***Tenth International Ship Operators Meeting***

***2 & 3 October 1996, Southampton Oceanographic Centre, Southampton, UK***

# ATTENDEES

| Country | Representative | Organisation |
|---|---|---|
| Belgium | Mr. M.A. Pollentier | MUMMS, Oostende |
| CEC | Dr. M. Weydert | DG XII, Brussels |
| Chile | Mr. E. Aranda | IFOP, Valparaíso |
| Finland | Ms. E. Lahdes | FIMR, Helsinki |
| France | Mr. J.X. Castrec | IFREMER, La Seine sur Mer |
| | Mr. P. Rouzaud | IFREMER, La Seine sur Mer |
| Germany | Dr. D. Strohm | RFG, Bremen |
| | Prof.dr. G. Kortum | IM, Kiel |
| Japan | Mr. H. Hayashi | JAMSTEC, Yokosuka |
| | Mr. T. Miyazaki | JAMSTEC, Yokosuka |
| | Mr. S. Tashiro | JAMSTEC, Yokosuka |
| | Mr. M. Zaitsu | NME, Yokosuka |
| Netherlands | Mr. C.N. van Bergen Henegouw | NIOZ, Texel Secretary |
| | Ms. M.J. Rietveld | NIOZ, Texel |
| OCEANIC | Ms. K. Bouton | Delaware, USA |
| ONR | Dr. A.I. Weinstein | London, UK |
| South-Africa | Mr. P.Goosen | SFRI, Cape Town |
| Spain | Mr. J.I. Diaz | CSIC, Barcelona |
| UK | Dr. B. Hinde | NERC, Swindon |
| | Dr. C.W. Fay | NERC-RVS Chairman |
| | Mr. J.W. Ramster | MAFF, Lowestoft |
| | Ms. C. Harper | NERC, Swindon |
| | Mr. J.A. Morrison | SOAFD, Aberdeen |
| | Mr. C. Adams | NERC-RVS |
| | Mr. F. Curry | BAS, London |
| USA | Ms. E. Dieter | NSF, Washington |
| | Dr. D. Heinrichs | NSF, Washington |
| | Prof. D. Nixon | Univ. of Rhode Island, Kingston |

Special guest: Mr. Frank Verdon, former secretary of ISOM

Apologies for absence

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|---|---|---|
| Canada | Dr. J. E. Elliott | BIO, Dartmouth |
| France | Dr. D. Girard | IFREMER, Paris |
| | Mr. F. Goutorbe | IFRTP, Plouzane |

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| Germany | Dr. D. Kohnke | BSH, Hamburg |
| Netherlands | Dr. J.H. Stel | GOA, The Hague |
| UN | Mr. D. Daniels | FAO, fisheries division, Italy |
| USA | Cpt. M. R. Mulhern | NOAA, Silver Spring |
| | R-Admiral W.L. Stubblefield | NOAA, Silver Spring |

# 1. WELCOME

Dr. Charles Fay, superintendent of NERC Research Vessel Services, welcomed on behalf of the director of the Southampton Oceanography Centre (SOC), Prof. John Shepherd, all 28 participants from 11 countries and 3 international organisations to the tenth ISO-Meeting. Especially welcomed were the new international members from Chille, Mr. E. Aranda, and from Germany Prof.dr. G. Kortum. Also welcomed were special participants from the UK, Dr. F. Curry (BAS) and Dr. A.I. Weinstein (ONR).

The final draft-agenda was distributed and amended according to the last comments. Dr. Fay explained the lay-out of the new building and some administration and safety regulations within SOC. Dr. Fay reported further on the special ISOM workshops held during this week and organised by RVS; 1) International Marine Technicians' Workshop, sponsored by the EC and 2) Workshop on Autosubs. Preliminary reports on the workshops will be presented on the second day. The final reports will be attached to this year's minutes.

# 2. MINUTES OF THE NINTH MEETING

The French contribution in agenda item "Research Fleet Changes" was left out. In an attempt to have all ISOM minutes on the ISOM WWW site some difficulties were encountered getting the last draft minutes of the ninth meeting ready. Except for the French contribution the minutes were accepted as a true record of the ninth meeting held in Cape Town, South Africa, on 3 and 4 October 1995.

