



**Intergovernmental Oceanographic Commission**  
*Reports of Meetings of Experts and Equivalent Bodies*

## **IOC-WMO-UNEP-ICSU Steering Committee of the Global Ocean Observing System (GOOS)**

**Eighth Session**  
21-23 February 2005  
Melbourne, Australia



**Intergovernmental Oceanographic Commission**  
*Reports of Meetings of Experts and Equivalent Bodies*

**IOC-WMO-UNEP-ICSU Steering Committee  
of the Global Ocean Observing System  
(GOOS)**

**Eighth Session**  
21-23 February 2005  
Melbourne, Australia

## *ABSTRACT*

The 8<sup>th</sup> session of the GOOS Steering Committee, meeting in Melbourne, Australia, from 21-23 February 2005 addressed GOOS developments, progress with the design activities of the Ocean Observations Panel for Climate and the Coastal Ocean Observations Panel, and progress in implementing GOOS through the Joint Technical Commission for Oceanography and Marine Meteorology. More attention needs to be given in future to the practical implementation of GOOS and to GOOS outreach and communications efforts. Expected financial and staff resources, provided as a regular budget allocation from UNESCO in 2006-2007 and extrabudgetary contributions from additional sponsors, are far below the amount required to carry out the planned GOOS program. A new Director for the GOOS Office, Keith Alverson, was hired beginning August, 2004 and a new chair of the GSC, John Field, began duties beginning March, 2005.

<b>1</b>	<b>OPENING AND WELCOME.....</b>	<b>1</b>
1.1	FORMATION OF SESSIONAL WORKING GROUPS.....	1
<b>2</b>	<b>GOOS DEVELOPMENTS.....</b>	<b>1</b>
2.1	PERSPECTIVES FROM THE GSC CHAIR.....	1
2.2	PERSPECTIVES FROM GPO DIRECTOR.....	1
2.3	DISCUSSION OF GOOS STRATEGY.....	1
2.4	SET EXPLICIT GOOS MJILESTONES FOR 1-5 YEAR TIMEFRAME.....	2
<b>3</b>	<b>COOP.....</b>	<b>2</b>
3.1	PERSPECTIVES FROM THE COOP CHAIR.....	2
3.2	ENDORSE THE COOP STRATEGIC IMPLEMENTATION PLAN.....	2
3.3	TRANSITION TO OPERATIONAL ACTIVITY: COOP TO POCO.....	3
3.4	DISSOLCE COOP AND START POCO.....	3
3.5	ENDORSE POCO TERMS OF REFERENCE.....	3
3.6	MAKE EXPLICIT WHO POCO REPORTS TO.....	4
3.7	SET EXPLICIT POCO MILESTONES FOR 1-5 YEAR TIMEFRAME.....	4
3.8	GOOS REGULAR BUDGET CONTRIBUTION TO POCO.....	4
<b>4</b>	<b>OOPC.....</b>	<b>4</b>
4.1	PERSPECTIVES FROM THE OOPC CHAIR.....	4
4.2	TRANSITION TO OPERATIONAL ACTIVITY.....	4
4.3	OOPC MILESTONES FOR 1-5 YEAR TIMEFRAME.....	5
4.4	GOOS REGULAR BUDGET CONTRIBUTION TO OOPC.....	5
<b>5</b>	<b>JCOMM.....</b>	<b>5</b>
5.1	PERSPECTIVES FROM MEMBERS.....	5
5.2	DISCUSSION: JCOMM AS OPERATIONAL ARM OF GOOS.....	5
5.3	DISCUSSION: WHAT/WHO IS THE GOOS SECRETARIAT.....	5
5.4	WHAT ARE THE FINANCIAL IMPLICATIONS OF JCOMM FOR GOOS AND IOC?.....	5
5.5	DEFINE JCOMM SECRETARIAT.....	5
5.6	DISCUSSION: GOOS REGULAR BUDGET CONTRIBUTION TO JOCMM IN 2006-2007.....	5
5.7	SET STAFFING AND BUDGETARY GUIDELINES FOR JCOMM SECRETARIAT AT GOOS/IOC.....	6
5.8	JCOMM LEADERSHIP.....	6
<b>6</b>	<b>I-GOOS AND REGIONAL COORDINATION.....</b>	<b>6</b>
6.1	PERSPECTIVES FROM THE I-GOOS CHAIR.....	6
6.2	DISCUSSION: GRC TERMS OF REFERENCE.....	6
6.3	APPROVE GRC TERMS OF REFERENCE.....	6
6.4	DISCUSSION: POLICY ON GOOS REGIONAL OFFICES.....	6
6.5	APPROVE A POLICY ON REGIONAL OFFICES.....	7

<b>7</b>	<b>CAPACITY BUILDING (GOOS AND JCOMM)</b>	<b>7</b>
7.1	STRATEGIC DISCUSSION: HOW SHOULD GOOS INTERACT WITH IOC/TEMA AND JCOMM?	7
7.2	GOOS REGULAR BUDGET CONTRIBUTION TO CB IN 2006-2007	8
<b>8</b>	<b>OUTREACH AND COMMUNICATIONS</b>	<b>8</b>
8.1	PERSPECTIVES FROM THE GOOS PAST CHAIR	8
8.2	DISCUSSION: WHAT NEEDS DOING AND HOW CAN IT BE FUNDED	8
8.3	APPROVE A 50K/YEAR COMMUNICATION LINE ITEM IN REGULAR BUDGET	8
8.4	DECIDE A TARGET AGENCY TO ASK FOR MATCHING \$50K	8
<b>9</b>	<b>RELATED ACTIVITIES</b>	<b>8</b>
<b>10</b>	<b>AUSTRALIAN HOST SESSION</b>	<b>9</b>
<b>11</b>	<b>REPORTING OF SESSIONAL WORKING GROUPS</b>	<b>9</b>
11.1	REPORT OF LIAISON WITH OTHER PROGRAMS SESSIONAL WORKING GROUP	9
11.2	REPORT OF STRUCTURE AND FUNCTION SESSIONAL WORKING GROUP	10
11.3	GSC COMMUNIQUÉ TO JCOMM	11
11.4	GOOS PILOT PROJECT ON CHLOROPHYLL-A	13
11.5	REPORT OF THE 'STATEMENT ON WARNING SYSTEMS' SESSIONAL WORKING GROUP	15
11.6	REPORT OF THE 'REGIONAL ALLOCATIONS AND PROGRAMS' SESSIONAL WORKING GROUP	16
11.7	REPORT OF THE PROGRAMME AND BUDGET SESSIONAL WORKING GROUP	16
<b>12</b>	<b>REVIEW OF ACTION ITEMS</b>	<b>17</b>
<b>13</b>	<b>MEMBERSHIP ROTATION</b>	<b>20</b>
<b>14</b>	<b>NEXT MEETING</b>	<b>20</b>
<b>15</b>	<b>LIST OF ACTIONS</b>	<b>21</b>

## ANNEXES

- I. AGENDA
- II. LIST OF PARTICIPANTS
- III. LIST OF DOCUMENTS
- IV. LIST OF ACRONYMS

## **1 OPENING AND WELCOME**

The Chair, James Baker, opened the eighth session of the Global Ocean Observing System (GOOS) Scientific and Technical Committee (GSC) at 08:30 on Monday 21 February 2005 at the Australian Bureau of Meteorology in Melbourne, Australia.

Geoff Love, Director of the Australian Bureau of Meteorology, welcomed the Committee.

Jim Baker, GSC chair, thanked the local organizing committee for their generous hosting arrangements. He introduced the new director of the GOOS Project Office (GPO), Keith Alverson.

Members of the committee and observers all briefly introduced themselves.

### **1.1 FORMATION OF SESSIONAL WORKING GROUPS**

The chair added this item to the provisional agenda in order to set up 5 Working Groups. These groups were expected to meet daily during the meeting and report back to the full GSC on the last day. The working groups were: Program and Budget; Liaison with other programs; Regional allocations and programs; Statement on warning systems; Organizational changes.

## **2 GOOS DEVELOPMENTS**

### **2.1 PERSPECTIVES FROM THE GSC CHAIR**

Jim Baker started the meeting with his perspectives on GOOS, what has been accomplished to date, and the state of the oceans in 2004. He highlighted the need to consolidate activities within GOOS, maintaining a strong JCOMM and strong GOOS regional alliances, while working towards merging other guidance structures, for example GSC, OOPC and COOP into a single body that meets once per year for 5 days.

### **2.2 PERSPECTIVES FROM GPO DIRECTOR**

Keith Alverson provided his perspectives from the GPO. He mentioned the need for more attention to be paid at the GPO to outreach and communications as well as the need to consolidate guidance and governance structures.

### **2.3 DISCUSSION OF GOOS STRATEGY**

Keith Alverson initiated the discussion with an introduction to document GSC-VIII/11 "GOOS Strategy document for 2006-2007". He strongly cautioned that GOOS must focus on core activities while dissolving other activities in order to fit the GOOS program within the available budget.

Ed Harrison suggested GOOS should start with our plans for what needs to be done, and then assess what it costs. Not start with the budget we have and ask what can we do with that money.

Worth Nowlin introduced the OOPC strategy and implementation plan as an excellent GOOS product. The job is now up to JCOMM to implement it. There are however aspects in research mode, or pilot projects, that remain within the remit of GOOS. He pointed out that OOPC is shared by GCOS and WCRP so that merging it with GSC would require input from these groups. The coastal group has also made progress. The COOP has produced a plan and wishes to start a new oversight group. It is unclear if this group should be a global group, or subgroup of GSC, or if it should be focused at the regional level. JCOMM can take on the

global products and services if they are passed a functioning operational project. JCOMM can coordinate and manage operational programs. JCOMM cannot take on a pilot or research project and make it operational – such transitions are an important GOOS concern.

Neville Smith pointed out that global observing systems have a very low profile at UNESCO. We need better visibility at UNESCO. He also pointed out that GODAE and ARGO were designed as autonomous projects in order to attract funds. The GODAE office will close at the end of 2007 and there is an opportunity to form a strategy as to how it is brought back into GOOS operationally, and thereby benefit from the progress made.

Graham Pearman explained that ICSU's decision to discontinue funding GOOS, and other observing systems such as GTOS, was due to financial difficulties. ICSU still strongly supports GOOS.

Silvana Vallergera pointed out that I-GOOS has raised 3 million euros and requires only a small contribution from the GPO Paris, and is thus a very cost effective group and should be continued and supported.

Nic Flemming pointed out that it would be difficult to get UNESCO to prioritize GOOS.

Neville Smith said that executive council of IOC has already agreed to I-GOOS terms of reference – with a letter due to have been sent by Keith Alverson asking for comments from Member states and cosponsors be sent to the secretariat. He stated the final decision on the terms of reference would then be up to Patricio Bernal. He stated that the GSC cannot dissolve I-GOOS and should not even try.

Helen Yap asked what the GOOS Regional Forum and I-GOOS have in common.

Silvana Vallergera pointed out that GOOS Regional Forum already exists, has had two meetings, and has been approved by both I-GOOS and IOC assembly.

There were no specific actions followed this initial discussion on GOOS strategy and structure.

