



**INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION
(of UNESCO)**

**MEETING OF THE OFFICERS OF THE INTERNATIONAL CO-ORDINATION GROUP FOR
THE TSUNAMI WARNING SYSTEM IN THE PACIFIC (ICG/ITSU)
6-9 FEBRUARY 2001, HONOLULU, HAWAII, USA**

SUMMARY REPORT

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1. OPENING

The ICG/ITSU Officers meeting took place in Honolulu, Hawaii, USA from 6-9 February 2001 under the auspices of the International Tsunami Information Center (ITIC).

The ICG/ITSU Chairman, Mr. F. Schindele (France), opened the meeting at 10:00 on 6 February 2001. He welcomed the participants and identified the meeting's objectives. He reviewed the progress achieved by the ICG/ITSU since ITSU-XVII (4-7 October 1999, Seoul, Republic of Korea), specified problems encountered in the programme implementation and identified actions needed for the successful preparation of ITSU-XVIII. He requested the Officers to pay special attention to the resources available for the Tsunami Programme.

The Agenda was adopted as given in Annex I. The List of Participants is presented in Annex II. The Technical Secretary presented the Timetable and List of Documents and after discussion, they were accepted as presented in Annexes III and IV.

The Director of ITIC informed the participants on local arrangements.

2. PROGRESS IN THE ITSU-XVII DECISIONS IMPLEMENTATION

The ICG/ITSU Chairman presented for review and updated the Action Sheet based on the decisions of ITSU-XVII. An updated version of the Action Sheet is Annex V.

The participants agreed that the following actions be taken urgently for the implementation of the still pending matters:

2.2 (paras. 38-39) Kuril/Kamchatka Project

The project has been successfully implemented with the installation of three tide gauges in the Petropavlovsk-Kamchatski, Yuzno-Sachalinsk and Malokurilsk. However, the communication links between these places and PTWC do not work properly. The ITSU contacts of USA, Russia and Japan should consider ways to overcome the problem. One of the improvements can be the installation of an additional tide gauge in the Kuril Islands to the north of Schikotan. Consultations should be organized in the coming months and the results reported to ITSU-XVIII.

2.2 (paras. 39-40) National Reports

The Officers requested the Director ITIC to develop a draft format and specify requirements for the content of national reports. The Officers noted the questionnaire prepared by the Director ITIC and commented on it.

2.3 (paras. 47-48) ITIC Associate Director

The Director ITIC, in consultation with the Associate Director, will develop the plan of action to be submitted to the ICG/ITSU Chairman and the IOC Executive Secretary for comments and endorsement. The IOC Executive Secretary will issue a Circular Letter with the need for assistance and the tasks clearly identified (based on the ITIC Director's request) inviting Member States to make proposals for the Associate Director.

The Officers stressed the need for the Associate Director to take part in ITSU-XVIII and acknowledged with thanks the readiness of Chile to continue to provide support to the Associate Director's position. A letter of acknowledgement should be sent to the Chief of the Chilean Division of

Hydrography for making his staff available to the post of the ITIC Associate Director and expressing the desire to have this practice continued.

3.1 (paras. 54-56) TIME Phase II Project

The lack of funding prevented the ICG/ITSU and particularly, Japan, to implement Phase II of the Time Project to the scope envisaged by ITSU-XVII.

The Officers noted with appreciation the efforts taken by the IOC Executive Secretary in raising funds in support of the IOC Tsunami Programme and recommended if funds foreseen in the Recommendation ITSU-XVII.3 for the development of the TIME Project are available to start implementing the Plan of Action for Phase II of TIME. The ITSU Contact of Japan should be consulted before any funding is made.

The ICG/ITSU Chairman and the Technical Secretary were requested to contact JMA and find out whether the training course on TIME has been implemented in Costa Rica. If this is not the case, to consider the possibility of supporting the course and implementing it before ITSU-XVIII. Having the course in Costa Rica back-to-back with ITSU-XVIII in Cartagena was recommended.

3.2 (paras. 65-66) Bathymetric Data

After listening to the arguments of the Chairman of the IUGG Tsunami Commission, the Officers agreed that at this stage there is no need for new meetings to be organized on bathymetric data management.

The ICG/ITSU, jointly with the IUGG Tsunami Commission, will continue following the activities aimed at the development of new bathymetric arrays (such as a new NGDC/NOAA series of CD-ROMs with 3-sec. digital bathymetry arrays for the coastal areas of North America, GoMAP Project – a new initiative directed to the high accuracy – at the resolution of 100 m or higher – mapping of the world ocean floor). The inventory of bathymetric arrays available in digital domain is supported by the PMEL/NOAA web site (<http://newport.pmel.noaa.gov/~kamphaus/time/data.html>). A large number of bathymetric arrays of different resolution has been collected for the Pacific region within the HTDB/PAC Project and is available on the HTDB/PAC CD-ROM.

The Officers noted the statement of the Delegate of Chile at the Thirty-third Session of the IOC Executive Council who proposed the establishment of a new project within the IOC mapping programme to improve the bathymetric data for the Southeastern part of the Pacific. He further proposed to organize a meeting in Valparaiso, Chile in September/October 2001 to initiate the project. It is expected that Chile, Colombia, Ecuador and Peru will take part at the meeting.

The Officers urged the present and past Chairmen of the ICG/ITSU to explore the progress achieved in the preparation of the meeting and take all necessary steps in order to avoid overlapping the dates of the meeting with those of ITSU-XVIII.

3.3 (paras. 69-70, Rec. ITSU-XVII.2) HTDB CD-ROM and Web Version

The Officers acknowledged the progress achieved and recommended that the mirror site of the web version be installed at NGDC prior to ITSU-XVIII in order to make HTDB easily and operationally accessible to all users. If additional funds are available, priority should be given to implementing the task.

The Officers requested the Technical Secretary to urgently circulate the letter informing Member States of the availability of the HTDB/PAC package containing the CD-ROM '*Tsunamis in the Pacific 47 BC – 2000 AD*' and operational manuals. See also comments under 8.

4.1 (paras. 73-74) Communication Tests

The Officers requested the Director PTWC to be more proactive in inviting Member States to participate actively in the monthly communication tests. If Member State(s) does not participate in the tests, a letter exploring the reasons should be sent to the ITSU National Contact point with a copy to the respective IOC Action Addressee.

4.1 PTWC's Bulletin/Spanish Version

The Director PTWC, reported that the ITIC Associate Director provided translations for all pre-scripted languages in PTWC's bulletins during his July visit to Honolulu and that PTWC's message generation software is now modified to produce but not yet disseminate Spanish language version of all pre-scripted bulletins. A document containing sample copies of those bulletins in English and Spanish was distributed for review and consideration. The Director PTWC went on to explain however, that some outstanding problems remained, the most difficult of which was that PTWC watchstanders were likely to modify the pre-scripted English bulletins during events as the situation required, and that the capability to make corresponding modifications to the Spanish language version did not exist. As a consequence, the Spanish language bulletin would not be identical to the English one and would conceivably contain wrong information. After a discussion on this problem, it was concluded that an acceptable solution was not likely to be found and therefore not to go forward any further with the Spanish language versions.

The issue will be brought to the attention of ITSU-XVIII for an in-depth discussion.