# 3. REPORTS OF ACTIVITIES

## a. Fleet Activities and Changes

Mr. Pollentier (Belgium) reported that no changes in the fleet occurred, RV Belgica being the only research vessel. Recently a new data acquisition system has been installed aboard the ship and also a clean laboratory 20 feet container has been acquired. RV Belgica continued her successful operation in the North Sea. Additionally two cruises took place in the Bay of Biscay and the North Atlantic for a major EC-MAST program.

Mr. Aranda (Chile) explained that the research vessel fleet in Chile is formed by three ships; *Abate Molina*, *Carlos Porter* and *AGOR Vidal Gormaz*. The first two are operated by the Instituto de Fomento Pesquero and the last belongs to the Navy (Hydrographic and Oceanographic Service). The research carried out by this fleet are dedicated to oceanographic condition monitoring (El Nino phenomenom) and to participating in international programmes such as WOCE anf JGOFS.

Ms. Lahdes (Finland) reported that no changes in fleet, RV *Aranda* being the only vessel. However, the activities include extensive unattended monitoring of the Baltic surface waters by several merchant ships where flow-through equipment consisting of thermo- salinograph, fluorimeter and water sampler for nutrient

and phytoplankton analyses, are installed. In the beginning of

this year RV *Aranda* experienced a camshaft failure when on her way from Cape Town to the Weddell Sea. It was repaired in Cape Town and the delay of one week was made up. The final reason for the failure is not yet known. In November repair work to improve the sound proofing in laboratories will start. It also will include some work in the engine room. About 1.2 million USD is reserved for this work. Some smaller improvements are also done according to the wishes of scientists. In near future the fire exhaustion system in labs and engine room based on halogen has to be replaced by $CO_2$-system due to the prohibition of freons. To compensate for RV *Aranda* during her expedition in the Southern Ocean a Russian research vessel *Victor Buinitsky* was chartered for one months time. Hard ice conditions in the Baltic last winter limited the choice.

Mr. Castrec (France) presented the Ifremer Research Fleet changes. The building of the new research vessel *Thalassa* continued during 1995 and she was fitted out in the wet dock in 1996. The RV *Thalassa* has made her first research cruise "PROSPEC" on 27$^{th}$ June 1996. The first cruise of our partner IEO will be carried out in March 1997. The modernisation of the oceanographic vessel *Le Suroit* is scheduled for the second semester of 1997. The RV *Le Noroit* commissioned in 1971 left the fleet in July 1996. The new owner is the government of Faeroes.

Dr. Strohm (Germany) reported that there were no changes in the fleet of research vessels (new, additional vessels resp. vessels going out of service). However, presently there are discussions and consultations between the Federal Government, the Coastal States and the Research Institutes with regard to a new regime for the medium-sized research vessels. The intention is to come to a similar organisation for the medium-sized ships as for the three large research vessels (*Meteor, Sonne* and *Polarstern*) by consolidating cruise planning and usage of the vessels. At the time being ship time applications for the three large ships are considered and evaluated nation-wide while ship time applications for the medium-sized ships compete only with other programmes of those institutions where the single vessels are linked to.

Mr. Tahiro (Japan) presented that deep sea RV *Kairei*. JAMSTEC's new vessel *Kairei* was launched on July in 1996 and was delivered on March in 1997 from the shipyard (Kawasaki Heavy Industrie,LTD.). *Kairei* is designed to engage in surveying deep sea bottoms such as trenches by serving as exclusive mother ship for 10,000m class remotely operated vihicle *Kaiko*. *Kairei* is equipped with varied devices (e.g., multi-channel seismic profiler capable of exploring complex structures of plate subduction zones) for studying deep sea bottom surface layers, faults and other geological morphologies, making it fit for integrated research in trenches and sea floor areas of the world. and that Oceanographic Research Vessel *Mirai*. The other JAMSTEC's new vessel *Mirai* is reconstructing from the *Mutsu* that was the atomic experimental vessel (she was launched in 1969) and will be delivered on September 1997 from the shipyard (Ishikawajima-Harima Heavy Industries Co.,Ltd. and Mitsubishi Heavy Industries Co.,Ltd.). *Mirai* is mounted with many and various high-accuracy observation equipment, and engage in marine meteorological observation and research on global scale for exteded periods. *Mirai* is also equipped to deploy a batch of ocean observation buoys, and is equipped with the Doppler rader, the Rosette water sampler, the Ocean Lidar and so on.