## 2.4 SET EXPLICIT GOOS MILESTONES FOR 1-5 YEAR TIMEFRAME

The committee did not address this agenda item.

## 3 COOP

### 3.1 PERSPECTIVES FROM THE COOP CHAIR

Tom Malone, COOP co-chair, gave an overview of COOP Implementation strategies and recommendations. The bottom line of his presentation was that regions must be involved in overseeing coastal implementation of GOOS. He asked for GSC to endorse the COOP Implementation Strategy and submit it to I-GOOS.

### 3.2 ENDORSE THE COOP STRATEGIC IMPLEMENTATION PLAN

The GSC endorsed the COOP Strategic Implementation Plan.

Priority Actions for Consideration by I-GOOS VII

An important role of IGOOS is to facilitate the implementation of GOOS Plans through national, regional and global initiatives, using mechanisms such as JCOMM and the GOOS Regional Alliances and by supporting and promoting Pilot Projects aimed at delivering additional capacity to GOOS. It is also



important for IGOOS to monitor, review and assess the progressive development and implementation and to assist in developing the capacity of all Member States to contribute to and benefit from GOOS.

The GSC noted that one of its roles is to bring to the attention of IGOOS those aspects of the GOOS design and implementation plans that should receive priority attention and to provide advice in issues germane to implementation and the integration of elements into the global system.

Based on the COOP Implementation Strategy for the Coastal Module of GOOS and the discussion under previous agenda items of the GSC VIII meeting, the GSC recommends that a global network of GOOS regional alliances and National GOOS Programmes be established as the primary mechanism for implementing key elements of the coastal module of GOOS.

The GSC further recommends the implementation of the following pilot projects as an effective means to enable development of the coastal module:

- (1) Marine Impacts on Lowland Agriculture and Coastal Resources (MILAC)
- (2) Global methods for developing, evaluating and improving ocean colour products in the coastal zone
- (3) Coupling Shelf and Deep Ocean Models
- (4) Coastal Ocean Data Assimilation Experiment (CODAE)

Each of these projects is described in some detail in the COOP Implementation Strategy for the Coastal Module of GOOS.

The GSC noted that any actions related to the acquisition and best use of information products and services derived from GOOS should be coordinated with the IOC Capacity Building Programme and its GOOS components.

In order to identify the resources needed for implementation, the GSC recommends that the IGOOS seek expressions of interest from Member States and from the Regional Alliances for participating in the above projects.

**Action 1.**        *Secretariat (Thorkild Aarup) to ensure COOP Strategic Implementation Plan is tabled at I-GOOS with GSC endorsement. Deadline: 1 April 2005.*

### 3.3    TRANSITION TO OPERATIONAL ACTIVITY: COOP TO POCO

The Committee agreed that if JCOMM were to implement COOP its mandate would have to be substantially expanded, thus the GOOS Regional Forum was thought a more obvious body to implement the COOP strategy. A major issue was how COOP/POCO will interact with JCOMM. A probable scenario is that JCOMM implements physical measurements in coastal areas.

### 3.4    DISSOLVE COOP AND START POCO

The Committee agreed that COOP had completed its task and thanked the chair for his hard work.

### 3.5    ENDORSE POCO TERMS OF REFERENCE

Due primarily to concerns about the excess number of GOOS panels given severely limited GOOS finances, the Committee did not agree to form a coastal implementation body POCO. Implementation of the COOP plan was agreed to be a task for the GOOS regional alliances. It was further agreed that the GSC

would be expanded to include more coastal expertise and, in this way, the GSC itself would serve in the capacity originally envisioned for POCO.

### 3.6 MAKE EXPLICIT WHO POCO REPORTS TO

Since POCO was not formed (see 3.5 above) this agenda item was not discussed.

### 3.7 SET EXPLICIT POCO MILESTONES FOR 1-5 YEAR TIMEFRAME

Focus and milestones for COOP should be about regional program development rather than particular instruments or measurements, as they are for OOPC for example. Standards development for coastal biological measurements is difficult regionally, and should not be expected globally in the near future. COOP should help to make existing standards for biological and chemical measurements in coastal areas more widely known, document what standards and protocols are in place and which ones should be adopted by the global system. The committee discussed whether chlorophyll-a might be a prime target for global biological measurement that JCOMM could be tasked with making operationally. A global chlorophyll-a measurement program would be an excellent pilot project for operational biological measurements following the model pioneered by GODAE and ARGO for the physical community.

**Action 2.** *Secretariat (Keith Alverson) to remind IOC Executive Secretary (Patricio Bernal) of the decision of the Assembly to task the IOC Secretariat to move forwards on standards and protocols for ocean measurements as a contracted activity in the science section, and that the GSC continues to support this activity. Deadline: 1 March 2005.*

### 3.8 GOOS REGULAR BUDGET CONTRIBUTION TO POCO

The Committee suggested that the GPO partially use savings expected from the dissolution of COOP and the fact that POCO was not set up to expand the GSC with added coastal expertise.

## 4 OOPC

### 4.1 PERSPECTIVES FROM THE OOPC CHAIR

Ed Harrison provided an overview of OOPC, its terms of reference and status. He highlighted the need to complete the observing system in order to reduce uncertainties in changing indices of ocean climate such as sea ice extent and subsurface temperature. The committee discussed the presentation. The users of GODAE and OOPC observing system were discussed.

### 4.2 TRANSITION TO OPERATIONAL ACTIVITY

The Committee discussed GEOSS, and asked what the concrete value GEOSS would add to existing observing systems. GOOS is expected to be a component of GEOSS. GEOSS should add value to GOOS by raising the political profile (hence hopefully the funding profile) of global observations in support of the goals of the WSGD.

Neville Smith gave a brief introduction to the recent GODAE symposium targeting the question of user's, or potential users, of real time ocean analyses. There is a need to understand end user and customer requirements. In 2007 GODAE should finish and transition to operational ocean prediction and analysis. Approximately 50% of GODAE customers are involved in reanalysis and interested in the products of reanalysis.

#### 4.3 OOPC MILESTONES FOR 1-5 YEAR TIMEFRAME

The Committee did not address this agenda item.

#### 4.4 GOOS REGULAR BUDGET CONTRIBUTION TO OOPC

The Committee did not address this agenda item.

### 5 JCOMM

#### 5.1 PERSPECTIVES FROM MEMBERS

Peter Dexter gave a brief introduction to JCOMM, an international coordination mechanism for operational oceanography and marine meteorology. Johannes Guddal provided an overview of SEACAMP as a successful example of how to combine capacity building efforts and enhance regional end-user benefit for JCOMM and GOOS products.

#### 5.2 DISCUSSION: JCOMM AS OPERATIONAL ARM OF GOOS

The Committee had already addressed this issue, in particular with regard to JCOMM not being the appropriate implementation body for aspects of coastal GOOS as described in section 3 above.

**Action 3.** *Tom Malone to write a statement to be presented to JCOMM about coastal implementation issues and to identify an effective spokesperson who will be present in Halifax to support it. Deadline: tomorrow.*

#### 5.3 DISCUSSION: WHAT/WHO IS THE GOOS SECRETARIAT

#### 5.4 WHAT ARE THE FINANCIAL IMPLICATIONS OF JCOMM FOR GOOS AND IOC?

Keith Alverson alerted the Committee to the fact that 180K had to be transferred from GOOS regional budget for 2005 to the JCOMM budget in order to support the JCOMM Halifax meeting.

#### 5.5 DEFINE JCOMM SECRETARIAT

The Committee did not address this agenda item.

#### 5.6 DISCUSSION: GOOS REGULAR BUDGET CONTRIBUTION TO JCOMM IN 2006-2007

Keith Alverson informed the Committee that expected annual costs associated with hosting the IOC portion of the JCOMM secretariat were on the order of \$200,000 - far in excess of the \$65,000 amount endorsed by the IOC assembly when they adopted JCOMM.

The Committee expressed its desire to see JCOMM financial and organizational support occurs at IOC level, not only as a GOOS responsibility. Capacity building section should support, financially and administratively, the JCOMM-GOOS capacity building coordination group and IODE the data management coordination group.

The Committee discussed its disappointment with the low level of discussions at the IOC Assembly and Executive Council in particular on JCOMM, but also GCOS and other important bodies.

#### 5.7 SET STAFFING AND BUDGETARY GUIDELINES FOR JCOMM SECRETARIAT AT GOOS/IOC

The Committee did not address this agenda item.

#### 5.8 JCOMM LEADERSHIP

The Committee discussed the fact that a new ocean co-chair for JCOMM was going to be chosen at the Halifax meeting.

**Action 4.** *All Committee Members to suggest potential members of the JCOMM resources task team to Peter Dexter. Deadline: 31 March 2005.*

### 6 I-GOOS AND REGIONAL COORDINATION

#### 6.1 PERSPECTIVES FROM THE I-GOOS CHAIR

Silvana Vallergera presented I-GOOS. The GOOS Regional Forum (GRF) meets alongside independent scientific meetings in alternate years to I-GOOS. The IOC Assembly has not yet endorsed formation of the GOOS Regional Council (GRC). An elected chair and a secretary will support the council. Annual meetings would be held back to back with I-GOOS and the GRF respectively. An overview of the milestones of the last four years was presented. A new chair will take over in 2005.

#### 6.2 DISCUSSION: GRC TERMS OF REFERENCE

The Committee discussed whether it was necessary for the IOC to endorse creation of a GOOS Regional Council. The Committee felt that GRA's should be able to organize themselves as they wish. It was recalled that it has already been decided that the GRC terms of reference will be presented to the Assembly for adoption and this cannot be changed at this late juncture. The Committee reiterated its feeling that the GRC should not be an IOC body, it should be an organ of the GRA's reporting to I-GOOS. There will be no funding or implications or human resources requests for the IOC secretariat associated with the formation of the GRC. The secretary of the GRC should not be the GPO Director, but should be provided by the GRC chair's institution.

#### 6.3 APPROVE GRC TERMS OF REFERENCE

The Committee did not object to the formation of a GOOS Regional Council, subject to the clarifications discussed in section 6.2.

#### 6.4 DISCUSSION: POLICY ON GOOS REGIONAL OFFICES

A proposal received from SCAR and WMO suggesting the formation of Arctic and Southern Ocean Regional Alliances tied to the International Polar Year (IPY) timing was discussed. IPY is intended to leave observational legacies for the future. The Committee endorsed the formation of an Arctic GOOS regional alliance should there be a community of people interested in making it succeed.

**Action 5.** *Secretariat (Keith Alverson) to respond to V. Ryabinin and C. Summerhayes's proposal stating that the Committee recognizes there is potential value in creation of an Arctic GOOS regional alliance, as well as good potential scientific and technological value to coordinated activities in the Arctic region. The Committee invites those parties with an interest in developing an Arctic GOOS Alliance to put forward a detailed and formal expression of their interest to I-GOOS.*

The Committee discussed how to best deliver targeted scientific and technical advice to I-GOOS. Two groups were formed to meet around open-ocean and coastal themes to put together suggestions for I-GOOS. Scientific and technical assessment of pilot project suggestions is something GSC should be preparing for I-GOOS. For example the Committee discussed whether a proposal for GODAE could be forwarded from GSC to I-GOOS.