4.2 (paras. 78-79, Rec. ITSU-XVII.1) Warning and Watches/*Ad Hoc* Working Groups

The Officers were informed of the progress achieved by the Working Groups in implementing their Terms of Reference. It was recommended to have two separate working documents for ITSU-XVIII containing the description of the discussion between group members and proposed recommendations of each of the groups. These documents should be prepared well in advance and included in the third dispatch planned for August 2001.

4.3 (para.23) Ocean Bottom Tsunami Detectors

The Officers requested Mr. R. Hagemeyer to take the necessary actions for the project proposal to be submitted to ITSU-XVIII. The project proposal should include the implementation plan and cost estimate, and be submitted for distribution among Member States by the mid-August, the latest.

4 (paras 102-104) IAS Tsunami Project Proposal

The Officers thanked Mr. Hagemeyer, one of the Co-Chairpersons of the Mayaguez Workshop, and the Technical Secretary for the implementation of the meeting which reviewed the IAS Project Proposal and recommended a number of important actions for the development of a new version (Summary Report of the Mayaguez Meeting on the IAS Tsunami Project Proposal, IOC/INF-1149, 19-21 December 2000, Mayaguez, Puerto Rico).

The Officers expressed thanks to the USA ICG/ITSU National Contact for funding a consultant to develop a new project proposal before ITSU-XVIII and make it available at the session for information and comments.

The Officers agreed on the list of available educational and awareness materials which can be useful to the IAS Member States for the tsunami preparedness and requested the Director ITIC to send at least two copies of each publication to the IAS tsunami contacts presented in Annex V to the Mayaguez

Workshop Summary Report. In a covering letter, the Director ITIC will request the IAS contacts to take care of producing additional copies and circulate them within the country.

4 (paras. 113-116) Far-East Tsunami Warning Centre

The Officers appreciated the efforts of JMA for making the centre operational and acknowledged the publication of the Handbook for Tsunami Forecast in the Japan Sea.

The Officers requested the Director ITIC to contact Japan and find out the progress in using the Internet for the distribution of the tsunami forecasts.

The Technical Secretary was requested to contact the ICG/ITSU National Contact in Japan regarding the organization of the workshop for the Far-East countries on the benefits of using the centres' services operational procedures and on co-operation with the newly established Tsunami Warning Centre. The objective is to expand the function of the Centre to other coastal areas of the sub-region.

4 (paras. 119-120) Indian Ocean

The ICG/ITSU Chairman will send a letter to Australia and Indonesia requesting the ICG/ITSU national contacts to inform him of the progress in the development of a proposal for the Indian Ocean Warning System.

6.2 (paras. 125-129) Tsunami Glossary

The ICG/ITSU Chairman presented a final draft of the Glossary, which was developed jointly with the Associate Director ITIC. The Officers recommended several modifications and improvements. It was decided to delete the Bibliography from the Annex and move the references to the publications from the text into footnotes. Converting the Glossary into a hypertext format was recommended in order to make it more user-friendly. The Hypertext version will be discussed at the ITSU-XVIII.

By mid-march, the ITIC Associate Director will send the final text in English to the Director ITIC and Director PTWC for editing.

The Glossary will be published in the IOC Manual and Guides format. The ICG/ITSU Chairman was requested to contact Nicaragua and find out whether the ITSU-XVII agreement on publishing the English and Spanish versions by Nicaragua is still valid. The Technical Secretary was requested to consider the possibility of the IOC publishing it in Russian in multi-colour. France will publish the French version of the Glossary. It will be a multi-coloured, high-quality booklet.

6.3 (para. 131) VEP Courses

The 2001 course will be implemented in August. The Officers recommended to select the candidates for the 2001 course from a long list of candidates for the 2000 course, rather than send a letter of announcement for the 2001 course with the request to submit names of candidates. The Officers reiterated the decision of ITSU-XVII that priority should be given to the experts from Indonesia and Australia if they are in the list of applicants for the 2001 course.

The Officers requested the Director ITIC to prepare a working document for ITSU-XVIII containing his strategic views on the ICG/ITSU education and training programme for the second dispatch of documents.

6.3 (para. 134) Earthquake and Tsunami Textbooks

The Technical Secretary was requested to send sets of English and Russian versions of the books (total 8 volumes in each language) to the ITIC Associate Director who will scan the books in a PDF file and develop a CD-ROM containing 8 volumes in two languages – English and Spanish. For the Russian version, the table of contents will be made available. The Spanish version of the volume will also be on the ITIC web site.

6.4 (para. 137) Tsunami Newsletter

Following the ITSU-XVII recommendation, the Director ITIC has completed restructuring the Newsletter and starting from 2000, the Tsunami Newsletter is being published in a new format. The Officers expressed concern on the quality of the new publication and requested improving the quality of the graphic material. The Director PTWC will provide the publishers with the software for improving the quality of publication.

The Officers urged the Director ITIC to publish the Tsunami Annual for 2000 prior to ITSU-XVIII.

6.5 (paras. 140-141) Tsunami Programme Press Kit

The Director ITIC provided the first draft of the kit. The Officers agreed on the need to considerably change the content and format of the draft. Taking into account the experience of IOC in developing press kits for the Year of the Ocean and IODE, the Officers invited IOC to develop a new version of the kit. They noted that the kit users will not only be the mass media but also decision-makers, teachers, scientists, other professionals and the public in general.

The Officers requested the Technical Secretary to develop the list of contents by the end of February – first week of March and submit it to the Officers for comments. It is expected that the first draft of the kit will be prepared by the end of June. The draft kit will be submitted to ITSU-XVIII for review and approval.

10.1 (paras. 145-147) IUGG Tsunami Commission – ICG/ITSU Co-operation

The IUGG Tsunami Commission Chairman informed the Officers about the process of constructing the GeoRisk Web page on natural disasters by the IUGG Commission on Geophysical Risk and Sustainability (GeoRisk Commission). The GeoRisk Web page is expected to become a sort of Webcyclopedia on natural disasters. The Web site is intended for organizations that deal with city planning, city leagues, emergency responders, as well as for the mass media and general public looking for reliable, certified information on natural disasters. The prototype of this site is running at www.rusatknofe.urbannet.ru/georisk. The IUGG Tsunami Commission has been invited to contribute to the content of this site with the information related to the tsunami disaster, its mitigation and countermeasures.

The Officers noted the importance of co-operating with the IUGG in this endeavour and recommended to include this item in the ITSU-XVIII Provisional Agenda. The IUGG Tsunami Commission Chairman and Director ITIC were invited to prepare a list of existing tsunami web pages with a short description of the content to be used at ITSU-XVIII as a working document. It was also recommended to invite the IUGG GeoRisk Commission Representative to participate at ITSU-XVIII.

The discussion of the preparation for the Cartagena workshop is presented under Agenda Item 5.

10.2 (paras. 148-151) Post-IDNDR Activities

The Officers urgently recommended to implement consultations with the Secretariat of the IDSR Task Force in order to identify areas of common interest and co-operation. It was recommended to invite the Representative of the Secretariat to take part in ITSU-XVIII.

10.3 (paras. 152-154) Member States Reporting on Tsunamis

The Officers expressed concern that in spite of the ITSU-XVII decisions, the Member States do not report to ITIC the occurrence of all sizes of tsunami in their areas. The Officers recommended ITIC to be more proactive and take the lead in looking for tsunami data to respond effectively to the requests from experts working on tsunami catalogues and modeling. The ITIC should closely co-operate with the IUGG Tsunami Commission and WDC-A, SEG in this effort.

