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INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION
(of Unesco)

THE IGOSS (INTEGRATED GLOBAL OCEAN SERVICES SYSTEM)
TRAINING AND ASSISTANCE PROGRAMME:
A DRAFT POLICY DOCUMENT

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While commending for the valuable efforts made by the ad hoc Sessional Group of the Joint IOC/WHO Working Committee for IGOSS and the IGOSS/TEMA Co-ordinator in bringing forth this Draft Policy Document, the IOC Secretariat wishes to draw the attention of the Working Committee for TEMA to the relevant section of the Summary Report of the Twelfth Session of the Assembly that reads (paragraph 214): "The Assembly considered that, in view of increased co-operation between IOC and Unesco Regional Offices for Science and Technology, and the new responsibilities assigned to their Marine Science Officers to act as IOC Assistant Secretaries for the Commission's regional subsidiary bodies in their respective areas, the functions of regional TEMA Co-ordinators should be reviewed by the Fourth Session of the Working Committee for TEMA, to determine whether such Co-ordinators are necessary or not."

When considering this Draft Policy Document, the Working Committee for TEMA should also bear in mind the relevant section (Item 5) of the Action Paper (Document IOC/TEMA-IV/8) which elaborates further on the possible future role of the major technical and regional subsidiary bodies of the Commission in the definition of priorities and promotion of required actions under TEMA.

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INTEGRATED GLOBAL OCEAN SERVICES SYTEM (IGOSS)

THE IGOSS TRAINING AND ASSISTANCE PROGRAMME:
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March 1984

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1. INTRODUCTION

1.1 The IGOSS Training and Assistance Programme is intended to enable developing countries to participate actively in IGOSS activities. Considerable attention is given by IOC and WMO, within their relevant aid programmes, to the subject of training and assistance for IGOSS purposes. The fields of synoptic oceanography, oceanic observations, data processing and archiving, preparation and application of products and services are particularly emphasized. The IGOSS Training and Assistance Programme can be considered as a supporting activity for the efficient and effective implementation of the three essential elements of IGOSS that are:

- (a) the IGOSS Observing System (IOS) consisting of various facilities and arrangements for obtaining standardized oceanic observations from research ships, ships-of-opportunity and voluntary observing ships, ocean weather stations, automated means such as buoys and fixed platforms and cosmic means such as satellites and aircraft;
- (b) the IGOSS Data Processing and Services System (IDPSS) consisting of national, specialized and world oceanographic centres for the processing of observational data, the provision of products, services and operational data exchange activities to various marine user groups;
- (c) the IGOSS Telecommunication Arrangements (ITA) consisting of telecommunication facilities of the Global Telecommunication System of the World Weather Watch of WMO and other arrangements necessary for the rapid and reliable collection and distribution of the required observational data and processed information.

(Note: The above division of essential elements of IGOSS are closely inter-dependent and should not be interpreted as completely separate entities.)

1.2 In order to specify: (i) the needs of developing countries that decided to participate in some elements of IGOSS, and (ii) the contribution that countries already active in IGOSS could make available to the IGOSS Training and Assistance Programme, a questionnaire was sent to all IOC and WMO Member States under the Joint IOC/WMO Circular Letter No.82-72 dated 4 January 1982. Analyzing the answers revealed that the main impediment to implementing the Programme lay in the discrepancy between the requests and the offers. Grounds for such a discrepancy were found to be twofold:

- (i) on the one hand, some of the requesting countries are not fully aware of what IGOSS actually is, and the way they might participate in the system. They therefore are inclined to use such an opportunity as the IGOSS Training and Assistance Programme to develop their capabilities in general fields of marine sciences or meteorology;
- (ii) on the other hand, potential donor countries might under-estimate the benefit to the overall system of the increased participation of other countries in IGOSS. They therefore accord low priority to contributions to the IGOSS Training and Assistance Programme.

1.3 The Joint IOC/WMO Working Committee (JWC) for IGOSS at its Third Session (Paris, 21 February - 2 March 1983) decided therefore that a TEMA policy document relating to IGOSS questions would be prepared and submitted to Member States for comments.