Ms. Rietveld (Netherlands) reported that no changes in research fleet are foreseen. RV *Pelagia* operated successfully for some major programmes in the North Sea, on the Continental Shelf in the Bay of Biscay and the North Atlantic. The Navy operated Tydeman completed a trans Atlantic cruise for a major research programme.

Mr. Goosen (South Africa) reported that Sea Fisheries, because of financial reasons and due to mechanical problems that were experienced on RV *Africana* and *FRS Algoa*, could keep its fleet at sea for only 130 to 180 days during 1996. The ships were used along the South African coast line for biomass estimations of the major exploited marine species and during these cruises environmental studies were also conducted. New trawl warps and a bow thruster were fitted to RV *Algoa* and an investigation is undeway for the replacement

of the 38 years old 37m RV *Sardinops.*

Mr. Diaz (Spain) presented the news about the RV Hesperides. She operated successfully in the past season (October 95 - June 96) in the Atlantic, Antarctica and Eastern Pacific. Technical staff has grown now to 15 people for supporting the future scientific cruises. The traction winch recently installed with 10.000 m wire of 16 mm diameter was successfully used for coring in the South-Eastern Pacific off Chile. Recently, the schedule for the next season has been fixed: October 96 - June 97 in the Alboran Sea Antarctica and Caribbean. The cruises included several multipurpose campaigns, some of them under the umbrella of WOCE, JGOFS and MAST international research programmes .

Mr. Adams (UK) reported that NERC-RVS continues to operate the Royal Research Ships Discovery, Charles Darwin and Challenger. BAS also operates RRS's James Clark Ross and Bransfield. RRS Discovery has completed five major cruises in the Mid and North Atlantic Ocean. She had one significant problem. On trying to deploy a Giant Piston Corer, it was discovered that the ship's structure and the structure and strength of the mechanical handling system (gantries and wires) was inadequate to cope with the major dynamic loads being imposed. As a result a careful (finite element analysis) study was carried out and a programme of strengthening the critical parts of the ship was implemented. As a result, the UK will shortly have a safe platform from which to launch giant corers. RRS Charles Darwin has completed seven major cruises in the North Atlantic, making full use of her SIMRAD Multi-beam Echo Sounder on some cruises. She had been scheduled to visit the Red Sea for oceanographic work, but local hostilities in the very area of intended work caused the expedition to be cancelled. RRS Challenger has had a very full programme of cruises around the UK in the North Sea and off the coasts of Scotland and Ireland. The Marine Scientific Equipment Pool has been upgraded with investment in new equipment. In particular the seismic multi-channel logging system is currently being replaced with a modern system. The ship-to-shore communication systems are being modernised to provide full electronic data transfer facilities, in response to the rapid increase in demand. A study was conducted into the design of a replacement ship for RRS Challenger.

