite for integrated management. DFO has created a national standard Table of Contents for EOARs to facilitate national consistency of Canada’s reporting efforts. Documentation and supporting publications can be downloaded from: http://www.dfo-mpo.gc.ca/csas/csas/Publications/Pub_Index_e.htm

At the 2004 SGGOOS meeting in Tenerife, Glen Harrison provided an overview of research being carried out by Canadian government scientists to develop methods the major elements of the EO report described above. Ken Frank and colleagues at Bedford Institute of Oceanography employed statistical ordination techniques to evaluate changes in a suite of abiotic and biotic factors that characterize the ecosystem and associated human pressures on the Eastern Scotian Shelf off the Atlantic coast of Canada (see Figure 3). This approach has been applied successfully by other organizations with similar EBM goals, (e.g. REGNS. For the 2008 SGGOOS meeting, Frank has provided a PowerPoint presentation that summarizes new ordination analyses of two ecosystems (the Western Scotian Shelf and Bay of Fundy) with significantly different structure and dynamics from the Eastern Scotian Shelf (his earlier study).



Figure 3. Example of results of the ordination on the first component of variables for the EOAR in the Western Scotian Shelf. From K. Frank (Bedford Institute of Oceanography).

5.5 SEPRISE and other developments at European level (H. Dahlin)

The development of European operational oceanography in support of GOOS is mainly a bottom-up process based on the work of the European ROOSes: Arctic ROOS, BOOS, IBI-ROOS, MOON and NOOS, and the Black Sea GOOS (see <http://www.eurogoos.org>). The Global scale, and the pan-European development and coordination are supported by the European Commission through a series of consecutive projects like MerSea IP (ending in 2008), ECOOP (ending by 2010), and MyOcean (starting in 2008). As an example, the relatively-small project SEPRISE has contributed with inventories, a plan for core-services, and a real time data exchange demonstration. The latter will be developed by ECOOP and MyOcean to a standardised sustained system for real time data exchange that will also serve as a contribution to GOOS and other global systems. More details on these projects can be found at:

MerSea IP: <http://www.mersea.eu.org/>

SEPRISE: <http://www.eurogoos.org/sepdemo/>

ECOOP: <http://www.ecoop.eu/>

5.6 Plans for the demonstration Workshop (WKOOP)

The demonstration workshop on ocean products and services (WKOOP) is scheduled for 8–9 April 2008 in Copenhagen. There has been a change in one of the conveners (John Siddorn replaced Martin Holt) but no other information was received by SGGOOS members. The group suggested that WKOOP should push for some core products in addition to circulation models. In addition, they should consider the recompilation and analysis of existing ICES OOS products and their suitability for users. This task, along with their participation in reporting on these products to IOC-GOOS, was suggested as ToRs for both WKOOP and the new Working Group in

Ocean Observations and Products (WGOOP) expecting to emerge from the workshop.

6 ToR (d) Identify and steer the development of appropriate outreach activities to disseminate information about ICES and GOOS and to articulate the benefits of taking a GOOS approach in the ICES context

6.1 Proposals for Plenary Lectures and Special Sessions

Special sessions on operational oceanography were a success of attendance in past ICES Annual Science Conferences (ASC). The group discussed the feasibility of having either a special session or a plenary lecture in the near future. The main options were:

- waiting for the outcome of WKOOP (A. Bode)
- a GOOS session at the ASC in Berlin 2009, as MyOcean participants, among others, would have the opportunity to come to ICES to report (H. Dahlin). Alternatively, a plenary lecture might be fit in 2009 rather than a full theme session.
- a GOOS session and plenary lecture by Ed Harrison (PMEL) at the Seattle ICES-PICES joint ASC meeting in 2010 (A. Kellermann and K. Alverson)

Most of the participants agreed that 2010 meeting appears as the most feasible option since most of 2009 is booked with other meetings, particularly associated with IOC and GOOS. For instance, the "Ocean Obs 09" meeting in autumn 2009 will involve almost all open ocean scientists. The discussion on this subject will continue intersessionally, and during the ASC in Halifax in September 2008, and eventually, three conveners per session need to be specified in September. T. Aarup suggested that this session (whenever it happens) include participants outside GOOS and this be the responsibility of the oceanography committee (OCC). A. Kellermann agreed to bring this up in the OCC mid-year meeting in May 2008.

Besides OOS, T. Aarup suggested a joint session on physical oceanography between WGOH and the European Geophysical Union (and J. Manning added the possibility of the American Geophysical union as well). The group supported the recommendation that will be made through the OCC.