2. BASIC PRINCIPLES

2.1 The philosophy adopted to formulate a TEMA policy relating to IGOSS is based upon two principles which are complementary to one another. Any kind of assistance provided to a country within the framework of IGOSS should:

(i) be compatible with a more general plan aimed at enhancing the capabilities of that country in the field of marine activities (such as, for example, the one described in the Comprehensive Plan for a Major Assistance Programme to Enhance the Marine Science Capabilities of Developing Countries (document IOC/EC-XV/8 Annex 5 rev.) adopted by the IOC Assembly at its Twelfth Session). This principle derives from the fact that no country can either participate in, or benefit from, an operational system such as IGOSS without a minimum level of skill and expertise in marine affairs in general; and,

(ii) carry a pledge from the recipient country to increase its participation in the programme. This principle derives from the very nature of IGOSS as a global operational oceanic system consisting of national facilities and services provided by participating Member States. Any national outlay can and must benefit the overall community.

2.2 In addition to these basic principles, it should be kept in mind that the IGOSS Training and Assistance Programme mainly relies on existing assistance programmes, such as the IOC Voluntary Assistance Programme (IOC-VAP), the WMO Voluntary Co-operation Programme (WMO-VCP), the United Nations Development Programme (UNDP), etc., but could also include specific bilateral or multi-lateral agreements for assistance arranged on a case by case basis.

3. REVIEW OF MATTERS WITHIN THE IGOSS TRAINING AND ASSISTANCE PROGRAMME

3.1 Taking into account the first basic principle, it would be preferred to convey requests for assistance in IGOSS matters through a national mechanism for co-ordinating ocean activities. An example of such a mechanism, called National Oceanographic Committee, is described in the afore-mentioned document IOC/EC-XV/8 Annex 5 rev.; IOC Member States have been urged (by IOC Resolution XII-8) to establish National Oceanographic Committees or equivalent bodies. As far as IGOSS is concerned, co-ordination at the national level should be undertaken by the National Representative for IGOSS (see attached Annex I: IGOSS Memorandum Sheet-I), who therefore should participate in the work of whatever national mechanism for co-ordinating ocean activities exists within the Member State.

3.2 It should be stressed that a country not having established such a national co-ordinating mechanism, nor having designated a National Representative for IGOSS, might find some difficulties for receiving assistance for IGOSS purposes because of IGOSS' inability to work outside official mechanisms. Well-defined channels need to be established for the effective exchange of information between international activities and the diverse agencies of any single country involved in their implementation. Such information from Member States is requested by IGOSS in order to assess their actual needs and abilities with regard to their possible participation in IGOSS. This assessment is a prerequisite for any kind of assistance to be provided.

3.3 From the second basic principle, it should be understood that any Member State requesting assistance for IGOSS purposes should demonstrate how the requested support would be used for improving its participation in elements of the IGOSS programme and should design a realistic plan to that end. This implies that: (i) the country requesting assistance is knowledgeable enough of IGOSS to be capable of designing such a plan, (ii) the JWC-IGOSS (or any group or individual commissioned by the Joint Working Committee to undertake this task) has to decide if the plan is realistic, and (iii) a suitable national co-ordinating mechanism be established to enable relevant information to be properly exchanged.

3.4 IGOSS is expected to make use of all possible sources of assistance through all possible existing procedures. For example, IGOSS can provide a general framework for some bilateral agreements to be concluded between a requesting and a donor country. Equally, IGOSS can act as a technical adviser for requests relevant to its field of activity and submitted to the IOC-VAP or the WMO-VCP. The IGOSS Training and Assistance Programme is flexible and innovative and developed in co-ordination with existing IOC and WMO mechanisms.

3.5 With regard to IGOSS matters, it should be realized that there are many levels of competence amongst the countries of the world and that each of these levels requires a specific type of assistance. The purpose of the IGOSS Training and Assistance Programme is to help countries progressing in a step-wise fashion from their present level of competence to active participation in the system. Each kind of assistance provided should therefore be tailored for the respective level of competence. No country should be provided with assistance directed at a level of competence beyond its ability. It should be accepted that IGOSS will benefit, at least in the long term, from providing as many countries as possible with suitable assistance.

4. COMPOSITION OF THE IGOSS TRAINING AND ASSISTANCE PROGRAMME

4.1 The rationale for composing the IGOSS Training and Assistance Programme takes into account the four levels of competence A, B, C and D outlined in Diagram 1 with their corresponding needs and sources of assistance. The assistance can range from the provision of IGOSS literature in the appropriate working language up to the donation of a research vessel. IGOSS in itself should be mainly involved in levels A, C and D because level B rather pertains to assistance of a general nature that is needed for IGOSS purposes but not justified by IGOSS requirements only. A preliminary step in examining any request for assistance in the framework of IGOSS should therefore be to assess the level of competence with regard to IGOSS of the Member States requesting assistance. This task falls under the responsibility of the JWC-IGOSS and may be committed to a group or an individual as appropriate.