8 (paras. 158-159, Rec. ITSU-XVII.2) HTDB/PAC

The HTDB Project Leader informed that the HTDB CD-ROMs will be sent to all HTDB regional co-ordinators requesting them to identify missing events or make comments before ITSU-XVIII. They will also be requested to include information on relevant events. The HTDB Project Leader was requested to verify the existing list of regional co-ordinators and make the necessary updates (e.g., the ITIC Associate Director will provide the new name of the Chilean Co-ordinator). See also comments under 3.3.

10 (paras. 164-166, Rec. ITSU-XVII.3) Finance

The Officers thanked the IOC Executive Secretary for his efforts in seeking extra-budgetary support to the IOC Tsunami Programme.

In response to his letter of 15 June 2000 (Annex VI) 3 Member States (Chile, France and the USA) allocated funds to the IOC Trust Fund earmarked for the Tsunami Programme. The Officers agreed to continue and facilitate efforts. The ICG/ITSU Chairman and Technical Secretary will send letters to the IOC and ICG/ITSU contact points in Australia, Canada, Japan and New Zealand inviting them to help in funding the programme.

3. PREPARATIONS FOR ITSU-XVIII

3.1 CONSIDERATION AND ADOPTION OF THE DRAFTS OF THE BASIC ITSU-XVIII DOCUMENTS

The Technical Secretary presented the drafts of the ITSU-XVIII Provisional Agenda, Annotated Provisional Agenda, List of Documents and Timetable for comments and approval.

The Officers reviewed the drafts, made modifications and requested the Chairman and the Technical Secretary to make the first dispatch of ITSU-XVIII documents by the end of February containing the letter of invitation and all agreed-upon basic documents. The letters of invitation should include comments made by the Officers regarding national reports, project proposals, etc. The first announcement of the Cartagena Workshop should also be attached.

The agreed-upon Provisional Agenda of ITSU-XVIII is presented in Annex VII. Annex VIII contains the ITSU-XVIII List of Documents with information on the responsible persons for their preparation and deadlines for their submission to the IOC Secretariat.

3.2 LOCAL ARRANGEMENTS

The Representative of the local Organizing Committee, Cmdr. J. A. Reyna, informed the Officers on the local arrangements for the Eighteenth Session and the IUGG-ICG/ITSU Tsunami Workshop. The Technical Secretary reported on the status of developing the Letter of Agreement between UNESCO/IOC and Colombia on implementing ITSU-XVIII. The draft Agreement was prepared, translated into Spanish and sent to Colombia for comments. It is expected that the Agreement be signed in the coming months.

The Officers recommended to have the Tsunami Workshop from 5-6 October 2001 and ITSU-XVIII from 8-11 October 2001 in Cartagena, Colombia in the Capilla del Mar Hotel. The Officers thanked the local Organizing Committee under the leadership of Capt. O. Malaver for their efforts in arranging the Session. They also expressed the need for the Workshop Organizing Committee to assist the co-convenors in the preparation and implementation of the meeting.

The Officers requested the local organizers to provide the IOC Secretariat with full information on local arrangements before mid-June to include it in the second dispatch of documents. They expressed the desire to have the Agreement between Colombia and UNESCO/IOC signed the latest at the IOC Assembly, in July 2001.

The Officers stressed the need for the Internet connection from the place of the meeting, for the space at the hotel to demonstrate posters and ITSU national products, and for facilities to demonstrate CD-ROMs and videos during ITSU-XVIII and the Workshop. It was recommended to organize an open door hours for the tsunami-related videos and publication demonstrations for the mass media and the public in general.

The Officers also noted that the participation of a Technical Assistant from the IOC Secretariat, knowledgeable in the Tsunami Programme proves to be very useful for the smooth running of the Workshop and Session and the timely development of the Summary Report.

The Representative of the Local Organizing Committee expressed their interest to invite the Assistant on a fund-sharing basis with IOC. The Technical Secretary thanked the Representative for this kind offer. The Officers invited the IOC Executive Secretary and the Head of the IOC Ocean Services Unit to consider the possibility of providing a Technical Assistant for the meetings.

The Officers acknowledged with satisfaction the preparation of the Session and Workshop and encouraged the local Organizing Committee to continue efforts for the successful implementation of the events.

4. ITIC ACTIVITIES AND THE ITIC DIRECTOR'S TERMS OF REFERENCE

The report of the Director ITIC is given in Annex IX. The Officers made the following comments:

- improvements should be made for the Tsunami Newsletter (see Agenda Item 2/6.4, para. 137 of this Summary Report);
- after completion of the VEP course, trainees should submit reports to the Director ITIC with a copy to the IOC Executive Secretary containing their views on the course programme, ways of improvement, application of the knowledge received at home, etc.;
- the Director ITIC should be more proactive in his contacts with Member States urging them to implement the decisions of the ICG/ITSU sessions;

- the ITSU Officers should help the Director ITIC in implementing his tasks by providing information, helping to establish the necessary national contacts, etc.;
- statistics of the visits to the ITIC Homepage should be prepared as criteria of the Homepage's success. ITSU-XVIII shall be informed of the results;
- on-line access to the ITIC library should be finalized and funds for acquiring a good search engine be allocated within the IOC/ITIC contract. Regular acknowledgement should be made to the contributors to the ITIC Library through the Newsletter;
- scientists should be requested, by a joint letter of the ICG/ITSU and the IUGG Tsunami Commission Chairmen to send reprints of their publications to ITIC. ITIC will continue publishing the summary of titles in the Newsletter. A software is needed to make the library database searchable. University Libraries should be approached by the Director ITIC with the request to share the needed software packages;
- the Director ITIC will update the mailing list and provide it to ITSU-XVIII for verification;
- the Director ITIC shall organize the continuing monitoring of the tsunami warning activities in the ICG/ITSU Member States in order to have the updated view on the latest developments of the warning system in the Pacific.
- the Officers decided to come back to considering the ITIC Director's Terms of Reference at ITSU-XVIII and requested the ICG/ITSU Chairman jointly with the Director ITIC to start the revision, taking into account the latest developments of the programme and Terms of Reference of the ITIC Associate Director. The results of the revision will be reported to ITSU-XVIII.

5. IUGG/ITSU CO-OPERATION: WORKSHOP ON TSUNAMI MITIGATION AND COUNTER MEASURES

The Officers discussed the preparations for the international workshop '*Tsunami Mitigation Beyond 2000*' which will take place in Cartagena, Colombia back-to-back with ITSU-XVIII, from 5-6 October 2001. They agreed on the objectives and topics for discussion.

The Workshop format will include talks given by leading experts and round table discussions. After consulting the Representative of the local Organizing Committee, it was agreed that the Workshop will be conducted in English only. The Officers discussed and identified facilities required for the Workshop: a conference room for about 40 participants; a small room for the convenors and Secretariat; a registration desk and a secretary fluent in English, who will also be responsible for photocopying and distribution of materials.

It was pointed out that there will be a need for PowerPoint and an overhead projector. It was decided to discuss details of the technical facilities required at a later stage when the programme is being formulated.

The first announcement flyer is presented in Annex X. It will be distributed via the Tsunami Bulletin Board and the IOC Circular Letter not later than mid- March 2001.

11. TSUNAMI PROGRAMME AT THE IOC ASSEMBLY

The Officers noted the information provided by the ICG/ITSU Chairman on his participation at the Thirty-third Session of the IOC Executive Council in June 2000. They expressed satisfaction with the Council's decisions to approve the ITSU-XVII Summary Report and adopt the recommendations contained therein.

