

# Ninth International Ship Operators Meeting

3 and 4 October 1995, Cape Town, South Africa

## ATTENDEES

Country	Representative	Organization
CEC	Dr. M. Weydert	DG XII, Brussels
Canada	Dr. J. E. Elliott	BIO, Dartmouth
France	Mr. J.X. Castrec	IFREMER, La Seine sur Mer
Germany	Dr. D. Strohm	F, Bremen
Japan	Mr. A. Aoki	JAMSTEC, Yokosuka
	Mr. H. Yamada	JAMSTEC, Yokosuka
	Mr. Zaitzu	NME, Yokosuka
Netherlands	Mr. C.N. van Bergen Henegouw	NIOZ, Texel, Secretary
	Ms. M.J. Rietveld	NIOZ, Texel
OCEANIC	Ms. K. Bouton	U Delaware, Lewes
South Africa	Mr. A. Robertson	SFRI, Cape Town, Chairman
	Dr. A. I. L. Payne	SFRI, Cape Town
	Mr. R. Cooper	SFRI, Cape Town
	Mr. P. Goosen	SFRI, Cape Town
	Mr. P. Malan	SFRI, Cape Town
	Mr. P. Van Der Byl	SFRI, Cape Town
Spain	Mr. J.I. Diaz	CSIC, Barcelona
UK	Dr. B. Hinde	NERC, Swindon
	Dr. C.W. Fay	NERC-RVS, Barry
UN	Mr. E.J. de Boer	FAO, Fisheries Division, Italy
USA	Ms. E. Dieter	NSF, Washington
	Prof. D. Nixon	NSF, Washington
<b>Apologies for absence</b>		
Belgium	Mr. M.A. Pollentier	MUMMS, Oostende
Australia	Mr. M. J. Pook	NFSC, Hobart
Finland	Ms E. Lahdes	IMR, Helsinki
France	Dr. D. Girard	IFREMER, Paris
	Mr. F. Goutorbe	IFRTP, Plouzane
Germany	Dr. D. Kohnke	BSH, Hamburg
Japan	Mr. Hikaru Hayashi	JAMSTEC, Yokosuka
Netherlands	Dr. J.H. Stel	NGF, The Hague
UK	Mr. J.W. Ramster	MAFF, Lowestoft
	Ms. C. Harper	NERC, Swindon
	Mr. J.A. Morrison	SOAFD, Marine Lab
USA	Dr. D. Heinrichs	NSF, Washington
	Cpt. M. R. Mulhern	NOAA, Silver Spring
	Rear Admiral W.L. Stubblefield	NOAA, Silver Spring

## 1. INTRODUCTION AND WELCOME

Dr. Andy Payne, acting-director of Sea Fisheries Research Institute (SFRI), as this years host welcomed all 18 participants from 9 countries and 3 international organizations to the ninth ISO-meeting. During a dinner party on the evening preceding the meeting he thanked ISOM for inviting South Africa to host the 1995 meeting. In his opening address to the meeting Dr. Payne stressed the importance of ISOM especially for countries who do not own research vessels. For these countries, ISOM acts as a catalyst for gaining access to research vessels and facilities. After his welcome he asked Mr. Alan Robertson, deputy director SFRI, to chair the ninth ISO-meeting on behalf of the Sea Fisheries and Research Institute (SFRI).

The order of the draft-agenda was changed to accommodate members' travel schedules for the second day.

## 2. MINUTES OF THE EIGHTH MEETING

The minutes were accepted as a true record of the eight meeting held in Dartmouth, Nova Scotia, on 26 September 1994. The chairman asked the secretary to continue to stimulate participation in ISOM by other countries, especially those from the southern hemisphere and the Russian Federation.