4.2 The four levels of competence described above apply in a similar way to each element of IGOSS. It is conceivable that the competence of Member States may vary from one element to another. This has to be taken into account when assessing their levels of competence because of the Joint Working Committee may wish to provide assistance aimed at improving one or two elements of IGOSS rather than the overall system for reasons of efficiency or economy.

DIAGRAM 1



A	IGOSS Member States Bilaterals VCP/VAP	No Operational Funds	Operational costs, salaries, software, probes, communication costs
B	UNDP International Agencies VCP/VAP Bilaterals	No Facilities (Capital Funds)	Platforms, facilities, equipment
C	Bilaterals Regional Associations VCP/VAP Trust Fund, Unesco	No Expertise	Training courses, cruises, guides and manuals, stipends and scholarships
D	IGOSS Secretariats VCP/VAP Trust Fund	No knowledge of IGOSS	Consultants, visits, brochures, literature, participation in regional meetings

Level	Sources of assistance	State in IOOSS matters	TEMA needs
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4.3 The levels of competence of Member States with regard to IGOSS should be assessed on a regular basis. The progression of Member States from one level to the next will give an evaluation of the IGOSS Training and Assistance Programme and also a real indication of what levels would be requiring increased priority. The results of the questionnaire attached to the Joint IOC/WMO Circular Letter No. 82-72 could be used initially to that end but further inquiries will be necessary at a later date.

4.4 Each level of competence requires a distinct assistance programme along the following lines:

(i) Level D: This level can be addressed by the provision of literature, by missions of experts to the country concerned, by helping interested scientists of the country attend IGOSS-related meetings, by the supply of educational material, etc. Once the country has a sufficient knowledge of IGOSS and of its potential benefits it can decide whether it wishes to go on increasing its competence in the system and to receive training to that end (level C). Further requests for assistance would imply that the recipient Member State has pledged itself to undertake serious consideration of future active participation in IGOSS.

(ii) Level D: Depending upon the element(s) of IGOSS under consideration, the concerned country has to identify, with the help of experts if required, its training requirements in observational techniques, maintenance of equipment, transmission of data, preparation of products, etc... These requirements will be matched to the offers for training submitted to the IGOSS Training and Assistance Programme. They also may generate new offers. In general, experience shows that the main difficulty lies in funding travel expenses and daily allowances for the trainees. For reasons of efficiency and economy, priority should be given to courses organized on a regional basis. Countries requesting assistance for training should pledge themselves to participate in IGOSS activities to the best of their ability and to designate a National Representative for IGOSS.

(iii) Level B: Countries requesting assistance at this level should possess the required level of technical competence in IGOSS matters (through a properly-trained manpower, for example) and participate in IGOSS at least at a minor level. The requested facilities would enhance their capability in this regard. Related offers for assistance would probably be linked to expectations of the donor countries regarding the use of such facilities in the framework of IGOSS, notwithstanding this specific kind of assistance would sometimes exceed IGOSS requirements.

(iv) Level A: Assistance in the operating costs of IGOSS elements is the final stage of the IGOSS Training and Assistance Programme. Such assistance should be restricted to those countries that would be capable of using it straightforwardly for IGOSS purposes either through enhancing existing national activities or creating new programmes.

5. SETTING UP OF PRIORITIES

5.1 It is to be expected that requests for assistance will exceed the offers by a substantial margin. Some criteria must therefore be applied for

selecting the requests that could be met. Attention is also called to the Guidelines for Implementing an IDPSS Programme in a Selected Ocean Area, contained in the Guide to the IGOSS Data Processing and Services System (WMO Publication No.623).

5.2 Requests for assistance should satisfy the following criteria for acceptance:

- (i) they should be specific;
- (ii) they should contribute to the objectives of IGOSS;
- (iii) the recipient country should have an adequate capacity for making efficient (effective at a low cost) use of the requested support;
- (iv) the recipient country should pledge the involvement of its relevant institutions in the IGOSS programme.

5.3 Requests satisfying the afore-mentioned criteria should be arranged by priority in accordance with the following guidelines:

- (i) the Assistance Programme should ensure a logical progression of countries from the lowest level to the top level. Regular evaluations should be undertaken;
- (ii) requests pertaining to activities that are considered essential to the development of IGOSS (such as the IGOSS Observing System) should have first priority;
- (iii) prime attention should be given to data-sparse oceanic areas (such as the Indian and South Atlantic and Pacific Oceans) and to these oceanic areas where particular efforts are made towards implementing IGOSS on a regional basis (Western Pacific, Caribbean, Central-Eastern Atlantic).