The Committee noted that Janice Trotte had reported that a South Atlantic GOOS Regional Forum had been successfully formed.

The Committee discussed whether other regional activities requiring spending should be reviewed.

The Committee discussed whether the formation of GRA's obviated the need for stand-alone GOOS regional offices. The Committee recommended that regional IOC offices should take on responsibilities for GOOS, rather than GOOS supporting additional regional offices.

## 6.5 APPROVE A POLICY ON REGIONAL OFFICES

Keith Alverson pointed out that maintaining the current level of financial support from the regular budget for the three regional GOOS efforts in Perth, Rio and Paris (for Africa) would require the entire program budget of the GPO given the level of cuts expected in 2006. Continuing support at present levels for these offices was therefore untenable. The Committee recognized the need for efficient use of IOC/GOOS funds for regional offices.

**Action 6.** *Secretariat (Keith Alverson) to invite, on behalf of the GSC, the Rio and Africa (in Paris) 'offices' to submit a list of accomplishments and plans according to a standard format based on the recent review of the Perth office. The GSC should use this information in preparing recommendations to the IGOOS for budget prioritizations in 2006 and beyond. Deadline: 30 June 05.*

## 7 CAPACITY BUILDING (GOOS AND JCOMM)

### 7.1 STRATEGIC DISCUSSION: HOW SHOULD GOOS INTERACT WITH IOC/TEMA AND JCOMM?

Keith Alverson introduced the need to discuss how to do capacity building in GOOS/JCOMM and ensure that it benefits from and interacts with activities in the Capacity Building section at IOC. There is a resolution of the IOC assembly that 50% of the capacity building section efforts should be dedicated to GOOS! This is certainly not happening. The Committee agreed that it is important for GSC to provide guidance and feedback to the capacity building section. The Committee agreed that funding for IOC capacity building activities should not come from the GOOS budget – all of it should come from the capacity building section. GOOS capacity building activities should be based on good proposals to work with the capacity building section using their funding. At the GSC meeting in Chile it was already pointed out that regional offices should not be stand-alone GOOS offices to be successful but have to cross cut with IODE and capacity building activities.

## 7.2 GOOS REGULAR BUDGET CONTRIBUTION TO CAPACITY BUILDING IN 2006-2007

The Committee did not recommend any GOOS regular budget contributions to capacity building activities. Rather GOOS should offer the platform through which the TEMA section can ensure its capacity building efforts are well targeted.

**Action 7.** *John Field to provide 3 names to JCOMM, with copies to Keith Alverson, for suggested GOOS representatives to the joint capacity building panel. Due date: 1 April 2005.*

## 8 OUTREACH AND COMMUNICATIONS

### 8.1 PERSPECTIVES FROM THE GOOS PAST CHAIR

Worth Nowlin, past GSC chair, introduced the need for communications and outreach to enhance the visibility and usefulness of GOOS. The approach suggested is to spend ~30K to produce a plan and then ensure that there are resources available to implement the plan. The possibility exists to work together with JCOMM to produce such a plan. IOC as a whole needs a communications plan and might be tasked with providing this service for GOOS and JCOMM. WMO is good at communications, and has a communication plan that could perhaps be taken advantage of. The Committee agreed that a communications plan was a good idea, cooperating with JCOMM was a good idea. The Committee suggested using extrabudgetary funding for the purpose of drawing up a communications plan and accepted the need to earmark regular funding from the regular budget augmented by extrabudgetary sources towards outreach and communications on a regular basis. The Committee suggested that it would be a mistake to contract out a communications plan without first having a funding plan in place for future, regular, implementation of the plan.

### 8.2 DISCUSSION: WHAT NEEDS DOING AND HOW CAN IT BE FUNDED

Jim Baker introduced the idea of holding a large, high profile, open meeting bringing together the GOOS community, scientists, stake-holders, governments etc. The event, like the year of the ocean in 1998, would provide great potential public relations value. Tony Blair is opening the world maritime meeting in March, 2006.

The products and services bulletins of GOOS and JCOMM were introduced. The JCOMM bulletin is dormant, JCOMM envisions reforming the bulletin as a web portal to products and services. The GOOS bulletin is not going to continue unless it can be taken over by JCOMM.

### 8.3 APPROVE A 50K/YEAR COMMUNICATION LINE ITEM IN REGULAR BUDGET

The Committee recommended that this action be adopted if feasible.

### 8.4 DECIDE A TARGET AGENCY TO ASK FOR MATCHING \$50K

The Committee did not address this agenda item.

## 9 RELATED ACTIVITIES

Paul Mason, GCOS chair, provided an overview of GCOS and its mandate for reporting to UNFCCC. GCOS reports to UNFCCC are intended to include information from GOOS. He asked what message GSC would like to convey *via* the GCOS contribution to the second adequacy report?

Colijn Francis introduced cooperation with sea-keepers and ferry-box projects. A joint session at a future ASLO meeting is planned. Ensuring data quality is an issue.

Paul Mason suggested GOOS may wish to hold a side event at SUBSTA meeting in Bonn, 16-20 May, possibly followed up at COP XI in Montreal in early November. Side events must be booked between 6-15 March 2005. A side event might consist of one or three talks. Ed Harrison, Tom Malone Peter Dexter or Keith Alverson might be asked to lead such an effort.

**Action 8.** *Keith Alverson with help from Ed Harrison, Tom Malone and Peter Dexter to draft short sharp (5 pages?) input based on Albert's survey material. Paul Mason will review the draft to ensure it meets appropriate specs and subtleties for the SUBSTA/COP audience. The report should include discussion of the difficulties associated with transitioning satellite remote sensing measurements from 'research supply' mode into 'operational supply' mode.*

## 10 AUSTRALIAN HOST SESSION

Ian Poiner presented the Census of Marine Life.

John Parslow presented AusiOOS.

Rick Bailey presented oceanographic services at the Australian Bureau of Meteorology.

## 11 REPORTING OF SESSIONAL WORKING GROUPS

Jim Baker suggested that at the next GSC meeting there should be time explicitly set aside during the meeting for side groups to meet. Careful thought should be given to organizing the documents and the meeting agenda/schedule to ensure the meeting is productive and enjoyable.

**Action 9.** *Secretariat (Keith Alverson) to set aside time in next GSC agenda for sessional working groups to meet.*

### 11.1 REPORT OF LIAISON WITH OTHER PROGRAMS SESSIONAL WORKING GROUP

Eric Lindstrom reported back from the 'liaison with other programs' working group.

Group Members: Paula Etala and Eric Lindstrom.

Examples of needed Liaison: GEOSS, IOC(JCOMM, IODE), GCOS, WCRP.

Some principles of engagement with other bodies:

1. We need to consider the viability of our recommendations to other bodies. For every GSC action involving liaison with other bodies the following questions should be asked and answered prior to interaction:

WHERE? Are the other body's terms of reference compatible with action on our recommendation? [Collect all T.O.R.]

WHO? Who carries our message to this group and make the case for action? [Associate all actions with an actor]

WHY? What are our success criteria for interaction with the other body on this matter? [Catalog our expectations for each action]

WHAT? What is our (simple) message to this body? [How does the action play into our communications plan?]

WHEN? What is the degree of urgency and importance in our communication and liaison with this body? [Maintain list of priority liaisons]

An initial suggested priority list for liaison activities might be based on the following guidelines:

- (i) Bodies through which implementation may be accelerated (national and regional commitments)  
GEOSS, I-GOOS, JCOMM, Disaster Mitigation Initiatives, IPCC, CEOS, IGFA
- (ii) Bodies engaged in parallel organizational efforts  
GCOS, GTOS, IGOS, IODE
- (iii) Bodies engaged in scientific community organization  
ICES/PICES, ICSU, SCOR, SCAR, WCRP, IAPSO/IAMAS

A table listing specific organizations and their priority level, who, what, where, why was begun by the group but time was not sufficient to make substantial progress. The secretariat was tasked with filling in the table.

The Committee pointed out that the list of groups to liaise with was clearly incomplete at present.

## 11.2 REPORT OF STRUCTURE AND FUNCTION SESSIONAL WORKING GROUP

John Field reported back from the 'structure and function' working group.

GSC - GOOS Scientific and technical Committee Foci (5 -10 years);

- Co-ordinate further development of GOOS implementation plans;
- Promote awareness and understanding of GOOS;
- Provide advocacy for GOOS, particularly for implementation;
- Provide scientific and technical advice to GRAs w.r.t.;
- Help development of implementation plans;
- Help development of priorities for global coastal variables;
- Help development of pilot projects for such variables;
- Transfer to JCOMM the co-ordination of implementation of coastal requirements.

GSC Structure

- Dissolve COOP and thank COOP for job well done;
- Strengthen GSC membership to incorporate coastal expertise;
- Possible slight expansion if necessary;
- Retain OOPC as sub-committee but try to meet back-to-back in alternate years;
- Try to meet back to back with GRC, JCOMM ManCom and other relevant bodies in alternate years;
- Solicit nominations of scientific and technical experts from sponsors (IOC, WMO, ICSU/SCOR) and GRAs for membership of GSC;
- Normal rotation of membership.

GSC-IX London 2006

- Meet alongside IMAREST operational oceanography conference 6-10 March, 2006;
- Give time for GRAs to meet among themselves;
- General structure: morning plenaries, afternoon breakaway groups, late afternoon plenary reports;
- Overview of global module, stressing implications for regions;
- Overview of JCOMM, stressing products being delivered and co-ordination of implementation;
- Overview and discussion of GOOS Coastal implementation strategy;



- Presentation of status reports from GRAs;
- Focus on relevant coastal activities, products being delivered, pilot studies and technical issues and needs;
- Discussion of way forward towards development of global coastal network of observations and products/services *via* pilot projects.

#### Suggested Inter-sessional Actions (Pre GSC-IX)

- Individual contact with key representative of each GRA;
- Request, *via* I-GOOS, annual reports from GRAs with specific information;
- Invite each GRA to present at GSC-IX.

#### GSC-X Hawaii, 2007?

- Key invitees: SEA GOOS, NEAR GOOS, Pacific Island GOOS, PICES, US Pacific region coastal observing system;
- Overview of GOOS Global module with specific focus on product delivery, status of implementation and unmet requirements in the Pacific;
- Overview and status report of JCOMM activities, with focus on Pacific;
- Reports from key invitees with focus on products being delivered and future developments;
- Common activities/plans among Pacific invitees;
- Potential use of GOOS coastal implementation strategy and modes by which GSC can assist with implementation of coastal GOOS.

Concerns were expressed as to the cost of inviting GRA's to attend GSC meetings. The decision to dissolve COOP was discussed at length. It was decided that the GRA's/GRF/GRC should be the implementation body for COOP rather than forming POCO. Modifications resulting from the discussion included ensuring that GRA representatives who may be invited to GSC, funding permitting, be technical/scientific experts not political appointees. GRA reports should be asked for regularly and should include mention of ongoing relevant activities in their regions. The composition of the new GSC needs to be addressed carefully for scientific balance, regional balance, gender balance etc.