Mr. Morrison (UK Scotland) Mr Morrison ( UK Scotland) reported that the SOAEFD research vessels *Scotia* and *Clupea* had continued to operate very full programmes successfully over the last year - with *Clupea* operating in the North Sea and to the west of Scotland and with *Scotia* operating both in the North Sea and in the North Atlantic - from Faeroe and Norway in the north to the Celtic Sea in the South. In January 1996, Ferguson Shipbuilders Limited of Port Glasgow were awarded a £19.25 million contract for the construction of a 68 metre replacement for the 25 year old FRV *Scotia*. Construction work on this vessel started in July 1996. This vessel has been designed to operate from 40' N to 63' N and from 20'W to 10'E for cruises of up to 30 days endurance. The vessel will be diesel electric, fitted with a single fixed pitch propeller, and will have a cruising speed of 13 knots. The vessel will carry 12 scientists and a crew of 17 and has been designed as a sophisticated pelagic and demersal fishing vessel as well as one designed carry out a wide variety of oceanographic sampling. Special efforts have also been made to ensure a low underwater noise signature - to facilitate acoustic survey work. To achieve the various requirements in a relatively small vessel has been a major design task which has resulted in some unconventional features. The vessel is to be equipped with de-mountable container laboratories that fit within the structure of the ship (to reduce turn- around time between cruises with different tasking), a system of sophisticated cranes and tension controlled winches to reduce the problems caused by pendulation during package handling over side and a large drop keel to deploy acoustic transducers below the hull entrained bubble layer in bad weather. The new vessel is due to come into operation in early 1998.

Ms. Dieter (USA) reported that the upgrade of the UNOLS fleet continues. The Atlantis II was retired from the fleet in July of 1996. The Agor 25 (RV Atlantis) will replace the A II as the Deep Submergence support ship and will be operated by Woods Hole Oceanographic Institution. The vessel is currently under construction and is expected to be operational in June 1997. Atlantis will support the DSV Alvin and the ROV´s. The RV Rodger Revelle (Agor 24) was delivered to Scripps Institution of Oceanography in July 1996. The completion of the new Agor's will bring the number of large UNOLS ships to six - Ewing, Melville, Knorr,

Thompson, Revelle and Atlantis. All of these ships are outfitted with a multibeam system. The intermediate class mid-life refits are now completed. The New Horizon (SIO) mid-life was completed in early 1996. The vessels undergoing upgrade were Oceanus, Endeavor, WecomA, Johnson and New Horizon. Mid-lifes are being considered for two Cape Class vessels -- Point Sur and Cape Hatteras. The small ship inventory essentially remains unchanged, however a replacement for the Blue Fin is in the design stage and the 95' Urraca (Smithsonian) has entered the fleet. The total sea days for the fleet in 1996 is slightly down from previous years. This is due to the winding down of the large programs, such as WOCE and JGOFS, and a level science budget. As a result, one Cape Class vessel (Cape Hatteras) is currently in lay-up status. Although it is not anticipated that any vessels will be laid up in 1997 the NSF and ONR use of the fleet is expected to remain flat. UNOLS is currently negotiating with NAVOCEANO and NOAA for use of excess ship time. The use of the UNOLS fleet by these two agencies will provide new funding sources and positive schedules for several ships.

Dr. Heinrichs added that the US coast guard will have a new ice breaker.

The secretary reported, on behalf of Dr. Elliot (Canada), that planning is underway to provide the scientific ship requirements in Canada from the amalgamated Canadian Coast Guard and DFO science fleet. The objective of this approach is to achieve fleet efficiency through multi-tasking of vessels. This model will still allow for some vessels to be dedicated to scientific program however a balance is preferred where all previously unused but available time from ships nominally assigned to Coast Guard duties will be filled to the maximum possible with other programs such as our scientific requirements and the dedicated vessels be kept to a minimum. Also we are proceeding implement a program management style whereby the ship days will be purchased by each program. It is expected that the Hudson will be available for the 1997 field season. An alternate vessel to replace the Hudson is under discussion, to be achieved through a modification to an existing vessel. It is expected that two to three years will be required for this transition multi-tasking to be completed.

The secretary also reported on behalf of Cpt. Mulhern, that a number of changes affecting the National Oceanic and Atmospheric Administration fleet have occurred during the past year. Two research vessels are joining the NOAA fleet, while several have been retired recently. The NOAA Ship Ronald H. Brown, named for the U.S. Secretary of Commerce who was killed in an aircraft accident in Bosnia, was launched May 30, 1996 and will be delivered in March 1997. It is similar to the Thompson, Atlantis, and Revelle which were built by the US Navy for the UNOLS fleet, and was built under the same contract. Conversion of a former US Navy T-AGOS vessel was completed this year. Uniquely configured for handling oceanographic moorings and related oceanographic research, it is now in service and is named the NOAA Ship Ka'Imimoana. Two well known NOAA ships, the