The Joint Working Committee may decide on any other specific guideline to be followed when deciding on levels of priority for individual requests.

6. IMPLEMENTATION OF THE IGOSS TRAINING AND ASSISTANCE PROGRAMME

6.1 At its First Session (Paris, 18 - 27 September 1978), the Joint IOC/WMO Working Committee for IGOSS "decided that the Vice-Chairman of the Joint Working Committee would be responsible for IGOSS/TEMA co-ordination". By Resolution 5 (JWC-IGOSS-I), the Joint Working Committee,

"Recalling IOC Resolution X-19 which "recommends that a TEMA Co-ordinator be appointed by subsidiary bodies of the Commission",

Recognizing the importance of close co-ordination of activities of the Joint IOC/WMO Working Committee for IGOSS with (a) the IOC Working Committee for TEMA for most effective and rational use of available TEMA funds and (b) with related WMO activities.

Recognizing also the need for establishing close liaison between IGOSS and regional activities of IOC and WMO,

Calls upon the Vice-Chairman of the Joint IOC/WMO Working Committee for IGOSS in consultation with the Chairman and Secretariats to appoint an IGOSS/TEMA Co-ordinator who shall assist the Vice-Chairman:

- 1) to establish liaison with related bodies on behalf of the Joint IOC/WMO Working Committee for IGOSS as indicated above,
- 2) to assist in developing TEMA-related components of IGOSS programme implementation,
- 3) to report and make recommendations on requirements for TEMA support to the sessions of the Joint IOC/WMO Working Committee for IGOSS."

6.2 The IGOSS/TEMA Co-ordinator shall therefore be the key person for implementing the IGOSS Training and Assistance Programme. But some of the steps described above (such as assessing the levels of competence of Member States or arranging the requests by priorities) should be undertaken by a group rather than by an individual. It is therefore suggested to establish within IGOSS a Task Team on the IGOSS Training and Assistance Programme made of the IGOSS/TEMA Co-ordinator and the IGOSS Officers (Chairman, Vice-Chairman of the Joint Working Committee; Chairman of the IGOSS subsidiary bodies such as Sub-groups of Experts and Task Teams) and assisted by the IOC and WMO Secretariats. This Task Team could also recruit members from the geographic regions under consideration as appropriate. The Task Team could be assigned the following terms of reference:

- (i) to advise on the level of competence with regard to IGOSS of any country requesting assistance within the framework of IGOSS, or, where necessary, how this could be assessed;
- (ii) to arrange requests for assistance using established priorities;
- (iii) to match, as far as possible, the requests and offers for assistance;
- (iv) to design specific strategies for assistance aimed at improving the implementation of IGOSS in one or another aspect;
- (v) to obtain information to answer questions raised within the framework of the IGOSS Training and Assistance Programme.

The IGOSS/TEMA Co-ordinator (or the Vice-Chairman of the Joint Working Committee) should lead the Task Team and organize its work. For reasons of economy, the Task Team will work by correspondence or take opportunities offered by attendance of its members at other meetings to exchange views.

6.3 The Task Team should take steps towards two urgent objectives:

- (i) Potential donor Member States should be urged, through the Secretariats, to specify full details of:
 - (a) the different kinds of assistance they might be ready to supply to recipient countries,
 - (b) the level of competence with regard to IGOSS that the programmes concerned will address, and,
 - (c) any constraint on the use of this assistance.

This implies the preparation and forwarding of a detailed inquiry, the direct communication with relevant individuals in the concerned countries, or both actions. Subsequent implementation of aid from one country to another or others would usually take place on a bilateral basis.

(ii) It is generally agreed that the most rapid benefit to IGOSS arising from the IGOSS Training and Assistance Programme would arise from a scheme offering expendable bathythermograph (XBT) probes to countries having reached the appropriate level of competence with regard to IGOSS. It is therefore suggested to develop a Pilot Scheme to that end along the general lay-out attached to this document as Annex 2.

ANNEX 1

IGOSS MEMORANDUM SHEET-I

National Representatives for IGOSS

This concept was introduced by the First Session of the Joint IOC/WMO Working Committee for IGOSS (Paris, 18-27 September 1978) in Recommendation 2 (JWC-IGOSS-I) which states inter alia that the JWC

"Recommends that each Member State of IOC and WMO be encouraged to designate a National Representative for IGOSS whose main tasks include:

- 1) acting as the permanent focal points in his country and maintaining contact with the competent national authorities on IGOSS matters,
- 2) promoting co-ordination of efforts and opinions among national services concerned with IGOSS,
- 3) ensuring that all correspondence on IGOSS matters is addressed to both Secretariats,
- 4) communicating with the Secretariats on IGOSS matters within his competence."