## 3. Research Co-ordination

### • Report on staff exchange

Dr. Fay (UK) reported that the exchange with Nippon Marine Enterprises was a success, that Dr. Girard of IFREMER took part in a review committee of RVS and that Cpt. R. Heath (Can) visited NERC-RVS in Barry. Mr. Diaz (Spain) reported that a marine staff technician from the Institute of Oceanographic Sciences (UK) visited the RV Hesperides in Spain to discuss the installation details to a planned summer operation of the TOBI in the western Mediterranean. The cruise was a success and the experience gained by the Spanish technicians team has been very important. Ms. Rietveld (NL) reported that a computer technician joined the UK research vessel Charles Darwin for on board training on the ABC computer system. Mr. de Boer (FAO) reported training of local west-African staff (technicians and scientists) on board the Norwegian fisheries research vessel Fridtjof Nansen, who was on a FAO time charter resource survey along the Northwest coast of Africa (Guinea-Morocco) with the participation of local scientists. In relation with the presence of mentioned ship Mr. Alan Robertson (SA) reported an exchange of staff with Namibia and Norway. Mr. Castrec (France) reported on the exchange of equipment with the UK. The S.A.R. was on the Discovery for a cruise of 10 days. Dr. Elliott (Canada) reported finally on an exchange of experiences between a Canadian and an USA arctic research vessel in a Multi-ship operation. Prof. Nixon (USA) mentioned insurance problems when exchanging scientific and/or technical staff. This will be discussed under item insurance.

The chairman summarized this report with the comment that the interchange of nautical staff and/or marine technicians offered considerable benefits operations at sea and that ISOM should continue to promote such interchange.

### • Reports on lost equipment

Mr. Strohm (FRG) reported that a 250.000 USD deep sea mooring with a failing acoustic release was recovered with the assistance of a Russian submarine. Dr. Fay (UK) reported the loss of a Sea-Soar because of cable corrosion underneath the faring. Dr. Weydert (EC) mentioned losses of current meters with a value of 125.000 USD within the MAST program. Ms. Rietveld (NL) reported the loss of equipment on board of a Italian research vessel Urania because of cable failure. The instrument was insured and is partly reclaimed. Mr. Aoki (Japan) reported the loss of five sea bottom seismographs (total value 300.000 USD) of which only one was recovered by Shinkai. Mr. Diaz (Spain) pointed out

that 8 different moorings were deployed in February in Antarctic for a year program. The position of the moorings were given to ISOM in the 1994 meeting. Due to the recent losses of other moorings in the western Mediterranean, the Antarctic moorings were insured, but the process of finding a suitable insurance company in Spain has been hard and difficult. Dr. Hinde (UK) suggested to develop performance indicators for equipment (for budgetary reasons) and to have the mooring operations connected to ship time planning and exchange in order to enhance the cost effectiveness of moorings. Ms. Dieter (USA) and Ms. Bouton (OCEANIC) pointed out that Internet can play an important role in recovering lost equipment. Dr. Elliott (Canada) informed ISOM that recovery on moorings improved since guard buoys were put around. He also mentioned release problems with WOCE moorings. The chairman concluded that ongoing exchange of information and experience might reduce losses and ISOM network plays a role in the recovery or salvage of lost equipment.

### • **Autonomous underwater vehicles and the Law of the Sea**

Dr. Fay (UK) introduced the "legal liabilities for auto-sub and oceanographic data acquisition systems (ODAS)". Dr. Fay made clear that the legal and liability frameworks for these new mobile intelligent vehicles in the sea are of a "primitive" nature. The accepted rules for ODAS at sea are sparse; they were addressed under the UNESCO Convention on ODAS (1972). When considering auto-sub no rules are set. It was suggested during the meeting that ISOM might start to assist developing these rules. Dr. Fay was asked to coordinate an effort for this development with the assistance of Prof. Nixon and Dr. Weydert.

### • **Oceanic database and research programme planning**

Ms. Bouton gave a presentation of Oceanic data base. This data base is used more and more. The new development is that Oceanic will be available on Internet with its own Web-side. Oceanic contains also the FAO data base on ship information. The ship schedules are not kept up to date by a number of operators. This will limit the chance for exchange of ship-time. Ms. Bouton asked ISOM for new ideas so that Oceanic can be as useful and user friendly as possible now and in the future. [NOTE: An ISOM Web-site will be developed at <http://www.cms.udel.edu/ships/isom>. Please give your e-mail address to be included on the ISOM mailing list]

### • **Insurance**

Mrs. Rietveld (NL) introduced this agenda item by presenting the results of the questionnaire held between the ISOM members this year. The results are that two mainstreams could be discovered

1. ship-operators that have insurance with professional insurers (In the first place P&I, but most also H&M and some even with equipment insurance) and
2. ship-operators that are governmental organizations and are as such self-insured (with some exceptions).