6.2 Information in the web

The dissemination of SGGOOS activities can continue with distribution of the flyer printed in 2006 at relevant meetings but the information on the web needs to be updated. Currently only the annual reports can be downloaded from the ICES web site and no links appeared at the GOOS web. The group agreed that at least the name and addresses of current members, along with the revised Action Plan should be in the web. GOOS will update their page with a short description and link to ICES partnership, accordingly. NOAA's "GOSIC" web site may be an additional option to post links, as noted by T. Gross.

7 Plans for 2008–2009

7.1 Proposal of new SGGOOS Chairs

No names were proposed to replace the present Chair. Earlier consultations were made with Alicia Lavín (past Chair of WGOH and one of the Chairs of IBI-ROOS) but

the latest news revealed that she may not be available as originally hoped. Therefore SGGOOS needs to come up with another person involved with GOOS activities. The new chair must be proposed by September 2008 at the ASC in Halifax, Canada to be appointed by the OCC. In case that there are no proposals, the OCC might consider the reorganization of the group within the committee. All members were urged to propose candidates, as the current Chair will not be able to continue after this year.

7.2 Next meeting

Under the name of ICES GOOS Steering Group (IGSG) this group will continue its role as an ICES steering group promoting cooperation between IOC-GOOS and ICES Working Groups. The next meeting is scheduled in Woods Hole (USA) in spring 2009 (dates to be confirmed). Jon Hare will act as local host.

7.3 Action points

- A. Kellermann and H. Dahlin: report from next GOOS Regional Forum (Guayaquil, November 2008) of GRAs
 - G. Parrilla and H. Dahlin: To prepare participation of ICES in the next I-GOOS meeting (June 2009)
 - A. Bode: making SGGOOS-2008 report available to GSSC (by sending it directly to T. Gross) and to WKOOP (by sending it to the chairs)
 - F. Colijn: report from recent developments of FerryBox
 - J. Mader (or L. Ferrer): report from IBIROOS meeting and activities in 2008
 - J. Hare (or J. Manning): report on US and Canada (G. Harrison) GOOS activities
 - new SGGOOS/IGSG chair (or WKOOP Chair): report on the outcome of WKOOP
 - new SGGOOS/IGSG Chair: report on recent developments on ICES Status Reports and other products (Ocean Climate, Zooplankton, HAB, FishMap,...)
 - all members: make plans for a keynote speaker and thematic session during ICES ASC 2010 (Seattle)
 - all members: propose new SGGOOS/IGSG chair to OCC by September 2008 meeting
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Annex 1: List of participants

Name	Address	Phone/Fax	Email
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Annex 2: Agenda

Thursday, 21 February 2008

09:00 – 09:30 h Welcome. Introduction. Election of rapporteur. Adoption of agenda.

09:30 – 10:30 h Discussion: ICES-IOC relationships through SGGOOS

10:30 – 11:00 h Coffee break

11:00 – 12:30 h ToR (a) Global and regional linkages between ICES and GOOS.

- Review of IGOOS-VIII Meeting

12:30 – 13:30 h Lunch

13:30 – 15:00 ToR (b) ICES contributions to GOOS.

- ICES Data Centre Survey
- ICES CTD/VOS
- ICES Status Reports

15:00 – 15:30 h Coffee break

15:30 – 17:00 h ToR (c) Regional Pilot Projects

- IBIROOS
- Ferry Box
- US GOOS
- Ecosystem Overview and Assessment Reports (EOARs) Canada
- SEPRISE and other developments at European level
- Plans for the demonstration Workshop (WKOOP)

Friday, 22 February 2008

09:00 – 10:30 h ToR (d) Outreach activities

- Proposals for Plenary Lectures and Special Sessions
- Information in the web

10:30 – 11:00 h Coffee break

11:00 – 12:00 h Discussion: Plans for 2008–2009.