The Officers requested the Chairman to use the opportunity of the coming session of the IOC Assembly (3-13 July 2001, Paris) to advertise the Tsunami Programme activities and discuss with them plans for fostering and expanding the programme. They recommended the Chairman to prepare a paper in consultation with the Officers and the Technical Secretary on the programme's future, on the progress achieved and the problems the programme is facing.

The ICG/ITSU Chairman was also requested to send letters to the ITSU National Contacts inviting them to contact the heads of their national delegations to the IOC Assembly, update them on the ITSU Programme development and urge them to express support to the Programme during its consideration at the Assembly.

12. RESOURCES: FUNDING AND STAFF

The Officers were concerned with the shrinking funds available for the ITSU Programme implementation. They expressed hope that the efforts of the IOC Executive Secretary (see Agenda Item 2/10, Finance of this Summary Report) and support from Member States will help to implement activities of the Programme in 2000-2001, as they were approved by the IOC Executive Council at its Thirty-third Session.

13. AWARENESS AND CAPACITY BUILDING

The Officers reiterated the importance of awareness and capacity building elements of the Tsunami Programme and agreed that if the activities recommended by ITSU-XVII in these areas implemented, it will be an important contribution for meeting the programme goals in awareness and capacity building. See chapters 2/6.2, 6.3, 6.4, 6.5 and 3 of the present Summary Report.

14. DATES AND PLACE OF ITSU-XIX

The Officers recalled the decision of ITSU-XVII to welcome New Zealand's offer to host ITSU-XIX. The ICG/ITSU

Chairman was requested to explore the interest of New Zealand to host ITSU-XIX urgently and if the interest still exists, invite the country to confirm it by sending a letter to the IOC Executive Secretary. If however, New Zealand is not interested anymore, the Chairman should consider other options for organizing ITSU-XIX in one of the countries of the Pacific, bearing in mind that the meeting should be free of charge to IOC or with the least expense possible for the Commission, and preferably be arranged in the countries of the Western or Central Pacific. The Officers invited the ICG/ITSU Chairman to keep them informed of the progress and expressed their readiness to help him in finding a candidate country for ITSU-XIX well in advance of the Eighteenth Session.

CLOSURE

The ICG/ITSU Chairman closed the Session at 12:30 on 9 February 2001. After the meeting, a field excursion was organized to Hilo Island of Hawaii to see the places affected by the tsunamis and visit the Tsunami Museum.

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ANNEX II

LIST OF PARTICIPANTS

Capt. H.M. Gorziglia

6, Norte 1081

Vina del Mar

CHILE

Tel: <56> (32) 26 65 06

Fax: <56> (32) 26 65 42

E-mail: hgorziglia@shoa.cl

Dr. R.H. Nunez

Head, Dept. of Oceanography

Servicio Hidrografico y Oceanografico de la Armada

Errazuriz 232 Playa Ancha

Valparaiso

CHILE

Tel: <56> (32) 26 66 70

Fax: <56> (32) 26 65 42

E-mail: rnunez@shoa.cl

<http://www.shoa.cl/oceano/bios/nunez.html>

Cmdr. J. A. Reyna

Head, Division of Hydrography

Centre of Oceanographic & Hydrographic Investigations

Escuela Naval, Isla de Manzanillo

Cartagena

COLOMBIA

Tel: <57> (5) 669 43 19

Fax: <57> (5) 669 42 86

E-mail: sdihid@cioh.org.co

Dr. F. Schindel  (Chairman)

Assistant Director

D partement Analyse et Surveillance de l'Environnement

Laboratoire de G ophysique, B.P. 12

91680 Bruy res-le-Ch tel

FRANCE

Tel: <33> (1) 69 26 50 63

Fax: <33> (1) 69 26 70 23

E-mail: schindel@ldg.bruyeres.cea.fr

Dr. I. Oliounine

IOC Consultant

IOC/UNESCO

1, rue Miollis

Paris 75015

FRANCE

Tel: <33> (1) 45 68 39 63

Fax: <33> (1) 45 68 58 12

E-mail: i.oliounine@unesco.org

Dr. V. Gusiakov

Head, Tsunami Laboratory

Institute of Computational Mathematics & Mathematical Geophysics

Lavrentieva Pr. 6

Novosibirsk 630090

RUSSIAN FEDERATION

Tel: <7> (3832) 34 20 70

Fax: <7> (3832) 32 42 59

E-mail: gvk@omzg.sccc.ru

Mr. R. Hagemeyer

Regional Director, Pacific Region

National Weather Service (NWS)

National Oceanic & Atmospheric Administration (NOAA)

737, Bishop St, Suite 2200

Honolulu, Hawaii 96813-3213

USA

Tel: <1> (808) 532 6416

Fax: <1> (808) 532 5569

E-mail: richard.hagemeyer@noaa.gov

Dr. C. McCreery (Vice-Chairman)

Geophysicist-in-Charge

Director, Pacific Tsunami Warning Center (PTWC)

91-270 Fort Weaver Rd.

Ewa Beach, HI 96706-2928

USA

Tel: <1> (808) 689 8207x301

Fax: <1> (808) 689 4543

E-mail: charles.mccreery@noaa.gov

Mr. M. Blackford
Director, International Tsunami Information
Center (ITIC)
737 Bishop St., Suite 2200
Honolulu, HI 96813-3213
USA
Tel: <1> (808) 532 6423
Fax: <1> (808) 532 5576
E-mail: michael.blackford@noaa.gov

Ms. L. Sjogren
Librarian, International Tsunami Information
Center (ITIC)
737 Bishop St., Suite 2200
Honolulu, HI 96813-3213
USA
Tel: <1> (808) 532 6423
Fax: <1> (808) 532 5576
E-mail: linda.sjogren@noaa.gov

ANNEX III
TIMETABLE

Time	Tuesday, 6 Feb.	Wednesday, 7 Feb.	Thursday, 8 Feb.	Friday, 9 Feb.
09h30 11h30	1.Opening 2.ITSU-17 Decisions Implementation	2.ITSU-17 Decisions Implementation	5.IUGG-IOC Co- operation	10.Closure
11h30 12h00	<i>COFFEE BREAK</i>	<i>COFFEE BREAK</i>	<i>COFFEE BREAK</i>	<i>COFFEE BREAK</i>
12h00 13h00	2.ITSU-17 Decisions Implementation	3.ITSU-18 Preparations	5.IUGG-IOC Co- operation 6.Tsunami Programme at IOC Assembly	10.Closure
13h00 14h30	<i>LUNCH BREAK</i>	<i>LUNCH BREAK</i>	<i>LUNCH BREAK</i>	<i>LUNCH BREAK</i>
14h30 16h00	2.ITSU-17 Decisions Implementation	3.ITSU-18 Preparations	7.Resources 8.Awareness & Capacity Building	
16h00 16h30	<i>COFFEE BREAK</i>	<i>COFFEE BREAK</i>	<i>COFFEE BREAK</i>	<i>COFFEE BREAK</i>
16h30 18h00	2.ITSU-17 Decisions Implementation	4.ITIC Activities	8.Awareness & Capacity Building 9.Dates & Place for ITSU-19	

ANNEX IV

LIST OF WORKING DOCUMENTS

- ITSU-XVII Action Sheet (as of January 2001);
- Drafts of the Basic Documents for ITSU-XVIII: Provisional Agenda, Annotated Provisional Agenda, List of Documents, Timetable;
- Tsunami Glossary;
- Draft Programme of the Cartagena Workshop;
- ITIC Progress Report;
- Progress Report of the Working Group on Warning & Watches;
- Draft of the Tsunami Press Kit.