The Recommendation was adopted by the Eleventh Session of the Executive Council of IOC (Mexico City, 26 February - 3 March 1979) by Resolution EC-XI.11 and by the Thirty-first Session of the Executive Committee of WMO (Geneva, 28 May - 1 June 1979) by Resolution 8 (EC-XXXI). As a follow-up, the Joint IOC/WMO Circular Letter No.79-56 dated 27 August 1979 invited Members of WMO and Member States of IOC to designate a National Representative for IGOSS. The list of National Representatives for IGOSS has been established from answers to that Joint Circular Letter.

ANNEX 2

LAY-OUT OF A PILOT SCHEME FOR SUPPLYING XBT PROBES
TO SELECTED SHIPS-OF-OPPORTUNITY/VOLUNTARY OBSERVING SHIPS

- (1) Contact Member States requesting the commitment of yearly amounts of XBT probes to this Pilot Scheme. It would be acceptable if a donor country wished to specify the geographical area in which these probes should be deployed.
- (2) Contact Member States possessing or approaching the capability to undertake or expand an operational BATHY programme asking for the commitment of their vessels under such a scheme with a description of the vessel, routes, frequency and method of communicating the data into the IGOSS framework. Additional requirements such as the training of the ship-borne operators, or maintenance technicians and/or the requirements for launchers could be accepted, but for the Pilot Scheme these additional requirements should be easily accommodated.
- (3) The Task Team would decide on the successful applicants, chosen with regard to their capability, acceptability and the usefulness of the anticipated data to the IGOSS system. The data sparse areas of the Southern Oceans could be considered of priority with probes being supplied to the numerous supply vessels transitting these waters in the summer. Alternatively, merchant vessel tracks across the Southern Atlantic, Pacific and Indian Oceans may be preferred.
- (4) Donor countries would be put in touch with addresses in the recipient countries and the Secretariats would monitor the Pilot Scheme. Assistance with Customs clearance could be given where appropriate.
- (5) If suitable recipient countries needed help as identified in (2) above, this assistance would be sought and undertaken before probes were committed.
- (6) Recipient countries receiving probes would make an annual report on the use of the probes and the transmission of the data to IGOSS. Failure to do this, or a low success rate of data to probes, would result in a transfer of the assistance to more profitable areas.
- (7) An evaluation of the success of this scheme would be undertaken by the Task Team and the lessons learnt would be used for continuing and/or implementing other schemes under the IGOSS Training and Assistance Programme.



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1. INTRODUCTION

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DIAGRAM 1



A	IGOSS Member States Bilaterals VCP/VAP	No Operational Funds	Operational costs, salaries, software, probes, communication costs
B	UNDP International Agencies VCP/VAP Bilaterals	No Facilities (Capital Funds)	Platforms, facilities, equipment
C	Bilaterals Regional Associations VCP/VAP Trust Fund, Unesco	No Expertise	Training courses, cruises, guides and manuals, stipends and scholarships
D	IGOSS Secretariats VCP/VAP Trust Fund	No knowledge of IGOSS	Consultants, visits, brochures, literature, participation in regional meetings

Level	Sources of assistance	State in IGOSS matters	TEMA needs
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4.3 The levels of competence of Member States with regard to IGOSS should be assessed on a regular basis. The progression of Member States from one level to the next will give an evaluation of the IGOSS Training and Assistance Programme and also a real indication of what levels would be requiring increased priority. The results of the questionnaire attached to the Joint IOC/WMO Circular Letter No. 82-72 could be used initially to that end but further inquiries will be necessary at a later date.

4.4 Each level of competence requires a distinct assistance programme along the following lines:

(i) Level D: This level can be addressed by the provision of literature, by missions of experts to the country concerned, by helping interested scientists of the country attend IGOSS-related meetings, by the supply of educational material, etc. Once the country has a sufficient knowledge of IGOSS and of its potential benefits it can decide whether it wishes to go on increasing its competence in the system and to receive training to that end (level C). Further requests for assistance would imply that the recipient Member State has pledged itself to undertake serious consideration of future active participation in IGOSS.