### 11.3 GSC COMMUNIQUÉ TO JCOMM

Tom Malone introduced the draft communiqué from GSC to JCOMM which had been developed off line during the GSC meeting in response to Action 3, section 5.2. The document follows:

- Start document -

TO: JCOMM II

23 February, 2005

FROM: The GOOS Steering Committee

RE: Implementing the Coastal Module of GOOS

#### **The Implementation Strategy for the Coastal Module of GOOS**

Implementing the coastal module of GOOS on a global scale is critical to the successful implementation of GOOS and the ocean and coasts component of the GEOSS. An important step toward implementation is the recent completion by COOP of the *Implementation Strategy for the Coastal Module of the Global Ocean Observing System*, which provides a road map for global implementation of the coastal module.

As recommended in the GSC and IGOOS approved *Integrated Design Plan for the Coastal Module of GOOS*, the Strategy articulates a set of actions needed to establish a Global Coastal Network (GCN) for the measurement, management and analysis of essential coastal variables referred to as the common variables. The GCN will be established through two parallel processes:

- (i) incorporation of existing global programs (e.g., Satellite Remote Sensing, GLOSS, GCRMN); and

- (ii) networking or scaling up of operational elements that are functioning on local or regional scales (e.g., the Continuous Plankton Recorder program of SAHFOS).

Given that most of the “non-physical” common variables are measured in a research mode, the development of operational capabilities for measuring these variables will be done through national programs for the most part. Thus, it is expected that networking national and regional coastal ocean observing systems and scaling up elements developed by participating nations will be the primary mechanisms by which the GCN will be developed.

Regional Ocean Observing Systems are developing on a global scale now. To ensure interoperability among regional ocean observing systems and between the global and coastal modules of GOOS, a mechanism is needed now to ensure coordinated development of GRAs worldwide, i.e., the formation of a globally coordinated, locally relevant ocean observing system of systems. Such a mechanism must

- (i) interface effectively with existing planning, oversight and implementation bodies including JCOMM, GTOS, GCOS, and other bodies as appropriate;
- (ii) promote partnerships with existing regional efforts including Large Marine Ecosystem Programs, Regional Seas Conventions, and Regional Fishery Bodies; and
- (iii) facilitate engagement of data providers and users (the stakeholders) in the design, operation & improvement of regional coastal ocean observing systems.

## JCOMM

At the First Session of the Commission it was recognized that regional coastal ocean observing systems being developed as part of GOOS will measure and manage a broad range of geophysical, biological and chemical variables and that implementation of the coastal module would be by national and regional bodies. In this context, the Commission agreed that *“with the proper representation and structure, JCOMM could incorporate the coordinated implementation of the physical components of the coastal component of GOOS into its work programme.”*

The Commission also recognized that some of the variables required for implementation of the coastal module of GOOS would be non-physical (chemical and biological) and that, subsequent to the publication of an *Implementation Strategy*, the Commission would have to consider the extent to which these variables could be accommodated within the overall work program of JCOMM.

Bearing these points in mind, the Commission agreed that it would work intersessionally to *“prepare for and contribute to implementation of the coastal component of GOOS, considering as appropriate the inclusion of required non-physical measurements, products and services.”* The appointed Rapporteur has not progressed this task or developed the requested position paper.

## Recommendations

The highest priority task is to assign responsibility for the implementation of plans for the common physical variables of the coastal module. Next, JCOMM should consider incorporation of the coordinated implementation of non-physical common variables into its work program.

Among other issues that should be considered immediately is the establishment of a global body that would perform coordination functions for those variables that cannot be drawn into JCOMM, focusing on GCN development

### **The GSC recommends that the JCOMM agree to the following:**

- Incorporate the coordinated implementation of the “physical” components of the coastal module of GOOS into its work programme, and make the necessary adjustments to ensure the proper representation and structure. This should include coordinating the densification of physical measurements and the use of common standards and protocols for those variables to be measured operationally by the GCN of the coastal module of GOOS.

- Work intersessionally to prepare options for the inclusion of relevant “non-physical” common variables, products and services into the work program of JCOMM. To this end, the Commission agrees to establish an *ad hoc* joint JCOMM Management-GSC Task Team to explore, in collaboration with GOOS Regional Alliances and National GOOS Programmes (perhaps through a global body of GOOS Regional Alliances and National GOOS Programmes such as the GOOS Regional Council), potential mechanisms for coordinating the implementation of “non-physical” variables to be measured operationally by the GCN.
- In collaboration with the GSC and representatives of the GRAs, consider the modalities of interaction between the global implementation represented by JCOMM and the various regional implementation mechanisms. In particular, consider how regional activities within the GRAs should be manifested in the structure and work program of JCOMM and the governance arrangements.

- End document -

The Committee nominated Helen Yap to follow up on finalizing this document and ensuring it is routed to the next JCOMM meeting.

**Action 10.** *Helen Yap to carefully review JCOMM working groups and find appropriate and convincing way to incorporate global aspects of coastal implementation needs and ensure that this proposal goes to JCOMM documents in Halifax by communicating with Candyce Clark at IOC secretariat.*

#### 11.4 GOOS PILOT PROJECT ON CHLOROPHYLL-A

Eric Lindstrom introduced the draft terms of reference for a GOOS pilot project on chlorophyll-a that was discussed in section 3.7. The document follows:

- start document -

##### GOOS Chlorophyll-a Integration Pilot Project (GOOS CHIPP) TERMS OF REFERENCE

###### PREAMBLE

The GOOS Steering Committee (GSC) has concluded that, for its goals, a significant enhancement of the presently available ocean surface chlorophyll-a data stream and products is required. In particular, it noted that the availability and consistency of existing data sets and products did not meet the requirements of GOOS. The GSC also noted that there were many other requirements for chlorophyll-a products that were not being satisfied as well as they should be. The GSC wishes to expand GOOS pilot projects beyond physical variables to include biological and chemical variables critical to both the global and coastal modules of GOOS.

There are a variety of in situ and remote methods for sampling and estimating chlorophyll-a at the ocean surface. Some of these techniques use algorithms sub-sampling sea spectral reflectance measured remotely while others estimate chlorophyll-a by some analysis of in situ measurements. Both are essential to provide calibrated and validated global products. The biology of chlorophyll-a variability near the surface are extremely complicated and there is no simple relationship between the different sampling strategies, even under ideal conditions.

There are also many different platforms available for gathering surface Chlorophyll-a information, some maintained operationally and others undergoing development and testing. It is clear that our present

techniques for assembling and analyzing these data are far from optimum and that, as a result, we compromise both the coverage and quality of the products provided to users.

GOOS will convene a Workshop in September 2005 to consider a Prospectus for a GOOS Chlorophyll-a Integration Pilot Project. The participants of the Workshop will evaluate the scientific and technical prospects for a significant enhancement of presently available chlorophyll-a products and develop plans for a Chlorophyll-a Integration Pilot Project to be formed under GOOS. A Science Team sponsored by GOOS would oversee the drafting of a detailed strategy and Implementation Plan to guide the Project.

The following Terms of Reference have been agreed for the Science Team:

- (i) Based on the conclusions of the GOOS Workshop, develop a set of objectives/goals and a Strategic Plan for the GOOS Chlorophyll-a Integration Pilot Project;
- (ii) Based on the actions agreed at the Workshop, develop an Implementation Plan for the GOOS CHIP including (a) a set of objectives and strategy, as developed under (i), (b) a set of actions and work to be undertaken by the Project, (c) a schedule for actions and work, and (d) a defined set of outcomes (e.g. weekly or monthly global maps of chlorophyll-a). As agreed at the Workshop, the actions shall include testing and validation of chlorophyll-a measurements, assembly of chlorophyll-a data sets and associated data exchange and serving, analyses of data, and required research and development;
- (iii) Provide scientific guidance to, and as appropriate receive advice from, the GOOS Steering Committee on the scientific and technical issues associated with the implementation of the Project and on the use of products by GOOS;
- (iv) Develop an international consortium to undertake the development and implementation of the Project, including its final transition into an operational system;
- (v) Provide advice and guidance on scientific and technical innovations relevant to the Project;
- (vi) Liaise as appropriate with other groups associated with the global ocean observing system, including the IOCCG and IGBP;
- (vii) Provide regular reports on progress to the GOOS Steering Committee.

- end document -

Discussion centered on who would do this and who would pay for it. Potential partners include CEOS-SIT, IOCCG and IOCCP. NASA funded and completed the symbios project along these lines and might revisit it. Who are the champions to be tasked with taking this forward? What is the defined outcome? For example could an operational weekly/monthly map of chlorophyll-a be produced? The committee agreed that this is the obvious and easiest biological variable start the process of bringing biogeochemical measurements into the realm of GOOS operational activities.

Eric Lindstrom gave an overview of remote sensing efforts in ocean surface topography, ocean vector winds, SST and chlorophyll-a and discussed issues associated with transition from research to operational status. For example, the current NOAA budget for ocean topography is 1.5 million dollars/year. In order to participate in JASON-3 mission as a first fully 'operational' topography mission would require that this budget be increased by two orders of magnitude.

## 11.5 REPORT OF THE 'STATEMENT ON WARNING SYSTEMS' SESSIONAL WORKING GROUP

Nic Fleming introduced the Draft Tsunami communiqué, written off line during the meeting. The text follows:

- start text -  
Preamble

1. Noting that resource has been allocated by Member States and international agencies for the development of Indian Ocean and global tsunami hazard detection and warning systems;
2. Noting that the capital investment and maintenance expenditure for such systems could provide the framework for a monitoring system with wider applications, such as storm surge and cyclone forecasting at modest marginal cost';
3. Concerned that investment in an expanded observing system necessitates a long-term expenditure on maintenance of the equipment and the management of the data analysis and warning procedures';
4. Mindful that the Member States have already decided to expand their existing tsunami warning systems and initiate new systems;
5. Noting with concern that the urgent need for improved sharing of data to allow rapid response to emergencies;

Requests IOC/GPO to:-

- a) Review existing and planned systems for tsunami warning on an Indian Ocean and global scale;
- b) Promote co-ordination and sharing between the separate tsunami warning systems on a regional and basin scale;
- c) Collaborate with WMO in the development of emergency and hazard warning systems on a regional and basin scale;
- d) Support the expansion of multi-hazard capabilities for disaster reduction at national, regional and international levels, and to ensure that relevant observing systems are also used, wherever possible, for continuous monitoring of the marine environment;
- e) Ensure that adequate mechanisms and resources are put in place for the long-term maintenance and operation of hazard warning systems and associated continuous monitoring.

-end text-

The Committee recognized there was a recent GEOSS communiqué on this same issue. Who would this GSC communiqué be for? The IOC tsunami meeting in March? The IOC Assembly in June? Is the goal to define a role for GOOS? JCOMM has done something similar. The Committee thought the text should include mention of the lack of operational status for ocean surface topography measurements from space (which captured December event) as a component of future tsunami hazard and warning.