INFORMATION DOCUMENTS

- ITSU-XVII Summary Report;
- Tsunami Newsletter (1999, 2000 issues);
- Information Document of Local Arrangements for ITSU-XVIII;
- ITSU Master Plan;
- IAS Tsunami Meeting Summary Report;
- EC-XXXIII Summary Report & Resolution EC-XXXIII.5;
- Interagency Task Force for Disaster Reduction Progress Reports;
- IOC Circular Letter to ITSU Member States on Fund Raising to Support the Programme;
- Handbook for Tsunami Forecast in the Japan Sea;
- Post-Tsunami Survey Field Guide, 1998, UNESCO.

ANNEX V

ACTION SHEET - IMPLEMENTATION OF THE DECISIONS OF ITSU-XVII
(As of February 2001)

Agenda Item	Major Subject	Actions	Responsible	Status of Implementation
2.1	Report of Chairman	Include ITSU-XVI Action Sheet as Annex to ITSU-XVII Summary Report (SR)	IOC	Done. Annex V of Summary Report
2.2	National Reports	Complete K/K Project by end '99	Russia, USA, Japan, IOC	Done. Project completed in 2000
		Provide abbreviated national report summaries to ITIC in electronic form for publication by 1 Dec. '99	Member States (MS), ITIC, IOC	Done. Vol. XXXI for 01.98/12.99
2.3	ITIC Associate Director	Organize 2 visits of ITIC Assoc. Director to ITIC during 2000-2001. Develop plan of actions of the Assoc. Dir. & submit to ITIC & IOC for approval	IOC, ITIC, Assoc. Dir. Assoc. Dir., ITIC	Done. Partially completed. Visit in Jul. 2000. First visit during Feb. 01. Second visit planned for Sept/Oct. 01
		Invite MS to make proposals for ITIC Assoc. Dir. based on ITIC Director's recommendations	ITIC, IOC	Done. Letter of 9 Jan. 01
3.1	TIME	Provide required funds for TIME Phase-II at level given in Annex VII to SR	MS, IOC	No funds available
3.2	Bathymetry Data	Continue organizing meetings on bathymetric data for tsunami research & operational activities	Chairman ICG/ITSU & IUGG/TC	No need for other meetings. Part. in & Contr. to the related activities
4.1	Communication Plan	Actively participate in monthly communication tests	MS, PTWC	Continuously
		Advertise results of tests through ITIC Newsletter & other means	PTWC	Letter of 5 Feb. 01, repeated on monthly basis
		Investigate possibility of issuing Spanish version of bulletins	PTWC, ITIC Assoc. Dir.	Bulletins translated in Jul. 2000. PTWC produces Spanish version. Possibility of issuing is under investigation
		Solicit feedback from MS regarding actions taken in response to warnings	ITIC	Done. Letter of 21 Jul. 2000
4.2	Warning & Watches	Make recommendations regarding information bulletins & PTWC responsibilities	ITIC, <i>Ad hoc</i> WG	Partially done by letters sent to each member of WG on 21 Jul. 2000 & Jan. 01
		Establish WG & make recommendations regarding procedures & criteria for issuing warning & watches, & regarding more precise tsunami forecasting. Report progress to ITSU Officers Mtg. (Jan. 2001)	PTWCC, <i>Ad hoc</i> WG	WG established. Rec. will be reported to ITSU-XVIII
4.3	Ocean-Bottom Tsunami Detectors	Develop project proposal with implementation plan & cost estimate	US Rep./E. Bernard	In progress

Agenda Item	Major Subject	Actions	Responsible	Status of Implementation
	New Technology Development	Include this item in Agenda of ITSU-XVIII	Chairman IOC	Done. Title 'Recent Technological' changed to 'Developments'
5.	IAS Tsunami Project Proposal	Revise project taking into account latest scientific findings & technology development	Chairman, US Rep., ITIC, Chair IOCARIBE Tsunami Steering GE	Consultant, Chairpersons
		Organize Joint Mtg. of Experts from the Pacific & IAS to review project	Chairman, IOCARIBE Tsunami St. GE, IOC	Done. Mayaguez, Puerto Rico, 19-21 Dec. 2000
		Invite CEPREDENAC to take part in Mtg.	IOC	Done
		Provide IAS with available educational & awareness material	ITIC	In progress
	Far East TWC	Use of Internet for tsunami forecasts dissemination	Japan Rep., ITIC	
		Inform China & DPR of Korea of developments & invite them to join system	IOC	Done. 6 Jul. 2000 (IOC letter). Letter sent to China & DPR of Korea
		Try to expand the functions of Centre to other coastal areas in WESTPAC	Japan Rep., Rep. of WESTPAC countries	In progress. IOC will contact JMA to find out details
		Regional Workshop to be organized (provided funds are available)	IOC, ITIC, Japan Rep.	
	Indian Ocean	Consider development of an Indian Ocean Warning System & report progress to ITSU-XVIII	Australia & Indonesia Rep., ITIC	IOC to send letter requesting information
		Nominate candidates for Visiting Experts Programme 2000	IOC	Done. IOC sent letter to MS
6.2	Tsunami Glossary	Publish Glossary in ITIC web site by end Nov.'99	Chairman, ITIC (Dir., Assoc. Dir)	Done in 2000. Continuing
		Provide Nicaragua with necessary graphics materials & photos by Apr.2000	Chairman ITIC	In progress
		Make Spanish translation of Glossary	Nicaragua Rep. with assistance of Chile Rep.	Planned for Jun. 01
		Publish Glossary in multi-coloured booklet form before Jan.2001	Nicaragua Rep., IOC	
		Make French & Russian translations	IOC	
6.3	Training & Education	ITIC Course in 2000-2001 for 4 experts	ITIC, IOC	Partly done. Peru & Colombia sent scientists to ITIC in Nov/Dec. 2000. Applicants needed for year 2001 (13-24 Aug)