(ii) Level D: Depending upon the element(s) of IGOSS under consideration, the concerned country has to identify, with the help of experts if required, its training requirements in observational techniques, maintenance of equipment, transmission of data, preparation of products, etc... These requirements will be matched to the offers for training submitted to the IGOSS Training and Assistance Programme. They also may generate new offers. In general, experience shows that the main difficulty lies in funding travel expenses and daily allowances for the trainees. For reasons of efficiency and economy, priority should be given to courses organized on a regional basis. Countries requesting assistance for training should pledge themselves to participate in IGOSS activities to the best of their ability and to designate a National Representative for IGOSS.

(iii) Level B: Countries requesting assistance at this level should possess the required level of technical competence in IGOSS matters (through a properly-trained manpower, for example) and participate in IGOSS at least at a minor level. The requested facilities would enhance their capability in this regard. Related offers for assistance would probably be linked to expectations of the donor countries regarding the use of such facilities in the framework of IGOSS, notwithstanding this specific kind of assistance would sometimes exceed IGOSS requirements.

(iv) Level A: Assistance in the operating costs of IGOSS elements is the final stage of the IGOSS Training and Assistance Programme. Such assistance should be restricted to those countries that would be capable of using it straightforwardly for IGOSS purposes either through enhancing existing national activities or creating new programmes.

5. SETTING UP OF PRIORITIES

5.1 It is to be expected that requests for assistance will exceed the offers by a substantial margin. Some criteria must therefore be applied for

selecting the requests that could be met. Attention is also called to the Guidelines for Implementing an IDPSS Programme in a Selected Ocean Area, contained in the Guide to the IGOSS Data Processing and Services System (WMO Publication No.623).

5.2 Requests for assistance should satisfy the following criteria for acceptance:

- (i) they should be specific;
- (ii) they should contribute to the objectives of IGOSS;
- (iii) the recipient country should have an adequate capacity for making efficient (effective at a low cost) use of the requested support;
- (iv) the recipient country should pledge the involvement of its relevant institutions in the IGOSS programme.

5.3 Requests satisfying the afore-mentioned criteria should be arranged by priority in accordance with the following guidelines:

- (i) the Assistance Programme should ensure a logical progression of countries from the lowest level to the top level. Regular evaluations should be undertaken;
- (ii) requests pertaining to activities that are considered essential to the development of IGOSS (such as the IGOSS Observing System) should have first priority;
- (iii) prime attention should be given to data-sparse oceanic areas (such as the Indian and South Atlantic and Pacific Oceans) and to these oceanic areas where particular efforts are made towards implementing IGOSS on a regional basis (Western Pacific, Caribbean, Central-Eastern Atlantic).

The Joint Working Committee may decide on any other specific guideline to be followed when deciding on levels of priority for individual requests.

6. IMPLEMENTATION OF THE IGOSS TRAINING AND ASSISTANCE PROGRAMME

6.1 At its First Session (Paris, 18 - 27 September 1978), the Joint IOC/WMO Working Committee for IGOSS "decided that the Vice-Chairman of the Joint Working Committee would be responsible for IGOSS/TEMA co-ordination". By Resolution 5 (JWC-IGOSS-I), the Joint Working Committee,

"Recalling IOC Resolution X-19 which "recommends that a TEMA Co-ordinator be appointed by subsidiary bodies of the Commission",

Recognizing the importance of close co-ordination of activities of the Joint IOC/WMO Working Committee for IGOSS with (a) the IOC Working Committee for TEMA for most effective and rational use of available TEMA funds and (b) with related WMO activities.

Recognising also the need for establishing close liaison between IGOSS and regional activities of IOC and WMO,

Calls upon the Vice-Chairman of the Joint IOC/WMO Working Committee for IGOSS in consultation with the Chairman and Secretariats to appoint an IGOSS/TEMA Co-ordinator who shall assist the Vice-Chairman:

- 1) to establish liaison with related bodies on behalf of the Joint IOC/WMO Working Committee for IGOSS as indicated above,
- 2) to assist in developing TEMA-related components of IGOSS programme implementation,
- 3) to report and make recommendations on requirements for TEMA support to the sessions of the Joint IOC/WMO Working Committee for IGOSS."