Most of these ship-operators do not have P&I insurance. Copies of the inventory and transparencies were handed out. After the presentation the discussion was led by Prof. Dennis Nixon. He made clear that there were strong arguments to have at least a minimum standard P&I insurance on every research vessel. In case something happens to a guest scientist on board a governmental self insured ship, without P&I, the insurance of the scientist will claim damage to the government, who owns the ship. This procedure is not always successful and when successful the operator might have to budget the claim anyway. This can influence international cooperation negatively.

The chairman concluded that a memorandum of understanding should be made with a minimum standard package for P&I with a 15 - 25 million US \$ coverage. All members present agreed to underwrite this although the amount insured could well vary from one country to the next, depending on vessel size and operating profile. Professor Nixon undertook to compile a draft text that would be circulated with the minutes.

### • **Shipboard containerized facilities**

The executive secretary Mr. Van Bergen Henegouw presented the results of the questionnaire on this subject. Containerized shipboard facilities (CSF) are mostly used for general purpose laboratories and special equipment. No standards are available to connect CSF to research vessels. Countries with containerized clean lab facilities have environmental restrictions for the use of these on board research vessels. The standard 20 feet size is most common and restrictions for placing these on research vessels are minimal. The conclusions were that

1. most countries have CSF available and the countries who have them available have the opinion that the use of CSF can stimulate exchange of ship time and
2. exchange between
  - a. Japan and USA and
  - b. between the different European countries and Africa seems possible. Exchange between a) and b) is not possible because of different electrical frequencies (60 vs. 50 Hz).

Mr. Zaitzu (Japan) presented case of JAMSTEC's container about size, purpose of use, electrical frequencies and way of fixing on board using OHP.

After this agenda item the safety-video on board the Netherlands research vessel Pelagia was shown. The way in which the safety-instructions were presented was much appreciated and inspired ship-operators to use a similar concept.

### • **Shipboard computer systems**

This item was introduced by the chairman with a view to promote a greater interchange of system concepts and data management philosophy. Mr. Robertson gave a broad outline of a SFRI develop in board data capture/processing system and a underwater monitoring system (temperature, light, depth, flow, etc.). Various members described their computer system in similar detail.

A feature of the ensuing discussion was that, in most cases the problem did not lie in the capture or processing of data but in its longer term management after each cruise. In most cases the validation and quality control is the responsibility of the scientist after the cruise, but the development is that more processing is done on board during the cruise. Dr. Weydert (EC) explained that within MAST research projects scientists should propose a data collection protocol and deposit the data to a data center 1- 6 months after the cruise, further the data should become publicly available (at the latest) two years after a cruise. The need for proper data management is becoming even more important with the ever increasing amount of data collected during marine research projects. More and more data products are becoming end results for scientists besides their scientific papers. This development will demand more professional data management structure to improve and maintain quality standards.

### • **Proposal for an international marine technician training course**

This proposal was introduced by the executive secretary Mr. Van Bergen Henegouw. ISOM accepted to have a proposal for a bi-annual training course/ workshop to start in Southampton (UK) in 1996. The subjects for this first marine technician workshop were discussed and the main topics were selected:

1. Mooring operations,
2. Fishing gear technology,
3. Calibration and standards, and when time permits also
4. Ship board computer systems and
5. Multi beam technology.

The subjects for a next workshop should be proposed by the marine technicians themselves. The members approved the proposal to have a small committee to draft a program for the training course/workshop. The draft proposal will be sent to the ISOM members for comments and approval. After that the proposal will be submitted to the EC and NSF (USA) for (financial) support.

[Note: The draft proposal will be written by Ken Robertson (NERC), Lisa Rom (NSF) and Cok van Bergen Henegouw (ISOM secretary)].

## 4. RESEARCH FLEET CHANGES

Dr. Fay (UK) reported that the NERC fleet is stable, in that all ships are operating at sea and there are no new builds planned. The Scottish Office (Ministry) is tendering for the build of a new 68m fisheries research ship to replace the RV Scotia. Scientific programs supported have been WOCE, JGOFS, OMEX, LOIS, and other smaller programs covering all scientific disciplines. The new Simrad EM12 Multi-beam Echo Sounder on RRS Charles Darwin has performed extremely well and is much used.