Agenda Item	Major Subject	Actions	Responsible	Status of Implementation
		Include information on national training activities in national reports for ITSU-XVIII	All ICG/ITSU MS	ITSU-XVIII Invitation Letter, Feb-Mar. 01
		Put earthquake & tsunami textbooks on ITIC web site	Chile Rep., ITIC (Dir. & Assoc. Dir)	To be completed in Apr. 01
		Provide Chile with textbooks in electronic form	IOC	Books to be scanned by Chile (English & Russian versions). IOC needs to send copies to Chile for scanning
		Download textbooks onto master CD-ROM & make copies for all MS. Include other educational materials in CD-ROM , if possible	USA Rep.	Delayed until above items are completed. USA will make copies of CD-ROM
6.4	Tsunami Newsletter	Implement re-structuring of Newsletter & start in 2000 new arrangements as agreed upon by ITSU-XVII	ITIC	Done Vol. XXXII published in 2000. Feb. 01 Newsletter is in the mail & on-line
		Provide necessary information to ITIC for inclusion in new information system regularly & without delay	All ICG/ITSU MS	Letter sent. New letter is needed
6.5	Mass Media	Develop draft of Tsunami Press Kit by Jan.2001	IOC	First draft by ITIC available for Officers Meeting. Final version in progress, to be submitted to ITSU-XVIII
7.1	ICG/ITSU & IUGG/TC Co-operation	Organize Tsunami Workshop in Moscow in first half of 2000	Chairmen ICG/ITSU & IUGG/TC, IOC	Done, June 2000
	Seoul Workshop Recommendations	Inform MS of products developed within HTDB Project & invite them to contact Pacific HQ of US NWS for available software	IOC, USA Rep.	
7.2	ICG/ITSU & IDNDR	Inform IDNDR Secretariat or its successor of decision of ICG/ITSU regarding IOC Tsunami Programme contribution to implementation plan for <i>A Safer World in the 21st Century</i>	IOC	Done. IOC/ISDR consultation planned for Jun/Jul. 01
7.3	ICG/ITSU & WDC-A, SEG	Report to ITIC & international community on all sizes of tsunamis	ICG/ITSU MS	Letter of 21 July 2000. In progress
7.4	ICG/ITSU & SOPAC	Invite SOPAC MS to become members of ICG/ITSU	IOC, ITIC, PTWC	PTWC to prepare draft letter. IOC to send letter by end-Feb. 2001
8.	New Projects	Provide historical data & information to HTDB Project Leader	Regional HTDB Co-ordinators	In progress
		Provide necessary funding for implementation of CD-ROM " <i>Tsunamis in the Pacific, 47 BC-2000 AD</i> " & installation of web version of database	IOC, IUGG/TC Chairman	Done. CD-ROM & manuals are available. Installation of web version done. Installation of mirror site in progress

Agenda Item	Major Subject	Actions	Responsible	Status of Implementation
10.	Programme & Budget for 2000-2001	Mobilize resources in support of Tsunami Programme	All ICG/ITSU MS	Request sent by IOC CL.1658, 15 June 2000; reminder sent on 16 Jan. 2001
		Implement activities as presented in recommendation	ICG/ITSU Officers, MS, IOC	In progress
		Provide contributions to IOC Trust Fund & in-kind for ITSU Programme	ICG/ITSU MS	Resources received from Chile, France & USA
		Provide necessary funds for 2000-2001 programme implementation	IOC	In progress
11.	Date & Place for ITSU-XVIII	Send letter to Colombia informing country officials about accepting invitation to host ITSU-XVIII & Tsunami Workshop in Fall of 2001	IOC	Done
		Send letter to New Zealand explaining reasons for not accepting invitation to host ITSU-XVIII & invite them to consider hosting ITSU-XIX	IOC	Done
		Make necessary arrangements & implement ITSU Officers Mtg. in Jan. & ITSU-XVIII in fall of 2001.	IOC, ICG/ITSU Officers	ITSU Officers meeting implemented in Feb. 01. Work in progress for ITSU-XVIII meeting
12.	ITSU-XVII Summary Report	Prepare final version & send for approval to ICG/ITSU Chairman	IOC	Done. Sent to Officers in Nov. 99

ANNEX VI

**IOC CIRCULAR LETTER NO. 1658 OF 15 JUNE 2000 AND
A REMINDER OF 16 JANUARY 2001**

Paris, 15 June 2000

IOC Circular Letter N° 1658*(English only)*

To: National Contacts ITSU; Chairman, Vice-Chairman ICG/ITSU;
cc: IOC Member States (Action Addresses) of the International Co-ordination Group for the
Tsunami Warning System in the Pacific;
National Representatives for UNESCO of IOC/ITSU Member States;
Subject: **Resources for the Tsunami Programme**

Dear Sir/Madam,

The IOC programme on the International Tsunami Warning System in the Pacific (referred to below as the Tsunami Programme) is a long-standing and successful programme of the Commission, aimed to warn and mitigate the impacts of devastating tsunamis. The Tsunami Programme covers all aspects of the tsunami warning network from mathematical models of tsunami propagation to programmes that alert the community.

Repeatedly, the IOC Governing Bodies referred to the Tsunami Programme as a programme of high priority which is the only IOC operational programme fully dedicated to saving human lives, protecting property and reducing the impact of natural disasters. Through the Tsunami Programme, IOC has contributed effectively to the objectives of the International Decade for Natural Disaster Reduction (IDNDR).

The resources allocated to manage the ITSU Programme have never been generous. The problem is now compounded by the demands to extend the programme outside the Pacific Basin to other regions.

The International Co-ordination Group for the Tsunami Warning System in the Pacific, at its Seventeenth Session in the Fall of 1999, emphasized the need for all Member States of the Pacific to share the operational costs of the Tsunami Warning System and resources for implementing the agreed-upon programme of work for 2000-2001.

By means of this letter I would like to encourage you to undertake a more direct responsibility in acquiring resources for the programme and invite you to support it, particularly the TIME Project (Tsunami Inundation Modeling Experiment), the development of a CD-ROM on '*Tsunamis in the Pacific, 47BC-2000AC*' and its web version, and the Visiting Experts Programme, by contributions to the IOC Trust Fund and in-kind contributions through national and regional efforts. Even a generous contribution of a few thousand dollars to the Trust Fund will help sustain the programme and make it more effective, responding to the needs of the Member States.

Let us not wait for another tsunami to devastate our coasts, let us unite and help the Tsunami Programme become more effective!

Yours sincerely,
P. Bernal
Executive Secretary IOC

REMINDER

Paris, 19 January 2001

Dear Sir/Madame,

By the Circular letter No. 1658 of 15 June 2000, the Member States of the Pacific were invited to make a generous contribution to the IOC Trust Fund for the implementation of the IOC Tsunami Programme which is extremely under-funded and requires additional support.

I am pleased to inform you that in response to this Circular Letter, a few countries made an extra budgetary contribution to meet the IOC Tsunami Programme's activities. Contributions were received from Chile, France and the USA. We are very thankful to the governments of these countries for the support of this unique IOC Programme which is entirely dedicated to saving human lives and the protection of property.

I hope that other countries of the Pacific might wish to follow this example of support and will keep you informed on the progress.

May I also use this opportunity to wish you all a Happy New Year.

Yours sincerely,
P. Bernal
Executive Secretary IOC

ANNEX VII

ITSU-XVIII PROVISIONAL AGENDA

- 1. OPENING**
- 2. ORGANIZATION OF THE SESSION**
- 3. PROGRESS IN THE PROGRAMME IMPLEMENTATION**
 - 3.1 REPORT OF THE CHAIRMAN ON THE PROGRAMME AND BUDGET
 - 3.2 NATIONAL REPORTS
 - 3.3 ITIC DIRECTOR'S REPORT
- 4. PROGRAMME MATTERS IN LIGHT OF THE INTERSESSIONAL ACTIVITIES**
 - 4.1 COMMUNICATION PLAN AND OVERVIEW OF THE WARNING SYSTEM
 - 4.2 RECENT TECHNOLOGICAL DEVELOPMENTS
- 5. IMPLEMENTATION OF ITSU-XVII RECOMMENDATIONS**
 - 5.1 WARNING CENTRE BULLETINS
 - 5.2 CD-ROM AND WEB VERSION OF THE BASIC PACIFIC TSUNAMI CATALOGUE AND DATABASE
- 6. TRAINING AND EDUCATION**
- 7. PREPAREDNESS FOR AWARENESS OF THE TSUNAMI DANGER**
 - 7.1 TSUNAMI NEWSLETTER
 - 7.2 TSUNAMI PRESS KIT
 - 7.3 TSUNAMI GLOSSARY
 - 7.4 TSUNAMI WEBSITES
- 8. SUB-REGIONAL TSUNAMI WARNING SYSTEMS**
 - 8.1 FAR EAST TSUNAMI WARNING CENTRE
 - 8.2 IAS TSUNAMI WARNING SYSTEM
 - 8.3 OTHER REGIONS
- 9. EXISTING PARTNERSHIPS AND OPPORTUNITIES FOR NEW ONES**
 - 9.1 CO-OPERATION WITH THE IUGG TSUNAMI COMMISSION, CONCLUSIONS OF MOSCOW AND CARTAGENA WORKSHOPS AND FOLLOW-UP
 - 9.2 POST-IDNDR DEVELOPMENTS
 - 9.3 WORLD DATA CENTRE-A, SOLID EARTH GEOPHYSICS DEVELOPMENT RELATED TO TSUNAMIS
 - 9.4 CO-OPERATION WITH OTHER ORGANIZATIONS
- 10. PROPOSALS FOR FUTURE PROJECTS**
- 11. FUTURE OF THE IOC TSUNAMI PROGRAMME**
 - 11.1 EVALUATION OF THE TSUNAMI PROGRAMME
 - 11.2 EXPANSION OF THE RESPONSIBILITIES OUTSIDE THE PACIFIC
- 12. OTHER BUSINESS**