6.2 The IGOSS/TEMA Co-ordinator shall therefore be the key person for implementing the IGOSS Training and Assistance Programme. But some of the steps described above (such as assessing the levels of competence of Member States or arranging the requests by priorities) should be undertaken by a group rather than by an individual. It is therefore suggested to establish within IGOSS a Task Team on the IGOSS Training and Assistance Programme made of the IGOSS/TEMA Co-ordinator and the IGOSS Officers (Chairman, Vice-Chairman of the Joint Working Committee; Chairmen of the IGOSS subsidiary bodies such as Sub-groups of Experts and Task Teams) and assisted by the IOC and WMO Secretariats. This Task Team could also recruit members from the geographic regions under consideration as appropriate. The Task Team could be assigned the following terms of reference:

- (i) to advise on the level of competence with regard to IGOSS of any country requesting assistance within the framework of IGOSS, or, where necessary, how this could be assessed;
- (ii) to arrange requests for assistance using established priorities;
- (iii) to match, as far as possible, the requests and offers for assistance;
- (iv) to design specific strategies for assistance aimed at improving the implementation of IGOSS in one or another aspect;
- (v) to obtain information to answer questions raised within the framework of the IGOSS Training and Assistance Programme.

The IGOSS/TEMA Co-ordinator (or the Vice-Chairman of the Joint Working Committee) should lead the Task Team and organize its work. For reasons of economy, the Task Team will work by correspondence or take opportunities offered by attendance of its members at other meetings to exchange views.

6.3 The Task Team should take steps towards two urgent objectives:

- (i) Potential donor Member States should be urged, through the Secretariats, to specify full details of:
 - (a) the different kinds of assistance they might be ready to supply to recipient countries,
 - (b) the level of competence with regard to IGOSS that the programmes concerned will address, and,
 - (c) any constraint on the use of this assistance.

This implies the preparation and forwarding of a detailed inquiry, the direct communication with relevant individuals in the concerned countries, or both actions. Subsequent implementation of aid from one country to another or others would usually take place on a bilateral basis.

(ii) It is generally agreed that the most rapid benefit to IGOSS arising from the IGOSS Training and Assistance Programme would arise from a scheme offering expendable bathythermograph (XBT) probes to countries having reached the appropriate level of competence with regard to IGOSS. It is therefore suggested to develop a Pilot Scheme to that end along the general lay-out attached to this document as Annex 2.

ANNEX 1

IGOSS MEMORANDUM SHEET-I

National Representatives for IGOSS

This concept was introduced by the First Session of the Joint IOC/WMO Working Committee for IGOSS (Paris, 18-27 September 1978) in Recommendation 2 (JWC-IGOSS-I) which states inter alia that the JWC

"Recommends that each Member State of IOC and WMO be encouraged to designate a National Representative for IGOSS whose main tasks include:

- 1) acting as the permanent focal points in his country and maintaining contact with the competent national authorities on IGOSS matters,
- 2) promoting co-ordination of efforts and opinions among national services concerned with IGOSS,
- 3) ensuring that all correspondence on IGOSS matters is addressed to both Secretariats,
- 4) communicating with the Secretariats on IGOSS matters within his competence."

The Recommendation was adopted by the Eleventh Session of the Executive Council of IOC (Mexico City, 26 February - 3 March 1979) by Resolution EC-XI.11 and by the Thirty-first Session of the Executive Committee of WMO (Geneva, 28 May - 1 June 1979) by Resolution 8 (EC-XXXI). As a follow-up, the Joint IOC/WMO Circular Letter No.79-56 dated 27 August 1979 invited Members of WMO and Member States of IOC to designate a National Representative for IGOSS. The list of National Representatives for IGOSS has been established from answers to that Joint Circular Letter.

ANNEX 2

LAY-OUT OF A PILOT SCHEME FOR SUPPLYING XBT PROBES
TO SELECTED SHIPS-OF-OPPORTUNITY/VOLUNTARY OBSERVING SHIPS

- (1) Contact Member States requesting the commitment of yearly amounts of XBT probes to this Pilot Scheme. It would be acceptable if a donor country wished to specify the geographical area in which these probes should be deployed.
- (2) Contact Member States possessing or approaching the capability to undertake or expand an operational BATHY programme asking for the commitment of their vessels under such a scheme with a description of the vessel, routes, frequency and method of communicating the data into the IGOSS framework. Additional requirements such as the training of the ship-borne operators, or maintenance technicians and/or the requirements for launchers could be accepted, but for the Pilot Scheme these additional requirements should be easily accommodated.
- (3) The Task Team would decide on the successful applicants, chosen with regard to their capability, acceptability and the usefulness of the anticipated data to the IGOSS system. The data sparse areas of the Southern Oceans could be considered of priority with probes being supplied to the numerous supply vessels transitting these waters in the summer. Alternatively, merchant vessel tracks across the Southern Atlantic, Pacific and Indian Oceans may be preferred.
- (4) Donor countries would be put in touch with addresses in the recipient countries and the Secretariats would monitor the Pilot Scheme. Assistance with Customs clearance could be given where appropriate.
- (5) If suitable recipient countries needed help as identified in (2) above, this assistance would be sought and undertaken before probes were committed.
- (6) Recipient countries receiving probes would make an annual report on the use of the probes and the transmission of the data to IGOSS. Failure to do this, or a low success rate of data to probes, would result in a transfer of the assistance to more profitable areas.
- (7) An evaluation of the success of this scheme would be undertaken by the Task Team and the lessons learnt would be used for continuing and/or implementing other schemes under the IGOSS Training and Assistance Programme.