**Action 11.** *Keith Alverson to request from IOC that Ralph Rayner give the GOOS talk at the March Tsunami meeting. Deadline: 25 February 2005. [GPO funding not required as he will be there anyway].*

**Action 12.** *All: send Ralph Rayner relevant material for his talk, deadline: 1 March 2005.*

**Action 13.** *Ralph Rayner to prepare and give a talk on behalf of GOOS at the IOC March tsunami meeting based on solicited input from GSC members. Deadline: 3 March 2005.*

The Committee noted that the powerpoint from this presentation could serve as a useful GOOS statement at other for a, together with the written draft communiqué on this issue.

## 11.6 REPORT OF THE 'REGIONAL ALLOCATIONS AND PROGRAMS' SESSIONAL WORKING GROUP

Silvana Vallerga reported back from the regional programs working group.

The Committee agreed that the regional offices should be told that starting 1<sup>st</sup> January 2006, they should expect no money from the regular budget of the GPO but will instead be expected to find their full funding from other sources.

**Action 14.** *Silvana Vallerga to investigate whether GRAND-T funding, if it comes through in 2006, can be targeted towards this lost salary for the effected regional offices rather than travel.*

## 11.7 REPORT OF THE PROGRAMME AND BUDGET SESSIONAL WORKING GROUP

Helen Yap presented the results of the Programme and Budget team.

In order to balance the budget GOOS needs to cut 100k/year from its current level of spending. The GSC was presented with the following suggested cuts:

- Ending GOOS financial contributions to SAHFOS and BILKO will save \$40k/year.
- If GOOS were to discontinue financing stand-alone regional offices or efforts, but continue to financially support regional activities, savings could be ~\$60k/yr.
- Alternative strategies include raising income or cutting other activities. Suggestions are welcome.

The GSC was asked to endorse the proposed breakdown of the GPO regular budget of 275k/year over the 2006-2007 period (document GSC-VIII/10, page 3) as follows:

- 30k – secretariat  
(equipment, IOC costs, software/hardware, etc.)
- 50k – outreach and communications  
(website, posters, flyers, etc.)
- 65k – Liaising and contributions  
(all relevant group)
- 40k – programs, activities, contracts  
(regional offices, activity contracts, pilot projects, etc...)
- 90k – governance and guidance  
[GSC (45), COOP (30), I-GOOS (15)]

The Committee accepted the report and asked that an executive team revisit the budget status in about six months.

**Action 15.** *John Field to write to SCOR asking them to put pressure ICSU to reinstate contritutions to GOOS. Deadline April 1.*

**Action 16.** *Jim Baker, John Field and Keith Alverson to revisit the status of the budget later in the year. Deadline August 30.*

## 12 REVIEW OF ACTION ITEMS

The committee reviewed the status of action items from GSC7. Status of these actions was determined as follows:

Seventh Session of the GSC (GSC-VII)

26 - 29 April 2004 Brest, France

List of Actions

Action #/ Page #	ACTIONS	Deadline	Responsible	Status as of GSC-VIII
1/3	Invite COOP and GRC chairs to next LME	none	KA	Done, no funding available.
2/4	Revise GOOS strategic plan, following decision on EC GOOS review.	none	KA	No EC decision, therefore impossible.
3/4	Inform Bernal of renaming GSC	none	KA	Done. Discussed at EC. No decision.
4/5	Discuss changing GSC MOU with sponsors	none	KA	Not done.
5/8	Provide input to UNFCCC via GCOS	31.1.05	AF	In progress.
6/10	Send documents/letters of invitation on JCOMM to appropriate oceanographic national agencies	none	YT/BL/CC	In progress.
7/10	JCOMM to develop/implement a pilot project for the real-time transmission of SST/subsurface T°	none	KA/YT/BL/CC	Underway
8/11	Bring MILAC to the attention of all GRAs	none	KA	MILAC is stalled pending action from Indian Lead
9/12	Draft a letter(s) for the Chairman to send to appropriate space agencies with recommendations: (i) WSOA; (ii) OSTM/Jason-2 Follow-on; (iii) Microwave Sea Surface Temperatures; (iv) Ocean Surface Vector Winds	none	KA	Done.
10/14	IODE to implement the distributed model as appropriate, and to strengthen its collaboration with the operational oceanography community.	none	KA/PP	unknown
11/14	Ensure that data are archived at the NODCs	none	KA	unknown
12/14	IODE to provide a flow diagram or "wiring diagram" for GRAs on how data should be submitted and how they can be obtained	none	PP/KA	unknown
13/14	GOOS representation at regular IODE meetings.	none	KA	Done (KA will attend IODE in 2005)
14/15	Work with GOSIC to define the scope and ToRs of the eventual transfer/ relocation of GOSIC.	none	KA	Check status.

15/15	Consider what constitutes a GOOS product and/or service, and how best to develop and to advertise	none	KA	Liaise with JCOMM
16/17	Provide inventories of EuroGOOS and US-GOOS observing stations for COOP Plan.	none	KA/GRA	Done
17/17	Consider possible future role of COOP	31/12/04	KA/TA	Done
18/17	Discuss ways and means of cooperation between IODE's Group of Experts on Biological and Chemical Data Management and Exchange Practices and the COOP	none	KA/TA/PP	Done
19/18	Encourage dialogue on technologies, strategies, and standards between Ferry Box and Sea Keepers	none	KA	Ongoing
20/19	Encourage the involvement of meteorological agencies in GRA activities	none	KA	Occuring
21/20	Request the GRAs list of national GOOS activities	none	KA	Underway
22/20	Develop a plan, and continue the work carried out by Bert Thompson after the end of his contract	End B. T. contract	KA	Pending
23/20	Find out what GOOS-related data may be obtained from the SW Indian Ocean Fisheries Panel, and the involvement of that Panel in IO-GOOS.	none	IO-GOOS/BE	Pending
24/22	Respond to the questions and requests of IODE with regard to (i) a possible membership of IODE in the Joint CB panel and (ii) the required actions for GOOS' participation in Ocean Teacher.	none	KA/Chair JCOMM CB	Ongoing
25/22	Merged GOOS-JCOMM CB Panel to report to I-GOOS, JCOMM, and GSC.	none	KA/Chair JCOMM CB	Done
26/22	Establish a GOOS-JCOMM CB Panel Task Team on Resources	none	KA/Chair JCOMM CB	To be done at/after JCOMM 2
27/23	Attend the annual PICES meeting in Hawaii	Oct.2004	Chair GSC	Done. Sent Miguel Fortes as GOOS rep.
28/24	Explore how basic oceanographic data (and especially physical oceanographic data) can be made available in real time by fisheries agencies, for use in forecasting models	none	KA	Ongoing
29/24	Prepare a proposal to the GEO process through appropriate national representatives.	none	KA/BL	Done. KA is official representative of GOOS to GEO
30/24	To get GOOS onto the agendas of the "Carnegie Group", "Global Science Forum" and IGFA	none	KA	Done



31/25	GOOS contributions/involvement in the IPY	none	KA	Done. KA is member of IPY joint committee and IOC is hosting next open meeting 3/2005
32/25	GPO to implement the recommendations of the GOOS Communications Strategy and Plan, version 2.0, (ii) Develop a mechanism for providing regular updates to the press on major oceanic environmental events and catastrophes, (iii) Develop a Power-Point presentation to make the case for GOOS, focusing on benefits.	none	KA	In Progress. KA obtained 50k in extrabudgetary resources partly for this effort. Development of new website is underway. The task remains difficult due to lack of staff.
33/26	Identify members for an Editorial Board for the production of "The GOOS 2005" (ii) Discuss with Peter Dexter (iii) Develop a costing for production.	none none	KA/NF KA/NF	Not done
34/26	GPO to steer the production of "The GOOS 2005", and to develop a 'National Geographic'-style book on the oceans.	none	KA	Not done.
35/26	GPO/produce and publish the biennial report and the brochure in 2004; (ii) contracting professional expertise to improve the GOOS web site	12/2004	KA	In Progress. KA obtained 50k in extrabudgetary resources partly for this effort. The task remains difficult due to lack of staff.
36/27	GPO to work with Ralph Rayner and Patricio Bernal to scope out the economic study, and report the results to GSC-VIII.	GSC-VIII	KA	Underway
37/28	GPO to invite representatives of GLOBEC, and IMBER to GSC-VIII	none	KA	Done.
38/28	GSC Chair to be invited to attend the Venice meeting	Venice Meeting	KA	Done
39/29	Develop an Implementation Plan for presentation to JCOMM-MAN-IV, GSC-VIII, and I-GOOS-VII	?	KA/YT/BL/CC	Done
40/29	GRAs to establish their global requirements, through GRAND, to be fed in to the Implementation Plan.	?	KA/GRAs	Underway
41/30	GPO to review the Perth Office budget in relation to overall GOOS requirements	GSC-VIII	KA	Done.
42/30	Report to GSC-VIII on the historical and possible future balance of the regional spends on GRAs.	GSC-VIII	KA	Cancel

43/30	GPO to ask WESTPAC, SCOR, and IOC Member States (through Circular Letter) to suggest possible replacement candidates from East Asia for the consideration of the IOC Officers.	none	KA	Ongoing
44/31	Develop the concept of a GOOS-Navies meeting	GSC-VIII	KA	Underway
45/31	GPO and IODE to plan GOOS involvement in the IMDIS meeting in Brest, 2005.	Brest 2005	KA/PP	Underway

The following further actions arose from the discussion:

**Action 17.** *Jim Baker to thank NOAA for their contribution to GOSIC.*

**Action 18.** *Keith Alverson to arrange a quarterly conference call between Alverson, Field, Baker and any other interested members.*

### 13 MEMBERSHIP ROTATION

The committee discussed membership rotations. Coastal expertise needs to be added as COOP is being absorbed into the GSC. Gender balance is important. Worth Nowlin was thanked for his long and excellent service as he is stepping down as 'past-chair' though he will stay involved with GSC as representative of JCOMM.

**Action 19.** *All, send member suggestions to John Field and Keith Alverson. Deadline: 1 April 2005.*

**Action 20.** *John Field to forward list of suggestions to the committee and sponsors for consideration. Deadline: 1 June 2005.*

**Action 21.** *Secretariat to ask all cosponsors to provide nominations. Deadline: 1 June 2005.*

**Action 22.** *Secretariat to write letters of thanks to all retiring GSC members. Deadline: 1 June 2005.*

### 14 NEXT MEETING

The committee discussed the timing and location of the next GSC meeting.

Ralph Rayner described the World Maritime Technology Conference for operational oceanography organized by IMarEST is a high profile meeting in London, 6-10 March, 2006, as a potential venue at which GOOS could showcase itself. A number of relevant groups will be meeting alongside the conference. It will provide an opportunity for the user community will be there. No major conflicts were known – Oceanology is later that month. The committee decided to hold GOOS-IX alongside this venue. COOP and OOPC should be encouraged to meet there as well. A meeting room will be available to us. The GOOS regional forum is encouraged to meet in London around the same time as well.

**Action 23.** *Task team (Baker, Erb, Rayner, Nowlin) to organize presentation/session at the IMAREST conference.*

**Action 24.** *Ralph Rayner to confirm the availability of meeting rooms and local support at no cost to GOOS and report to Keith Alverson. Deadline: 1 April 2005.*

John Field thanked Jim Baker for his productive and constructive leadership as chair and Keith Alverson for his preparation of the meeting and work in the secretariat.