- 13. PROGRAMME AND BUDGET FOR 2002-2003**
- 14. DATES AND PLACE FOR ITSU-XIX**
- 15. ADOPTION OF THE SUMMARY REPORT AND RECOMMENDATIONS**
- 16. CLOSURE**

ANNEX VIII

ITSU-XVIII PROVISIONAL LIST OF DOCUMENTS

Working Documents	Title	Agenda Item	Responsible Person	Deadline for Submission
IOC/ITSU-XVIII/1 prov.	Provisional Agenda	1	FS/IO	Feb.
IOC/ITSU-XVIII/1 add.	Provisional Timetable	1	FS/IO	Feb.
IOC/ITSU-XVIII/2 prov.	Annotated Provisional Agenda	1-14	FS/IO	Feb.
IOC/ITSU-XVIII/3	Summary Report (prepared during the Session)	15	FS/IO	Oct.
IOC/ITSU-XVIII/4 prov.	Provisional List of Documents (this Document)	1	FS/IO	Feb.
IOC/ITSU-XVIII/5 prov.	Provisional List of Participants	1	IO/AV	Oct.
IOC/ITSU-XVIII/6	Report of the Chairman of ICG/ITSU on Interseasonal Activities	3.1	FS	Aug.
IOC/ITSU-XVIII/7	National Reports on Tsunami-related Activities	3.2	MS/IO	Aug.
IOC/ITSU-XVIII/8	Draft Format Recommendations for National Reports Presentation	3.2	MB	June
IOC/ITSU-XVIII/9	Report of the ITIC Director	3.3	MB	Aug.
IOC/ITSU-XVIII/10	Report on Communication Issues	4.1	CM	June
IOC/ITSU-XVIII/11	Report & Recommendations of the <i>Ad Hoc</i> Working Group on the Language of the ITSU Regional Warning/Watch Messages & the Area of Responsibility of the Tsunami Warning System in the Pacific	5.1	MB	Aug.
IOC/ITSU-XVIII/12	Improvements of Procedures & Criteria for Issuing Warnings, Watches & Cancellations	5.1	CM	Aug.
IOC/ITSU-XVIII/13	Summary of the HTDB Project Implementation	5.2	SG	June
IOC/ITSU-XVIII/14	Training & Education Strategy in Tsunami Mitigation	6	MB	June
IOC/ITSU-XVIII/15	Tsunami Press Kit (Draft)	7.2	IO	Aug.
IOC/ITSU-XVIII/16	List of Tsunami web sites	7.3	FS/SG	June
IOC/ITSU-XVIII/17	An Intra-Americas Seas Tsunami Warning System Project Proposal	8.2	RH	Aug.
IOC/ITSU-XVIII/18	Proceedings, Conclusions & Recommendations of the IOC/IUGG Workshop on Long-Term Tsunami Risk Assessment (June 2000, Moscow, Russia)	9.1	SG	June
IOC/ITSU-XVIII/19	Conclusions & Recommendations of the IOC/IUGG Workshop on Tsunami Mitigation Beyond 2000 (5-6 October 2001, Cartagena, Colombia)	9.1	SG/FS/HM	Oct.
IOC/ITSU-XVIII/20	National Proposals for Future Projects	10	MS/IO	Aug.

FS: F. Schindele
IO: I. Oliouline
AV: A. Vannier

MS: Member States
MB: M. Blackford
CM: C. McCreery

SG: S. Gusiakov
RH: R. Hagemeyer
HM: Hansjurgen Meyer

Information Documents	Title	Agenda Item
IOC/ITSU-XVII/3	Summary Report of the ICG/ITSU Seventeenth Session, Seoul, Republic of Korea, 4-7 October 1999 (E,F,S,R)	1-14
IOC/EC-XXXIII/3	Extracts from the Summary Report of the Thirty-third Session of the IOC Executive Council (Paris, 20-30 June 2000) relevant to the Tsunami Programme	1-14
IOC-XXI/3	Extracts from the Summary Report of the Twenty-first Session of the IOC Assembly (Paris, 3-13 July 2001) relevant to the Tsunami Programme	1-14
IOC Manual & Guides No. 37	Post-Tsunami Survey Field Guide, 1998, UNESCO	4, 5.1
IOC Manuals & Guides No. 35	IUGG-IOC TIME Project. Numerical Method of Tsunami Simulation with the Leap-Frog Scheme, 1997, UNESCO	6, 9.1
IOC Technical Series No. 1124	Tsunami Master Plan, 1999, UNESCO (E,F,S,R)	1-14
	Tsunami Newsletter, Jan. 1998/Dec. 1999, Vol. XXXI	7.1
	ITSU/ITIC Tsunami Annual	7.1
	Tsunami Newsletter, Vol. XXXII, No.1-4	7.1
IOC Technical Series	Tsunami Glossary, 2001 (E,F,S,R)	7.3
	Handbook for Tsunami Forecast in the Japan Sea, JMA, Jan. 2001	8
	Five-Year Master Plan for the Development of a Regional Tsunami Warning System in the Southwest Pacific by Dr. G. Pararas-Carayannis, 1991, UNESCO (E only)	8
	Tsunamis in the Caribbean Area, edited by J. Lander	8
IOC/INF-1149	Summary Report of the IAS Tsunami Warning System Meeting, 19-21 December 2000, Mayaguez, Puerto Rico	8.2

ANNEX IX

ITIC DIRECTOR'S REPORT

VISITING EXPERTS PROGRAMME

Ms. A. Quiceno of the Pacific Pollution Control Center of Colombia and Mr. D. Olcese of the Hydrography and Navigation Directorate of Peru participated in ITIC's Visiting Experts Programme, which was held over a two-week period spanning the end of November and the beginning of December 2000. The programme stressed the importance of having a regional tsunami warning system in order to respond more quickly to events that originate within a few hours tsunami travel time of one's area of responsibility. The participants were briefed on the development of ITSU and the role it has played over the years in keeping communities in the Pacific aware of possible threats from teletsunamis. They were also informed about its efforts supporting tsunami research and public education programmes designed to help mitigate the effects of all tsunamis. Besides receiving briefings on the various topics of the programme at the ITIC's facilities in Honolulu, the participants were taken on a number of field trips. They received briefings at the Hawaii State Civil Defense, the Pacific Tsunami Museum, the Pacific Tsunami Warning Center, various sites in Hawaii that have experienced destructive tsunami inundation in the past, and at a few sites equipped with different types of water level measurement systems. Both participants completed the course successfully and each was awarded a Certificate of Training from the ITIC.