Discoverer and Malcolm S. Baldrige (formerly the Researcher), were decommissioned in August. They joined the NOAA ships Oceanographer, Fairweather, and Davidson that were previously decommissioned and will be disposed of. NOAA presently operates 8 fisheries, 3 nautical charting, and 4

oceanographic and coastal research vessels. Chartering to full fill part of each mission requirement has increased. NOAA works closely with the National Science Foundation, Office of Naval Research, and the UNOLS fleet, and now charters a significant amount of ship time from UNOLS academic institutions. Aboard NOAA research vessels a large percentage (approximately 75%) of members of the scientific parties continue to be from academic institutions and international organisations.

## b. Ship Time Barter - Exchange, Staff Exchange and Equipment Lost

Mr. Diaz reported that Pedro Jornet, the young senior mechanics of CSIC (Spain), spent time at NERC

Research Vessel Services in the Southampton Oceanography Centre last August. He has been discussing with the different departments the many technical issues related to the scientific operations at sea, such as safety rules, maintenance procedures, etc. The experience has been considered as a success.

Mr. Diaz also reported that in February 1995, 8 moorings with current meters and sediment traps were deployed in the Bransfield Strait (Antarctica) for one year. When going to recover in February 1996 only three of the moorings were recovered. The cause of the problem still remains unknown.

Ms. Rietveld (Netherlands) reported the loss of a 125 meter mooring in the Bay of Biscay last June and the loss of a bottom lander adrift at 10.000 feet in the North Atlantic since September. Both instruments are reported to the lost equipment site of OCEANIC. The loss of another mooring could be prevented by the instalment of a radio-transmitter that revealed its position by satellite when adrift. It was successfully recovered and deployed again.

Mr. J.X. Castrec (France) reported the ship time exchange with USA and Germany. In December 1995 the RV Nadir (with Nautile) has provided 3 dive days for NSF (ODP Naut cruise). From 12 April 1996 to 16 May 1996 the French cruise ETAMBOT/2 was carried out on RV Edwin Link. In September 1996 (Toulon 12-09-96 / Toulon 28-09-96) the RV Le Suroit operated by IFREMER has provided 17 days for the University of Berlin.

Mr. Zaitsu (Japan) mentioned staff exchange with NOAA. On equipment losses a list was distributed of the loss of three moorings, a seismograph and a magnetometer.

Mr. Goosen (South Africa) reported that in 1996 Sea Fisheries (South Africa) had chartered RV *Algoa* to NERC for current meter retrievals. With the USA a joint fish egg survey on board RV *Algoa* was executed. Finally a joint intercalibration and fish behaviour survey was done with the *FRS Africana* and the *FRS Dr Fritjof Nansen* (participating countries were SA, Namibia, Norway, France, USA and Angola). In future years, joint research ventures like these will become more frequent, especially in assisting the Southern African Development Countries (SADC) with their research development. In 1996 Sea Fisheries staff assisted the USA with current meter retrievals in the Southern Ocean on board *SAS Outeniqua* and Namibia with fish behaviour studies on board the *Dr Fritjof Nansen.* In 1996 only two current meters were temporarily "lost" at a squid research station.

# 5. INSURANCE OF RESEARCH SHIPS

Last year in Cape Town all ISOM members present agreed to comply with a minimum standard package for P&I with a 15 -25 million US$ coverage for a research vessel. This agreement was reaffirmed in this year's meeting. Prof.dr. Dennis Nixon (USA), marine legal advisor to UNOLS, presented a draft report of the Willis Corroon Group on a special insurance package for research vessels and explained the principal features and its scope of coverage. Although designed for UNOLS the insurance programme is applicable world wide. Terms and conditions will reflect the different national legislation. This report can possibly offer a good starting point to achieve at least a common level of liability insurance. The report will be distributed among the ISOM members as soon as an up-date revision is available. From the discussion it became apparent that every country would have to find a solution for its specific problems in finding a governmental and/or institutional approval.