Jim Baker adjourned the meeting at 15:30.

A tour of the NMOC was provided following the meeting.

## 15 LIST OF ACTIONS

- ACTION 1.** SECRETARIAT (TA) TO ENSURE COOP STRATEGIC IMPLEMENTATION PLAN IS TABLED AT I-GOOS WITH GSC ENDORSEMENT. DEADLINE: 1 APRIL 2005. .... 3
- ACTION 2.** SECRETARIAT (KA) TO REMIND IOC EXECUTIVE SECRETARY (PATRICIO BERNAL) OF THE DECISION OF THE ASSEMBLY TO TASK THE IOC SECRETARIAT TO MOVE FORWARDS ON STANDARDS AND PROTOCOLS FOR OCEAN MEASUREMENTS AS A CONTRACTED ACTIVITY IN THE SCIENCE SECTION, AND THAT THE GSC CONTINUES TO SUPPORT THIS ACTIVITY. DEADLINE: 1 MARCH 2005. .... 4
- ACTION 3.** TOM MALONE TO WRITE A STATEMENT TO BE PRESENTED TO JCOMM ABOUT COASTAL IMPLEMENTATION ISSUES AND TO IDENTIFY AN EFFECTIVE SPOKESPERSON WHO WILL BE PRESENT IN HALIFAX TO SUPPORT IT. DEADLINE TOMORROW. .... 5
- ACTION 4.** ALL COMMITTEE MEMBERS TO SUGGEST POTENTIAL MEMBERS OF THE JCOMM RESOURCES TASK TEAM TO PETER DEXTER. DEADLINE MARCH 31. .... 6
- ACTION 5.** SECRETARIAT (KA) TO RESPOND TO RYABNIN AND SUMMERHAYES PROPOSAL STATING THAT THE COMMITTEE RECOGNIZES THERE IS POTENTIAL VALUE IN CREATION OF AN ARCTIC GOOS REGIONAL ALLIANCE, AS WELL AS GOOD POTENTIAL SCIENTIFIC AND TECHNOLOGICAL VALUE TO COORDINATED ACTIVITIES IN THE ARCTIC REGION. THE COMMITTEE INVITES THOSE PARTIES WITH AN INTEREST IN DEVELOPING AN ARCTIC GOOS ALLIANCE TO PUT FORWARD A DETAILED AND FORMAL EXPRESSION OF THEIR INTEREST TO I-GOOS. .... 7
- ACTION 6.** SECRETARIAT (KA) TO INVITE, ON BEHALF OF THE GSC, THE RIO AND AFRICA (IN PARIS) 'OFFICES' TO SUBMIT A LIST OF ACCOMPLISHMENTS AND PLANS ACCORDING TO A STANDARD FORMAT BASED ON THE RECENT REVIEW OF THE PERTH OFFICE. THE GSC SHOULD USE THIS INFORMATION IN PREPARING RECOMMENDATIONS TO THE IGOOS FOR BUDGET PRIORITIZATIONS IN 2006 AND BEYOND. DEADLINE 30 JUNE 05. .... 7
- ACTION 7.** JOHN FIELD TO PROVIDE 3 NAMES TO JCOMM, WITH COPIES TO KEITH ALVERSON, FOR SUGGESTED GOOS REPRESENTATIVES TO THE JOINT CAPACITY BUILDING PANEL. DUE APRIL 1. .... 8
- ACTION 8.** **ACTION:** KEITH ALVERSON WITH HELP FROM ED HARRISON, TOM MALONE AND PETER DEXTER TO DRAFT SHORT SHARP (5 PAGE?) INPUT BASED ON ALBERT'S SURVEY MATERIAL. PAUL MASON WILL REVIEW THE DRAFT TO ENSURE IT MEETS APPROPRIATE SPECS AND SUBTLETIES FOR THE SUBSTA/COP AUDIENCE. THE REPORT SHOULD INCLUDE DISCUSSION OF THE DIFFICULTIES ASSOCIATED WITH. .... 9
- ACTION 8.** TRANSITIONING SATELLITE REMOTE SENSING MEASUREMENTS FROM 'RESEARCH SUPPLY' MODE INTO 'OPERATIONAL SUPPLY' MODE. .... 9
- ACTION 9.** SECRETARIAT (KA) TO SET ASIDE TIME IN NEXT GSC AGENDA FOR SESSIONAL WORKING GROUPS TO MEET. .... 9
- ACTION 10.** HELEN YAP TO CAREFULLY REVIEW JCOMM WORKING GROUPS AND FIND APPROPRIATE AND CONVINCING WAY TO INCORPORATE GLOBAL ASPECTS OF COASTAL IMPLEMENTATION NEEDS AND ENSURE THAT THIS PROPOSAL GOES TO JCOMM DOCUMENTS IN HALIFAX BY COMMUNICATING WITH CANDYCE CLARK AT IOC SECRETARIAT. .... 13
- ACTION 11.** : KA TO REQUEST FROM IOC THAT RALPH RAYNER GIVE THE GOOS TALK AT THE MARCH TSUNAMI MEETING. DEADLINE FEBRUARY 25. [GPO FUNDING NOT REQUIRED AS HE WILL BE THERE ANYWAY] .... 15
- ACTION 12.** ALL: SEND RALPH RAYNER RELEVANT MATERIAL FOR HIS TALK, DEADLINE MARCH 1. .... 15
- ACTION 13.** RALPH RAYNER TO PREPARE AND GIVE A TALK ON BEHALF OF GOOS AT THE IOC MARCH TSUNAMI MEETING BASED ON SOLICITED INPUT FROM GSC MEMBERS. DEADLINE MARCH 3. .... 15
- ACTION 14.** SYLVANA VALLERGA TO INVESTIGATE WHETHER GRAND-T FUNDING, IF IT COMES THROUGH IN 2006, CAN BE TARGETED TOWARDS THIS LOST SALARY FOR THE EFFECTED REGIONAL OFFICES RATHER THAN TRAVEL. .... 16
- ACTION 15.** JOHN FIELD TO WRITE TO SCOR ASKING THEM TO PUT PRESSURE ICSU TO REINSTATE CONTRIBUTIONS TO GOOS. DEADLINE APRIL 1. .... 16

<b>ACTION 16.</b> JIM BAKER, JOHN FIELD AND KEITH ALVERSON TO REVISIT THE STATUS OF THE BUDGET LATER IN THE YEAR. DEADLINE AUGUST 30. ....	16
<b>ACTION 17.</b> JIM BAKER TO THANK NOAA FOR THEIR CONTRIBUTION TO GOSIC.....	20
<b>ACTION 18.</b> KEITH ALVERSON TO ARRANGE A QUARTERLY CONFERENCE CALL BETWEEN ALVERSON, FIELD, BAKER AND ANY OTHER INTERESTED MEMBERS. ....	20
<b>ACTION 19.</b> ALL, SEND MEMBER SUGGESTIONS TO JOHN FIELD AND KEITH ALVERSON. DEADLINE APRIL 1. 20	
<b>ACTION 20.</b> JOHN FIELD TO FORWARD LIST OF SUGGESTIONS TO THE COMMITTEE AND SPONSORS FOR CONSIDERATION. DEADLINE JUNE 1. ....	20
<b>ACTION 21.</b> SECRETARIAT TO ASK ALL COSPONSORS TO PROVIDE NOMINATIONS. DEADLINE JUNE 1. ....	20
<b>ACTION 22.</b> SECRETARIAT TO WRITE LETTERS OF THANKS TO ALL RETIRING GSC MEMBERS. DEADLINE JUNE 1. 20	
<b>ACTION 23.</b> TASK TEAM (BAKER, ERB, RAYNER, NOWLIN) TO ORGANIZE PRESENTATION/SESSION AT THE IMAREST CONFERENCE .....	20
<b>ACTION 24.</b> RALPH RAYNER TO CONFIRM THE AVAILABILITY OF MEETING ROOMS AND LOCAL SUPPORT AT NO COST TO GOOS AND REPORT TO KEITH ALVERSON. DEADLINE APRIL 1.....	20