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INTERGOVERNMENTAL
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WORLD
METEOROLOGICAL
ORGANIZATION



INTEGRATED GLOBAL OCEAN SERVICES SYSTEM (IGOSS)

THE IGOSSTRAINING AND ASSISTANCE PROGRAMME:
A DRAFT POLICY DOCUMENT

A D D E N D U M

15 AVR. 1985

This Addendum to Document IOC/INF-576 contains a reprint of the sections, that may be relevant to IGOSST, of the Summary Report of the Fourth Session of the IOC Working Committee for TEMA, held in Lisbon from 4 to 9 June 1984.

The IOC Working Committee for TEMA, at its Fourth Session (Lisbon, 4 - 9 June 1984), was presented, inter alia, with Document IOC/INF-576 "The IGOSST Training and Assistance Programme, a Draft Policy Document". Although it did not specifically comment on the document, it came to general conclusions with regard to the TEMA components of the global and regional programmes of the Commission. The following conclusions may influence IGOSST policy in this field:

(i) "The Working Committee having considered various suggestions made by the Delegates came to the conclusion that serious consideration should be given by IOC subsidiary bodies to defining training requirements in more specific terms. The Working Committee, therefore, recommended that whereas the role of major technical bodies (e.g., GIPME, IGOSST, IODE) should be to provide general guidance on methodology, technique, intercalibration exercise and publication, whenever necessary, of pedagogic material relative to their respective programmes, the role of regional subsidiary bodies, because they are responsible for developing, recommending priority co-operative marine science programmes, should be to identify in more specific terms the TEMA components. It also recommended that such TEMA components, as far as possible, should be in the form of a "package" quantifying the specific needs and follow-up of facilities in order that this be acceptable to possible donor countries."

(ii) "The Working Committee noted that, in a number of developing countries, there is a lack of scientific fora where results of scientific research could be discussed periodically and recognizing the importance of such fora to the future development and expansion of IOC programmes, particularly in the regional context. The Working Committee, therefore, recommended that all regional subsidiary bodies of the Commission give due attention to holding symposia and/or scientific workshops immediately prior to their sessions, to allow scientists to present the results obtained during the intersessional period, relating to the selected programmes of the Commission, and that the support of Unesco Division of Marine Sciences and organizations concerned be sought."

(iii) The Working Committee for TEMA was also informed of the conclusions of the IOC Working Committee on International Oceanographic Data Exchange (IODE) at its Eleventh Session (New-York, 9 - 18 January 1984), which "agreed that the concept of TEMA Co-ordinator within the IODE Committee be discontinued" and decided "to establish a Task Team for IODE/TEAM to:

- provide a focal point for assessing in co-operation with the IOC regional offices, regional needs for training, education and mutual assistance for developing countries in order that they can actively participate in the IODE Programme;
- solicit assistance from developed countries in establishing programmes to meet identified training and assistance needs;
- provide advice to the Chairman of the WC/IODE and the Secretary of IOC regarding future TEMA activities;
- provide expertise and assistance to all subsidiary bodies of the Committee in all activities pursuant to TEMA requirements."

After discussion, the Working Committee for TEMA "concluded that the present system of TEMA Co-ordinator for subsidiary bodies is cumbersome and should be abolished. [...]" However, while expressing satisfaction over the decision taken by the Working Committee for IODE, it was the consensus of the Working Committee for TEMA that it was not clear that the same approach would be applicable to all other subsidiary bodies of the IOC.

The Working Committee for TEMA, therefore, requested that the Working Committee for IODE maintain complete documentation on the success, or lack of success, in implementation of the Programme and report to the Working Committee for TEMA at its Fifth Session. The experience of the Working Committee for IODE in this way might be useful if modifications are required to improve co-ordination for assessment of TEMA needs and their implementation to satisfy Member States' needs."