- Proposal of new SGGOOS Chairs
- ToRs for 2008

12:00 – 12:30 h Any other business. Closure of the meeting

Annex 3: SGGOOS/IGSG terms of reference for the next meeting

The **ICES GOOS Steering Group (IGSG)** will meet at Woods Hole (USA) in spring 2009 (dates to be confirmed) to:

- a) Identify and steer the development of global and regional linkages between ICES and GOOS bodies:
 - i) Review the outcome of 2008 Meeting of GRAs (Guayaquil, Ecuador, November 2008);
 - ii) Prepare the participation of ICES in 2009 Meeting of I-GOOS
 - iii) Promote the cooperation of ICES in IOOS (US);
 - iv) Enhance cooperation of ICES in EUROGOOS.
- b) Identify and steer the development of components and activities of ICES contributing to GOOS, as well as GOOS products relevant to ICES:
 - i) Review the outcome of WKOOP 2008 meeting;
 - ii) ICES Status Reports;
- c) Identify and steer the development of regional ICES, PICES and GOOS pilot projects to demonstrate the benefits of taking a GOOS approach in the ICES context:
 - i) Review recent developments in IBIROOS;
 - ii) Review recent developments in US and Canadian GOOS;
 - iii) Review recent developments in Ferry-Box consortium.
- d) Identify and steer the development of appropriate outreach activities to disseminate information about ICES and GOOS and to articulate the benefits of taking a GOOS approach in the ICES context:
 - i) Promote a special session and plenary lecture on GOOS at the ICES ASC in 2010 (Seattle);
 - ii) Link information on this group and ICES at the GOOS web site;
 - iii) Recommend a joint session of WGOH and EGU/AGU.

IGSG will report by (date) for the attention of the Oceanography Committee.

Supporting Information

PRIORITY:	The activities of the ICES GOOS Steering Group must be considered essential for the participation of ICES as an active regional partner in GOOS.
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SCIENTIFIC JUSTIFICATION AND RELATION TO ACTION PLAN:	Term of Reference a)
	To provide annual summaries of GOOS activities to inform both the ICES and IOC communities and to recognize potential areas for collaboration.
	Term of Reference b)
	To foster collaboration on data exchange and use within ICES and to raise awareness on data products needed for GOOS-related work. (ii) To promote the use ICES GOOS products.
	Term of Reference c)
	To promote and extend the development of GOOS regional projects in the ICES area
	Term of Reference d)
	A Special Session and Plenary Lecture on GOOS was driven by the action points and recommendations since 2004. The review of the Action Plan in 2006 and recent changes at both ICES and GOOS structure and plans justifies this action. (ii) Visibility of ICES GOOS activities in the web is required. (iii) Physical oceanography within ICES, besides GOOS products, needs also promotion outside ICES.
RESOURCE REQUIREMENTS:	N/A.
PARTICIPANTS:	GOOS, EuroGOOS, and other relevant GOOS bodies are free to contribute to the Group. Delegates are asked to ensure good representation of all ICES disciplines in this Group. Ideal participants are those already connected with GOOS activities in member countries.
SECRETARIAT FACILITIES:	None.
FINANCIAL:	No financial implications.
LINKAGES TO ADVISORY COMMITTEES:	Marine monitoring activities are closely relevant to the interests of all ICES Advisory Committees.
LINKAGES TO OTHER COMMITTEES OR GROUPS:	All ICES Science Committees have an active interest in this Group. Amongst the closely aligned Working Groups are many of the Oceanography Committee's Groups and IBTSWG under LRC.
LINKAGES TO OTHER ORGANIZATIONS:	IOC, GOOS, EUROGOOS, PICES.
SECRETARIAT MARGINAL COST SHARE:	ICES:100%

Annex 4: Recommendations

RECOMMENDATION	FOR FOLLOW UP BY:
1 To OCC: Change the name of SGGOOS to ICES GOOS Steering Group (IGSG). IGSG will not be a formal part of IOC-GOOS as before, therefore Co-Chairing of the group is not required although IOC participation in IGSG is welcomed. ICES will be represented at GOOS bodies (GSSC, I-GOOS).	OCC
2.To OCC: request for nomination of a new Chair	OCC
3. To all members IGSG: propose a Special Session and plenary lecture for GOOS at the ICES ASC 2009–2010	OCC
4. To ICES Data Centre: Future user surveys should ask users to give specific details on existing / required data and products. Also, the survey should include independent measurements (e.g. web based counters) on the access to data and products like status reports and bibliometric studies on citations.	OCC
5. To WGHAB: Global products of HAB monitoring should be part of IOC-GOOS	OCC
6. To WKOOP (eventually ToR for WGOOP): Produce a guide on existing / required GOOS products for ICES WGs by taking into account the results of the EUROGOOS Working Group on Products (March 2008).	OCC
7. To WKOOP (eventually ToR for WGOOP): Take responsibility of reporting ICES-GOOS activities (WGOH, WGBPI, WGHAB, WHZE) to GOOS (using report templates).	OCC
8. To WGOH: Joint session on physical oceanography between WGOH and European Geophysical Union and/or American Geophysical Union	OCC