A short discussion was held on the question of Autosub insurance. The main issue here is the liability question discussed during the ISOM working group on autonomous submersibles (see next agenda item). The agenda item was concluded by Mr. Zaitsu (Japan) with a presentation on present JAMSTEC fleet insurance.

# 6. REPORT ON WORKING GROUP ON AUTOSUBS

Mr. Adams (UK) reported on the discussion held in the working group on autonomous submersibles. A full report of this working group will be added to the minutes. After a brief discussion the chairman concluded that this investigation should be continued. Developments on this subject will be reported to ISOM.

# 7. PERFORMANCE INDICATORS

The chairman asked Dr. Hinde (UK) to introduce this subject. Dr. Hinde explained that within the scientific community the number and quality of scientific papers were the performance indicators. The relationship between the scientific output and the money put into, for instance, a marine research institute is clear. For ship operators however this relationship can not be used to indicate its performance. Are indicators like; the number of days at sea versus idle, station days versus number of days out of harbour, equipment lost at sea and days lost at sea (caused by any performance except weather conditions), indicators for ship operators for good performance? Or should an indicator like, good data versus bad data collected, be used? An indicator only the scientist can assess after a cruise. After the introduction a discussion evolved in which the participants were able to explain their opinion. In general no quantitative performance indicators were used to justify the marine research facility costs to the funding agencies. Often a strategic plan with a projection into the future was used to approve the nature and volume of the facilities. In some countries a form of post cruise review report (see attached example of NERC-RVS review of performance indicators) was used to have a qualitative performance indicator. However, is was known that most practical criticism were quickly forgotten before it reaches a post cruise review report.

The chairman concluded the discussion that for ship operators no clear performance indicators are used. If they would be available it would be easier for ship operators to assess the nature and the volume of the marine research facilities especially towards funding agencies and to improve the service more effectively.

# 8. ISOM PRESENTATION ON INTERNET

The chairman distributed a concept terms of reference for ISOM. After a brief discussion and some proposals for changes the amended terms of references were accepted to be used on the ISOM WWW pages. The secretary was asked to review the present ISOM WWW pages in co-operation with Ms. Bouton (OCEANIC).

# 9. OCEANIC DATABASE AND RESEARCH PLANNING - FUTURE USE

Ms. Bouton (OCEANIC) explained that OCEANIC is not receiving up-dates of research planning on a regular bases from the participants. The use of OCEANIC database based on out-dated information becomes therefore less effective. Also based on the number of queries per year and as a tool for ship time exchange the importance of OCEANIC database was emphasised. The use of a database however is dependent of the information in it. When information in a database is out dated then the use of that database decreases. Within their organisation ship operators have the most up-to-date schedule available. The step to send this information to OCEANIC seems quite often one step to much. Perhaps when OCEANIC can contact the participant's local computer network automatically it can extract the most up-to-date schedules without any action of the ship operators. Technically speaking this kind of Internet "harvesting" is available already. The

only thing ship operators have to do then is to make the information available on a local network server. The chairman asked Ms. Bouton to make a proposal to change the set-up of OCEANIC regarding research ship schedules. This proposal should be discussed and approved during next year's meeting.

# 10. REPORT OF INTERNATIONAL MARINE TECHNICIAN WORKSHOP

The chairman introduced Mr. Ken Robertson (NERC-RVS), who chaired the INMARTECH 96. Mr. Robertson reported extensively on the Workshop and added that the final report of the workshop will be available with the ISOM minutes and on Internet site. After the report a brief discussion developed to evaluate the first INMARTECH. It was stated that information exchange on a technical and operational level is of mutual interest to assist marine science better. That translation facilities were available was a great advantage for the information exchange. It is of importance that marine management will become aware of these workshop, allowing marine technicians to participate. The discussion was closed by a short impression of Mr. Miyazaki (Japan) who participated in the Workshop.

The chairman concluded with the suggestion to develop the bi-annual INMARTECH further and to organise the second in co-operation with the RV-tech meetings in the USA.