TSUNAMI NEWSLETTER

Some delays were encountered during the first half of the year 2000 in producing the Tsunami Newsletter, however, two bi-monthly issues, one semi-annual issue, and one Tsunami Newsletter Annual were produced during the contract period. The delays were due primarily to the shift from contracting out the Newsletter production to producing the Newsletter in-house. The Annual included summaries of Member State National Reports received either at the ICG/ITSU meeting in Seoul, Republic of Korea, in 1999 or submitted in conjunction with the meeting by Member States who were unable to attend the meeting. It also included the list of potentially tsunamigenic Pacific events, those events with a magnitude over 6.5, for the years 1998 and 1999. This list, together with events listed in the other shorter term Newsletters, provides continuity to the reporting of potentially tsunamigenic events and brings such reporting up to date. The distribution list for hard copies of the Newsletter was pared down considerably following on the response of recipients to an inquiry as to whether or not they wished to continue to receive a hard copy now that an on-line version is routinely available on the ITIC website. This has helped to reduce production time and costs significantly.

ASSOCIATE DIRECTOR

During the latter half of July 2000, the ITIC Associate Director Mr. R. Nunez traveled to the ITIC facilities for consultation with the ITIC Director and staff. The purpose of the consultation was to co-ordinate the production of ITIC publications with their placement on the ITIC website, which is maintained by SHOA in Chile. During his visit to the ITIC, the Associate Director also assisted with the production of the first semi-annual Tsunami Newsletter in-house in many years. The net result of this visit was the establishment of greatly improved lines of communication between the ITIC and the Associate Director's facility at SHOA. Also, the visit afforded the Associate Director the opportunity to share his expertise in on-line production with the ITIC staff so that materials generated by the ITIC will be more compatible with the requirements for uploading onto the web page.

ITIC LIBRARY

Preparations for on-line access to an annotated listing of the ITIC library holding was nearly complete at the conclusion of this contract period. Some of the material intended for scanning was sent to researchers developing an on-line database for tsunamis in the Atlantic and Caribbean areas. What these researchers do not scan will be scanned by the ITIC. The library grew slightly with the purchase of a few recent treatises on tsunamis. Many duplicate texts and reports have been culled from the shelves and they have been offered free to institutions that have a need for literature on tsunamis but have a limited budget to purchase such material. On-going maintenance of the library material continues.

MEETINGS

The ITIC Director attended a joint meeting of representatives from ITSU and from the Intra-American Seas Tsunami Warning System Steering Group held in Mayaguez, Puerto Rico in December 2000. The Director had an opportunity to explain to the group contributions ITSU could make to the Steering Group drawn from its 35 years of experience with the operation of a tsunami warning system in the Pacific. He also contributed significantly to the concept of a warning facility distributed among the system users in contrast to a centralized warning facility currently used in the Pacific. The meeting proved to be quite productive and actions intended to bring a warning system to the Intra-American Seas region are moving ahead swiftly.

ANNEX X

**IUGG-ICG/ITSU WORKSHOP 'TSUNAMI MITIGATION BEYOND 2000'
– FIRST ANNOUNCEMENT**

**The International Workshop
"Tsunami Mitigation Beyond 2000"**

**Organized jointly by the IUGG Tsunami Commission (IUGG/TC) and
the IOC International Co-ordination Group for the Tsunami Warning System in the Pacific (ICG/ITSU)
in Cartagena, Colombia, 5-6 October 2001
in conjunction with ITSU-XVIII**

Convened by V. Gusiakov (Russia), F. Schindelé (France) and H. Meyer (Colombia)

In response to the ITSU-XVII recommendations, the International Workshop '*Tsunami Mitigation Beyond 2000*' will be organized in Cartagena, Colombia on 5 & 6 October 2001 with the support from the Intergovernmental Oceanographic Commission (IOC) of UNESCO and the National Oceanographic Committee of Colombia, in conjunction with the XVIII Session of the IOC ICG/ITSU. This will be the third workshop of a series of three workshops organized jointly by the IUGG/TC and the ICG/ITSU. The focus of the first workshop held in Seoul, Korea in October 1999 was on the operational aspects of tsunami warnings. The second workshop held in Moscow, Russia in June 2000 was devoted to the methods of the long-term tsunami risk calculation and hazard assessment. The workshop in Cartagena will be mainly oriented on practical methods of tsunami mitigation and will be of interest to a wide community of researchers, emergency managers, decision-makers and other practitioners dealing with assessment and mitigation of tsunami hazard. These workshops complement the recommendations of the Tsunami Master Plan of the further development of the tsunami programme in the years after 2000 and assist in developing regional tsunami mitigation programmes, e.g., in the Intra-Americas Sea region.

The objectives of the Cartagena workshop are to: (1) review state-of-the-art knowledge of tsunami mitigation and preparedness; (2) exchange national experiences on the development of countermeasures; and (3) formulate recommendations on the actions required for tsunami disaster reduction.

Specific topics for the discussions during the Workshop will be:

- reaction to tsunami warnings at national, regional and local levels;
- tsunami inundation maps, their impact on land use planning and construction codes;
- engineering methods of tsunami protection;
- tsunami education and public awareness, national and regional programmes.

The Workshop format will include talks given by leading experts, presentations of participants and round-table discussions.

The language of the Workshop will be English.

Workshop Co-conveners

Viacheslav K. Gusiakov
Chair, IUGG/TC
Head, Tsunami Laboratory, Institute of Computational Mathematics & Mathematical Geophysics
Pr. Lavrentieva, 6 Novosibirsk 630090
RUSSIA
Tel: <7>(3832) 34-20-70
Fax: <7>(3832) 32-42-59
E-mail: gvk@omzg.sccc.ru

François Schindelé,
Chairman, ICG/ITSU
Laboratoire de Détection et de Géophysique
B.P. 12, 91680 Bruyères-le-Chatel
FRANCE
Tel : <33> 1 69 26 50 63
Fax : <33> 1 69 26 70 23
E-mail: schindel@ldg.bruyeres.cea.fr

Hansjürgen Meyer
Observatorio Sismológico del Suroccidente - OSSO
Universidad de Valle, Campus Meléndez
A. Aéreo 25360
Cali
COLOMBIA
Tel: <57>(2)339-7222, 330-1661
Fax: <57>(2)331-3418
Email: hjm@tsunami.univalle.edu.co, hjmeyer@osso.org.co

Prof. Meyer will also serve as the Local Contact for the Workshop arrangements.

Deadline for Preliminary Registration: 31 March 2001

Deadline for Abstract Presentation: 31 May 2001

Preliminary Registration Form
(to be sent to all conveners via e-mail)

The International Workshop
"Tsunami Mitigation Beyond 2000"

Organized jointly by the IUGG Tsunami Commission (IUGG/TC) and
the International Co-ordination Group for the Tsunami Warning System in the Pacific (ICG/ITSU) in Cartagena,
Colombia, 5-6 October 2001

in conjunction with ITSU-XVIII

Family name :
First name :
Citizenship:
Title:
Affiliation/Institution :
Business address :
.....
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