Mr. Diaz (Spain) presented the news (October 94 - June 95) about the RV Hesperides. She suffered on her first cruise near Canary Islands a serious problem in one of the electric propulsion engines. It was necessary to dry dock the vessel and completely rebuild the damaged engine in the supplier factory. Since the repair took one month and a half, it was necessary to modify the vessel's schedule, but only one of the Antarctic cruises was postponed for two years. Scientific cruise activities were developed near Canary Islands, Central Atlantic, Antarctica, Drake Passage and Western Mediterranean. One of the successful cruises was made in cooperation with the Ins. Oceanographic Sciences, Deacan Lab., (UK) when the containerized deep sea side scan sonar system (TOBI) was temporarily installed and operated. The only significant refit made this year in the vessel has been the replacement of the deep sea winch (7500 m; 13 mm diameter) for a traction winch (10.000 m; 16 mm diameter) with a pull strength capability of 17 tons.

Mrs. Rietveld (NL) reported that RV Pelagia was refurbished this year to make her fit for coring in deeper waters, especially on the continental slope for the OMEX, ENAM and WOCE cruises. A deep sea winch with 8000 m cable was installed.

Ms. Dieter (US) reported that the US Academic Fleet upgrade continues with the construction of two new Agor's and the mid-life overhauls of the intermediate and coastal vessels. The Agor 24 (Rodger Revelle) was launched April 1995 and will go into service in late 1996. The Agor 25 (Atlantis) will be launched in February 1996 and began service in mid-1997. The construction and operation of the Agor's is under the auspices of the Office of Naval Research (ONR). The proposed construction of an Arctic Research Vessel for the National Science Foundation (NSF) is on hold pending the results of a study by the National Academy of Science on "Arctic Ocean Research and Supporting Facilities/National Needs and Goals". The mid-life upgrades have been completed on the three Oceanus class vessels (56 M) owned by the National Science Foundation and the Seward Johnson (63 M) owned by Harbor Branch Oceanographic Institution. All four vessels are back in service. A mid-life upgrade is proposed for the New Horizon (52 M), owned by Scripps Institution of Oceanography, in 1995-6. Mid-life upgrades will be proposed for the two Cape class vessels (41 M), owned by NSF, for 1996-97. The retirement of the submersible handling vessel, Atlantis II, is owned for the fall of 1996. At that time the Deep Submergence Vessel Alvin will go through and extensive overhaul. The Navy is currently reviewing plans for conversion of Agor 25 to support deep submergence facilities, including Alvin

and ROV operations. The Alvin and the support ship are expected to be back in operation mid-1997. In 1996 the large ships will be returning from long deployment to the Indian Ocean and southern Pacific Ocean. The Knorr returns from an 18 month WOCE cruise via the Atlantic. The Thompson returns from a sixteen month JGOFS cruise via the Pacific. These vessels will support a variety of cruises while working their way home from the Indian Ocean. The Ewing and Melville have been supporting MG&G cruises in the southern Pacific and are fully subscribed in support MG&G in 1996. The Atlantis II and Alvin will begin the year in the Pacific, working back to Woods Hole Oceanographic Institution (WHOI) by late summer. The Intermediates and small ships will be doing mainly regional cruises.

Dr. Elliott (Canada) confirmed that the merger between the Department of Fisheries and Oceans science fleet and the Canadian Coast Guard fleet has occurred. Fleet consolidation is presently underway under the Department of Fisheries and Oceans title and program assignments for 1996 have been initiated under this new regime. Multi-purpose use of the vessels is under review; it is anticipated that additional ship platforms will be available for scientific work in the coastal zone. One of the Coast Guard vessels, the Louis St. Laurent, was fully operational to undertake the arctic science program. The Quest, a Department of National Defense research vessel, is entering a two-year refit and is being replaced temporarily on the east coast by the Endeavour, a west coast vessel. The Tally has completed modifications to handle the ROPOS - a deep sea remotely operated vehicle. With present funding plans the Hudson is expected to be operational for two more years.