ANNEX I

**AGENDA**

**1 OPENING AND WELCOME**

*1.1 FORMATION OF SESSIONAL WORKING GROUPS*

**2 GOOS DEVELOPMENTS**

*2.1 PERSPECTIVES FROM THE GSC CHAIR*

*2.2 PERSPECTIVES FROM GPO DIRECTOR*

*2.3 DISCUSSION OF GOOS STRATEGY*

*2.4 SET EXPLICIT GOOS MILESTONES FOR 1-5 YEAR TIMEFRAME*

**3 COOP**

*3.1 PERSPECTIVES FROM THE COOP CHAIR*

*3.2 ENDORSE THE COOP STRATEGIC IMPLEMENTATION PLAN*

*3.3 TRANSITION TO OPERATIONAL ACTIVITY: COOP TO POCO*

*3.4 DISSOLVE COOP AND START POCO*

*3.5 ENDORSE POCO TERMS OF REFERENCE*

*3.6 MAKE EXPLICIT WHO POCO REPORTS TO*

*3.7 SET EXPLICIT POCO MILESTONES FOR 1-5 YEAR TIMEFRAME*

*3.8 GOOS REGULAR BUDGET CONTRIBUTION TO POCO*

**4 OOPC**

*4.1 PERSPECTIVES FROM THE OOPC CHAIR*

*4.2 TRANSITION TO OPERATIONAL ACTIVITY*

*4.3 OOPC MILESTONES FOR 1-5 YEAR TIMEFRAME*

*4.4 GOOS REGULAR BUDGET CONTRIBUTION TO OOPC*

**5 JCOMM**

*5.1 PERSPECTIVES FROM MEMBERS*

*5.2 DISCUSSION: JCOMM AS OPERATIONAL ARM OF GOOS*

*5.3 DISCUSSION: WHAT/WHO IS THE GOOS SECRETARIAT*

*5.4 WHAT ARE THE FINANCIAL IMPLICATIONS OF JCOMM FOR GOOS AND IOC?*

*5.5 DEFINE JCOMM SECRETARIAT*

*5.6 DISCUSSION: GOOS REGULAR BUDGET CONTRIBUTION TO JCOMM IN 2006-2007*

*5.7 SET STAFFING AND BUDGETARY GUIDELINES FOR JCOMM SECRETARIAT AT GOOS/IOC*

*5.8 JCOMM LEADERSHIP*

**6 I-GOOS AND REGIONAL COORDINATION**

*6.1 PERSPECTIVES FROM THE I-GOOS CHAIR*

*6.2 DISCUSSION: GRC TERMS OF REFERENCE*

*6.3 APPROVE GRC TERMS OF REFERENCE*

*6.4 DISCUSSION: POLICY ON GOOS REGIONAL OFFICES*

*6.5 APPROVE A POLICY ON REGIONAL OFFICES*

**7 CAPACITY BUILDING (GOOS AND JCOMM)**

*7.1 STRATEGIC DISCUSSION: HOW SHOULD GOOS INTERACT WITH IOC/TEMA AND JCOMM?*

*7.2 GOOS REGULAR BUDGET CONTRIBUTION TO CB IN 2006-2007*

**8 OUTREACH AND COMMUNICATIONS**

*8.1 PERSPECTIVES FROM THE GOOS PAST CHAIR*

*8.2 DISCUSSION: WHAT NEEDS DOING AND HOW CAN IT BE FUNDED*

*8.3 APPROVE A 50K/YEAR COMMUNICATION LINE ITEM IN REGULAR BUDGET*

*8.4 DECIDE A TARGET AGENCY TO ASK FOR MATCHING \$50K*

**9 RELATED ACTIVITIES**

**10 AUSTRALIAN HOST SESSION**

**11 REPORTING OF SESSIONAL WORKING GROUPS**

*11.1 REPORT OF LIAISON WITH OTHER PROGRAMS SESSIONAL WORKING GROUP*

*11.2 REPORT OF STRUCTURE AND FUNCTION SESSIONAL WORKING GROUP*

*11.3 GSC COMMUNIQUÉ TO JCOMM*

*11.4 GOOS PILOT PROJECT ON CHLOROPHYLL-A*

*11.5 REPORT OF THE 'STATEMENT ON WARNING SYSTEMS' SESSIONAL WORKING GROUP*

*11.6 REPORT OF THE 'REGIONAL ALLOCATIONS AND PROGRAMS' SESSIONAL WORKING GROUP*

*11.7 REPORT OF THE PROGRAMME AND BUDGET SESSIONAL WORKING GROUP*

**12 REVIEW OF ACTION ITEMS**

**13 MEMBERSHIP ROTATION**

**14 NEXT MEETING**

**15 LIST OF ACTIONS**

ANNEX II

LIST OF PARTICIPANTS

**I. CORE COMMITTEE**

D. James BAKER (Chair)  
President  
Academy of Natural Sciences  
1900 Benjamin Franklin Parkway  
Philadelphia, PA 19103-1195  
USA  
Tel : (1 215) 299 1016  
Fax: (1 215) 299 1028  
Email: baker@acnatsci.org

John FIELD (Chair-Elect)  
Zoology Department  
University of Cape Town  
7701 Rondebosch  
South Africa  
Tel: (27 21) 650 3612  
Fax: (27 21) 650 3701  
Email: jgfield@pop.uct.ac.za

Worth NOWLIN (Past-Chair)  
Texas A & M University  
Dept. of Oceanography  
College Station  
Texas 77843-3146  
USA  
Tel: (1 979) 845 3900  
Fax : (1 979) 847 8879  
Email: wnowlin@tam.u.edu

Franciscus COLIJN  
Director  
Institute for Coastal Research,  
GKSS Research Centre  
Max-Planck-Straße 1  
D-21502 Geesthacht  
Germany  
Tel: (49 04152) 87 1533  
Fax: (49 04152) 87 2020  
Email: franciscus.colijn@gkss.de

Philippe DANDIN  
Météo-France  
Direction of Production Marine Forecast  
DP/PREVI/MAR  
42, avenue Coriolis  
F-31057 Toulouse cedex 1  
France  
Tel : (33 5) 61 07 82 90  
Fax: (33 5) 61 07 82 09  
Email : philippe.dandin@meteo.fr

**15.1.1.1.1.1**

María Paula ETALA  
Department of Meteorology  
Argentine Naval Hydrographical Service  
Comodoro Py 2055 - Piso 15 –  
1104 Buenos Aires  
Argentina  
Tel: (54 11) 4317 2000 ext. 3152  
Fax: (54 11) 4317 2309  
Email: etala@ara.mil.ar

José MUELBERG  
Fundação Universidade Federal do Rio Grande  
Departamento de Oceanografia  
Caixa Postal, 474  
96201-970 Rio Grande RS  
Brazil  
Tel : (55 53) 233 6513  
Fax : (55 53) 233 6601  
Email: docjhm@furg.br

Ralph RAYNER  
Managing Director  
Fugro GEOS  
Gemini House, Hargreaves Road, Swindon  
Wiltshire SN25 5AL  
United Kingdom  
Tel: (44 1793) 725766  
Fax: (44 1793) 706604  
Email: r.rayner@geos.com

G. Narayana SWAMY  
Scientist  
National Institute of Oceanography (NIO)  
Dona Paula, 403004 Goa  
India  
Tel: (91 832) 2456700 Ext. 4271 (Office)  
(91 832) 2453469 (Private)  
Fax: (91 832) 2456702/2456703  
Email: narayana@darya.nio.org (Office)

Helen YAP  
Professor  
The Marine Science Institute  
University of the Philippines Diliman  
Quezon City 1101  
Philippines  
Tel: (63 2) 922 3921  
Fax: (63 2) 924 7678  
Email: hty@upmsi.ph

Takashi YOSHIDA  
Office of Marine Prediction  
Japan Meteorological Agency  
1-3-4, Otemachi, Chiyoda-ku,  
Tokyo, 100-8122  
Japan  
Tel: (81 3) 3212 8341 ext. 5128  
Fax: (81 3) 3211 3047  
Email: tyoshida@met.kishou.go.jp

## **II. GOOS PANELS REPRESENTATIVES**

### **Ocean Observation Panel for Climate (OOPC)**

Ed HARRISON (Chair)  
PMEL/NOAA/OCRC  
7600 Sand Point Way  
Seattle, WA 98115  
USA  
Tel : (1 206) 526 6225  
Fax : (1 206) 526 6744  
Email : harrison@pmel.noaa.gov  
d.e.harrison@noaa.gov

### **Coastal Ocean Observations Panel (COOP)**

Tom MALONE (Co-chair)  
Professor  
Univ. of Maryland Centre for Environmental  
Science (UMCES)  
Horn Point Laboratory  
P.O. Box 775  
2020 Horn Point Road  
Cambridge, Maryland 21613  
USA  
Tel: (1 410) 221 8301  
Fax: (1 410) 221 8473  
Email: malone@hpl.umces.edu

### **Intergovernmental Committee for GOOS (I-GOOS)**

Silvana VALLERGA (Chair)  
IAMC- CNR, Head of Section  
IMC Scientific Director  
Località Sa Mardini  
09072 Torregrande – Oristano  
Italia  
Tel: (39 0783) 22027, 22136, 22032  
Fax: (39 0783) 22002  
Email: vallerga@nameserver.ge.cnr.it

### **Capacity Building Panel**

No invitee since Committee is in flux

## **III. SPONSORS REPRESENTATIVES**

### **International Council for Science (ICSU)**

Graeme PEARMAN AM FAA  
Sustainability Science  
School of Geography and Environmental Science  
Monash University  
Room: Second Floor, Menzies West, W222  
Clayton, 3800, Victoria  
Australia  
Tel: (613) 9905 2350  
Fax: (613) 9905 2948  
Mob: 0418 585 291  
Email: graeme.pearman@arts.monash.edu.au

### **World Meteorological Organization (WMO)**

Georgi KORTCHEV  
Director Applications Programme Department  
WMO  
7 bis Ave de la Paix  
CP 2300  
CH-1211, Geneva 2  
Switzerland  
Tel: (41 22) 730 8221  
Fax: (41 22) 730 8128  
Email: Gkortchev@wmo.int

Johannes GUDDAL  
Co-President JCOMM  
Norwegian Meteorological Institute  
Region West, Allegaten. 70  
5007 Bergen  
Norway  
Tel: (47 55) 23 66 26  
Fax: (47 55) 23 67 03  
Email: j.guddal@met.no

### **Intergovernmental Oceanographic Commission (IOC) of UNESCO**

Nicholas FLEMMING  
Southampton Oceanography Centre  
European Way, Southampton,  
SO14 3ZH, UK  
Tel: 44 (0) 23 8059 6242  
44 (0) 23 8059 6262 (Sec.)  
Fax: 44 (0) 23 8059 6399  
E-mail: n.flemming@soc.soton.ac.uk  
n.flemming@sheetsheath.co.uk



#### **IV. IGOS REPRESENTATIVES**

##### **Global Climate Observing System (GCOS)**

Prof. Paul MASON  
Global Climate Observing System (GCOS)  
Director NCAS  
Universities Weather Research Network (UWERN)  
Department of Meteorology  
University of Reading  
PO Box 243  
Early Gate  
Reading RG6 6BB  
United Kingdom  
Tel: (44 0118) 378 8957/6311  
Fax: (44 0118) 378 8791  
Email: p.j.mason@reading.ac.uk

##### **Committee on Earth Observation Satellites (CEOS)**

Eric LINDSTROM  
NASA Headquarters, Code YS  
300 E Street SW  
Washington DC, 20546, USA  
Tel : (1 202) 358 4540 voice  
Fax : (1 202) 358 2770  
Mail: eric.j.lindstr@nasa.gov

##### **Global Ocean Observing System (GOOS)**

Keith ALVERSON  
Director, GOOS Project Office  
IOC of UNESCO  
1, rue Miollis  
75732 Paris Cedex 15  
France  
Tel: (33 1) 45 68 40 42  
Fax: (33 1) 45 68 58 13  
Email: k.alverson@unesco.org

#### **V. IOC PARTNER SECTION**

Peter PISSIERSSENS  
Head, IODE  
IOC of UNESCO  
1, rue Miollis  
75732 Paris Cedex 15  
France  
Tel: (33 1) 45 68 40 46  
Fax: (33 1) 45 68 58 12  
Email: p.pissierssens@unesco.org

Erlich DESA  
Head, Capacity Building  
IOC of UNESCO  
1, rue Miollis  
75732 Paris Cedex 15  
France  
Tel: (33 1) 45 68 40 16  
Fax: (33 1) 45 68 58 12  
Email: e.desa@unesco.org

#### **VI. OBSERVERS**

Leah GOLDFARB  
International Council for Science (ICSU)  
51, Bld de Montmorency  
75016 Paris  
France  
Tel : (33 1) 45 25 03 29  
Fax: (33 1) 42 88 94 31  
Email : leah@icsu.org

Laura S.L. KONG  
Director  
International Tsunami Information Center (ITSU)  
Pacific Guardian Center  
737 Bishop St., Suite 2200  
Honolulu, HI 96813  
United States of America  
Tel: (1 808) 532 6423  
Fax: (1 808) 532 5576  
E-mail: Laura.Kong@noaa.gov

François SCHINDELE  
Chairman ICG/ITSU  
Dept. d'Analyse et Surveillance de l'Environnement  
B.P. 12  
91680 Bruyères-le-Châtel  
France  
Tel: (33 1) 69 26 78 09  
Fax: (33 1) 69 26 70 00  
E-mail: francois.schindele@cea.fr

Ian POINER  
Director,  
Australian Institute of Marine Science (AIMS)  
PMB 3, Townsville MC  
Townsville 4810,  
Queensland,  
Australia  
Tel: (61 7) 3826 7223  
041 970 2652 (Mobile)  
Fax: (61 7) 3826 7203  
Email: i.poiner@aims.gov.au

## **VII. LOCAL ORGANISATION COMMITTEE**

Neville SMITH  
Bureau of Meteorology Research Centre  
700 Collins Street  
Docklands, Victoria 3008  
Australia  
Tel : (61 3) 9669 44 34  
Fax : (61 3) 9669 46 60  
Email : nrs@bom.gov.au