# 11. UPDATE ON SCIENTIFIC DIVING REGULATION

Dr. Marco Weijdert (EC) reported that a draft paper on this subject is in its final form. The overall conclusion will be that all basic training certificates will be allowed, but that these certification will be evaluated. The paper seems to meet an European and international agreement. The final report will be made available for ISOM as well.

# 12. THE UNITED NATIONS "YEAR OF THE OCEAN" 1998

Dr. D. Heinrichs (USA) explained that the UN declared 1998 to be the year of the ocean. This should be an opportunity for all levels of government, and for each individual, to reflect on the situation and to consider the action needed to undertake our common responsibility to sustain one of the world's greatest benefits and common responsibility (see attached sheet on this subject). The proposal is to create a global marine research programme, using national programmed cruises in a global coverage. This global marine research programme should be plotted on a map at Ocean Expo '98, together with displays of the regional programmes, sponsors and vessels participating. The participants of ISOM are asked to assist UNESCO to create this global marine research programme. Mr. Hayashi explained that Japan will plan an Atlantic Ocean cruise in 1998 with Sinkai 6500. One of the Japanese research vessels will visit Expo '98. A number of participants promised to have a research vessel visit Expo '98 in case it fits in there research planning.

# 13. DIPLOMATIC CLEARANCE FOR RESEARCH VESSELS

Ms. Dieter introduced this subject, explaining that there is a growing trend in problems with obtaining diplomatic clearance of coastal states for marine research in there Exclusive Economic Zones (EEZ), even with countries with ISOM participation. In some case the diplomatic clearance was not received in time. To

apply the rule of implied consent too often might be endangering future marine research. Most of the participants mentioned examples in which similar problems were encountered. Mr. Weijdert reported that steps are taken within the EC to propose for scientific marine research to abolish the application. He will keep ISOM informed on the developments. The chairman concluded that using ISOM network participants should plan well in advance and suggested that participants might try to assist in each others national diplomatic clearance procedure.

# 14. SAFE DEPLOYMENT OF DEEP SEA CTD´s

The chairman introduced Mr. John Gould of the WOCE project office. Mr. Gould gave a brief explanation of the international WOCE experiences with high quality CTD capability, especially in very deep waters (> 3000 m). Japan and Germany reported that they are studying technology improvements for deployment for over 4200 m. water depth. The question was raised of how to get information on experiences and problem solving widely circulated. The chairman suggested that ISOM might take steps to organise a working group on this subject together with the WOCE Office.

# 15. INTERNATIONAL SAFETY MANAGEMENT (ISM) CODE

Ms Rietveld introduced the subject. The ISM compliance timetable requires that from July 2002 on all RV's have to comply. Preparation and implementation mean a huge effort for ship-owners and operators. For the Dutch research vessels preparation not yet started. She enquired after the situation with other ISO members. Members that already are underway could possibly be of help with their experience to others. US and Japan are in various stages of preparation for 2002 as deadline. METEOR of Germany has a passenger status and is preparing for 1998. Mr. Ramster (UK) mentioned that MAFF already had the certificate, and promised to prepare a note for ISOM.

# 16. Any other business

Mr. Goosen (South Africa) asked ISO members' attention for the serious manning problems SFRI has to cope with since premiums on leaving Governmental jobs had been installed, whereas at the same time operational budgets had been cut. SFRI is in serious need of external funds for direct costs. Therefore it offers its vessels for charter for fuel costs only.

The chairman reminded ISOM that this year ISOM was held for the tenth time. He explained that within ISOM the executive secretary play an important part as the memory of the group, while the chairman changed every year. For the relatively new members he introduced Frank Verdon, the secretary of ISOM from 1986-1991. Frank Verdon was greeted warmly by the others. Frank Verdon thanked the chairman for inviting him to this special occasion and gave a presentation on ISOM history (enclosed)

It was agreed unanimously that ISOM would continue to be an annual event.

# 17. DATE AND PLACE OF NEXT MEETING

The chairman closed the Tenth ISO-meeting and thanked all participants for their contribution. He informed the meeting that Spain invited all participants next year to Barcelona for the Eleventh meeting on 2 and 3

October 1997.