Mr. Aoki (JAPAN) presented a paper on the reconstruction plan of nuclear ship Mutsu to the large oceanographic research vessel. The nuclear engine has already been removed and the hull was cut into two parts to reconstruct at the two different shipyards. Reconstruction will be completed by April 1997, and new LRV is scheduled to start operation for the Global Ocean Observation on October 1997. Mr. Aoki added that JAMSTEC has begun the construction of shore facility and the reinforcement of support staff such as scientists research engineers and etc., in order to support the LRV operations. Mr. Aoki reported also about Mother Ship of Kayko. She is planned to be built by the additional budget in 1995. According to the construction schedule of New Vessel, She is now under the detailed designing. Construction will start in April 1996. She will be delivered into JAMSTEC in March 1997, and will start the operation ever afterward. Her design is almost the same as Yokosuka. The main mission of new vessel are support of ROV Kayko and survey of deep sea area. Besides, he reported on the progress of the building plan of the deep-sea drilling vessel.

Mr. Castrec (F) presented the IFREMER research fleet changes. The new research vessel Thalassa is under construction in Dieppe (F). She was launched in May 1995 and will be integrated into IFREMER's fleet in the beginning of 1996. The first trial at sea are scheduled for January 1996. The principles of a new scheme to renew the oceanographic fleet during the period 1995-2010 were approved by the Scientific Committee and the Board. They are based on the modernization of the oceanographic ship Le Suroit and the acquisition of a new support ship for the submersible Nautil. Major repair was necessary for the Nautil from October 1994 to June 1995, as well as for the Cyana from March 1995 till October 1995.

Mr. Robertson (SA) reported on the only upgrade in the Sea Fisheries fleet and that was the installation of a 290kW re-tractable Bow Thruster (by Schottel) on board RV Algoa, this constituting the final phase of the conversion program. As from October 1 1995, seven fisheries patrol vessels were transferred to Sea Fisheries from Cape Nature Conservation as part of a re-allocation of responsibilities within government departments. Problems with officer manning continues to adversely affect vessel operations. In an endeavor to address this problem Sea Fisheries was in the process of compiling a detailed specification so as to invite tenders from professional ship operators for the manning of all research, supply and patrol vessels. Assistance and advice from ISOM members had proved to be extremely useful and was gratefully acknowledged.

## **5. SHIP EXCHANGE/BARTER ARRANGEMENTS**

Dr. Fay (UK) reported that a short barter cruise for the USA was carried out on RRS Discovery to deploy a sediment trap mooring. Otherwise no barter or exchanges were arranged.

Ms. Rietveld (NL) reported on the UK contribution of TOBI to the OMEX-cruise with the RV Pelagia.

Mr. Castrec (F) reported on the tri-lateral arrangement between USA, Australia and France. In December 1995 the research vessel Nadir (with Nautile) will provide 6 dive days for NSF (ODP Naut/cruise). In October 1994 Le Suroit operated by IFREMER has provided 25 days for IFM Kiel (Thetis cruise). In May 1995 the Poseidon operated by IFM Kiel has provided 26 days for IFREMER (BIOMET cruise). In October 1995 the Thalia will provide 8 days for IFM Kiel.

## **6. ANY OTHER BUSINESS**

Dr. Weydert (EC) reported that new standards for scientific diving are being prepared. Included in the standards are basic training and additional courses. He mentioned the emphasis of the EC on technology development on acoustics and sensors. Proposals on these subjects are welcome.

Mr. Yamada (Japan) showed a video "challenging the ultimate depth" by ROV Kaiko, reaching the deepest point of the Mariana Trench (10,911 m) on March 24, 1995. The video gave a very good picture of deep sea submersible operations.

The chairman put forward the annual question whether ISOM should continue next year. All present members agreed to the continuation.

Dr. B. Hinde (UK) will put forward a proposal on scientific cruise output measurements performance indicators that will be a special item on the 1996 agenda.

## **DATE OF 1996 MEETING IN UK**

The tenth meeting will be held in Southampton (UK) on 18 and 19 September 1996. The participants are asked to arrive on the 17th for an evening event. Because of the 10th anniversary of ISOM the next year's host Dr. C. Fay invited the participants also on the 20th for a special planned program. The marine technician training course/workshop is scheduled in the week 23 till 27 September 1996 also in Southampton (UK).

[Note: the dates have changed according to the new proposed dates in the letter of 18 March 1996]

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