Peter DEXTER  
Ocean Policy Unit  
Bureau of Meteorology  
GPO Box 1289K  
Melbourne Victoria 3001  
Australia  
Tel : (61 3) 9669 48 70  
Fax : (61 3) 9669 46 95  
Mobile: (61 4) 0899 2424  
Email : p.dexter@bom.gov.au

William ERB  
Head  
Intergovernmental Oceanographic Commission  
Perth Regional Programme Office  
c/o Bureau of Meteorology  
P.O. Box 1370  
West Perth, WA 6872  
Australia  
Tel: (61 8) 9226 2899  
Fax: (61 8) 9226 0599  
Email : W.Erb@bom.gov.au

## **VIII. UNABLE**

Mike SINCLAIR  
Regional Director  
Fisheries and Oceans Canada  
Bedford Institute of Oceanography  
P.O. Box 1006  
Dartmouth, Nova Scotia B2Y 4A2  
Canada  
Tel: (1 902) 426 3492  
Fax: (1 902) 426 8484  
Email: SinclairM@mar.dfo-mpo.gc.ca

Anthony KNAP (COOP Co-Chair)  
Director  
Bermuda Biological Station for Research  
Ferry Reach  
Bermuda GE01  
Tel: (1 441) 297 1880 ext 244  
Fax: (1 441) 297 0860  
Email: knap@bbsr.edu

Thomas ROSSWALL  
Executive Director  
International Council for Science (ICSU)  
51, Bld de Montmorency  
75016 Paris  
France  
Tel : (33 1) 45 25 03 29  
Fax: (33 1) 42 88 94 31  
Email : Thomas.rosswall@icsu.org

Berrien MOORE (GTOS) Chair  
Global Terrestrial Observing System  
CSIR Environmentek  
PO Box 395  
Pretoria 0001  
South Africa  
Tel: +27 (0) 12 841 2045  
Fax: +27 (0) 12 841 2689  
Email: b.moore@unh.edu

R. Norberto FERNANDEZ  
Chief a.i.  
Early Warning and Observing Systems Branch  
United Nations Environment Programme (UNEP)  
Division of Early Warning and Assessment  
P.O. Box 30552  
Nairobi  
Kenya  
Tel: (254 2) 62 34 50  
Fax : (254 2) 62 43 09  
Email : norberto.fernandez@unep.org

Ed URBAN  
Executive Director  
Scientific Committee on Oceanic Research (SCOR)  
Department of Earth and Planetary Sciences  
The Johns Hopkins University  
Baltimore, MD 21218  
USA  
Tel : (1 410) 516 4070  
Fax: (1 410) 516 4019  
Email : scor@jhu.edu

ANNEX III

**LIST OF DOCUMENTS\***

Document Code	Title	Author	Agenda item	By when
WORKING DOCUMENTS				
GSC-VIII/1 prov.	Provisional Agenda	K.Alverson	All	done
GSC-VIII/2 prov.	Provisional Timetable	K.Alverson	All	done
GSC-VIII/3 prov.	Summary Report of the Session (to be prepared during or after the Session)	K.Alverson	All	
GSC-VIII/4 prov.	Provisional list of Documents (this document)	K.Alverson	All	done
GSC-VIII/5	List of Participants	K.Alverson	All	
GSC-VIII/6	Proposal regarding the GOOS Products and Services Module	J.Guddal	-	done
GSC-VIII/7	GOOS, the Southern Ocean and the International Polar Year	C.Summerhayes	6	done
GSC-VIII/8	Plan for the Report on the state of the Ocean Observing System for Climate for SBSTA/UNFCCC (May/June 2005)	A.Fischer	4	done
GSC-VIII/9	GCOS and related Climate Matters	P.Mason	9	done
GSC-VIII/10	GPO Director's Report	K.Alverson	All	done
GSC-VIII/11	GOOS Strategy Document for 2006 - 2007	K.Averson	All	done
GSC-VIII/12	Draft COOP Implementation Plan	T.Aarup	3	done
GSC-VIII/13	Request for the establishment of an Arctic and a Southern Ocean GRA	V.Ryabini C.Summerhayes	6	done
GSC-VIII/14	List of actions of GSC-VIII (to be prepared during the meeting)	-	-	-
BACKGROUND DOCUMENTS				
GSC-VIII/B1	Report of the 9th Session of the Joint GCOS-GOOS-WCRP Ocean Observations Panel for Climate (OOPC)	A. Fischer		Done
GSC-VIII/B2	GCOS 2nd Adequacy Report Executive Summary (GCOS-82 ES)	A. Fischer		Done
GSC-VIII/B3	GCOS Implementation Plan Executive Summary (GCOS-92 ES)	A. Fischer		Done
GSC-VIII/B4	GCOS Implementation Plan (GCOS-92)	A. Fischer		Done

\* This list is for reference only. No stocks of these documents are maintained.



## ANNEX IV

### LIST OF ACRONYMS

AO	Arctic Oscillation
CB	Capacity Building
CBCG	Capacity Building Coordination Group
CEOS	Committee on Earth Observation Satellites
CliC	Climate and Cryosphere programme
CLIMAR	Workshop on Advances in Marine Climatology
CLIVAR	Climate Variability and Predictability
CNES	Centre national d'études spatiales (France)
CoML	Census of Marine Life
COP	Conference of the Parties (of the UNFCCC)
COOP	Coastal Ocean Observations Panel
DBCP	Data Buoy Co-operation Panel
DIC	Dissolved Inorganic Carbon
DIM	Data and Information Management
DIVERSITAS	it's a UNESCO programme – ask Science Sector
DMACS	Data Management and Communication System
DMCG	Data Management Coordination Group
DMPA	Data Management Programme Area
DODS/OpenDAP	Distributed Oceanographic Data System
EC	European Commission
ENSO	El Nino and the Southern Oscillation
ETDMP	Expert Team on Data Management Practices
EuroGOOS	European GOOS
FAO	Food and Agriculture Organization of the United Nations
GE-BICH	Group of Experts on Biological and Chemical Data Management and Exchange Practices
GCN	Global Coastal Network
GCOS	Global Climate Observing System
GEF	Global Environment Facility
GEO	Global Eulerian Observatory
GEOHAB	Global Ecology of Harmful Algal Blooms
GE-TADE	Group of Experts on Technical Aspects of Data Exchange
GLOSS	Global Sea-Level Observing System
GLOBEC	Global Ocean Ecosystems Dynamics
GODAE	Global Ocean Data Assimilation Experiment
GOMA-GOOS	GOOS Gulf of Maine Area
GPM	Global Precipitation Mission
GPS	Global Positioning System
GPO	GOOS Project Office
GOOS	Global Ocean Observing System
GOSIC	G3OS Information Centre
GRAs	GOOS Regional Alliances
GRASP	GOOS Regional Alliances for the South Pacific
GRAND	GOOS Regional Alliances Network Development
GRC	GOOS Regional Council
GSC	GOOS Steering Committee
GSOP	Global Synthesis and Observations Project
GTOS	Global Terrestrial Observing System

GTS	Groupe de Travail Scientifique
ICES	International Council for the Exploration of the Sea
ICSU	International Council for Science
IGBP	International Geosphere-Biosphere Programme
IGFA	International Group of Funding Agencies on Global Change Research
IGOS	Integrated Global Observing Strategy
I-GOOS	Intergovernmental Committee for GOOS
IFREMER	Institut français de recherche pour l'exploitation de la mer
IMAGES	Marine component of Past Global Change Programme
IMBER	Integrated Marine Biogeochemical Ecosystem Research
IMDIS	International Marine Data and Information Systems
IOCCP	International Ocean Carbon Coordinating Project
IOC	Intergovernmental Oceanographic Commission (of UNESCO)
IOCCG	International Ocean Colour Coordinating Group
IODE	International Oceanographic Data and Information Exchange
IOGOOS	Indian Ocean GOOS
IPCC	Intergovernmental Panel on Climate Change
IPY	International Polar Year
JAMSTEC	Japan Marine Science and Technology Centre
JCOMM	Joint WMO-IOC Technical Commission for Oceanography and Marine Meteorology
JCOMM-DIM	JCOMM Data and Information Management
JCOMM SCG	JCOMM Services Coordinating Group
JCOMMOPS	JCOMM <i>in situ</i> Platform Support Centre
J-GOOS	Joint Scientific and Technical Steering Group for GOOS
LME	Large Marine Ecosystem
LOICZ	Land-Ocean Interaction in the Coastal Zone
MAMA	Mediterranean network to Assess and upgrade the Monitoring and forecasting Activity in the region
MAN	Management Committee (of JCOMM)
MedGOOS	Mediterranean GOOS
MILAC	Marine Impacts on Lowland Agriculture and Coastal resources
MOU	Memorandum of Understanding
NASA	National Aeronautics and Space Administration (USA)
NEAR-GOOS	N. E. Asian Region GOOS
NEPAD	New Plan for African Development
NOAA	National Oceanic and Atmospheric Administration (USA)
NODC	National Oceanographic Data Centre
OBIS	Ocean Biogeographical information System
OECD	Organization for Economic Co-operation and Development
ODIN	Ocean Data Information Network
ODINCARSA	Ocean Data Information Network in Caribbean and South America region
ODINCINDIO	Ocean Data Information Network in Indian Ocean region
OOPC	Ocean Observations Panel for Climate
OPA	Observations Programme Area (of JCOMM)
OSTM	Ocean Surface Topography Mission
OIT	Ocean Information Technology Project
PICES	North Pacific Marine Science Organization
POGO	Partnership for Observation of the Global Ocean
PSMSL	Permanent Service for Mean Sea-Level
RAMP	Rapid Assessment of Marine Pollution
ROOFS AFRICA	Regional Ocean Observing and Forecasting System for Africa

RNODC	Responsible National Oceanographic Data Centre
SEA GOOS	South-east Asia GOOS
SBSTA	Subsidiary Body for Science and Technology Advice (to UNFCCC)
SCAR	Scientific Committee for Antarctic Research
SCOR	Scientific Committee on Oceanic Research
SIDS	Small Island Developing States
SOLAS	Surface Ocean Lower Atmosphere
SOOP	Ship-of-Opportunity Programme
SST	Sea Surface Temperature
TEMA	Training, Education and Mutual Assistance programme (IOC)
TMR	TRMM Microwave Radiometer
TRMM	Tropical Rainfall Measurement Mission
TTR	Task Team on Resources
UNCED	United Nations Conference on Environment and Development (Rio de Janeiro, 1992)
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNEP	United Nations Environment Programme
UNFCCC	United National Framework Convention on Climate Change
VOS	Voluntary Observing Ship
WCRP	World Climate Research Programme
WDC	World Data Centre
WESTPAC	IOC Sub-Commission for the Western Pacific
WIOMAP	Western Indian Ocean Marine Applications Project
WMO	World Meteorological Organization
WOCE	World Ocean Circulation Experiment
WSOA	Wide Swath Ocean Altimeter
WSSD	World Summit on Sustainable Development
XBT	Expendable Bathythermograph
XML	Extendable Make-up Language