

3. History and milestones in the development of the Tsunami Warning System in the Pacific, ITSU to PTWS, 1960 - 2015
Historical Keynote Speech: Evolving the PTWS
Dr. Iouri Oliounine, 20 April 2015

WELCOME TO ITSU COMMEMORATION

DEAR COLLEAGUES, FRIENDS,

I AM VERY THANKFUL TO THE ORGANIZERS FOR GIVING ME AN OPPORTUNITY TO SHARE WITH YOU THE RECOLLECTION OF MY WORK WITH THE IOC INTERNATIONAL COORDINATION GROUP ON TSUNAMIS IN THE PACIFIC, AND TO ALL THOSE WHO PHONED AND SENT MESSAGES TO ME EMPHASIZING THE NEED OF MY PARTICIPATION IN THE COMMEMORATIVE EVENT.

I AM VERY SORRY THAT DUE TO EARLIER OVERLAPPING COMMITMENTS I AM NOT ABLE TO BE WITH YOU TODAY.

MAY I NOW TAKE YOUR TIME AND BRING YOU 37 YEARS BACK TO 1978 WHEN I HAD THE FIRST ENCOUNTER WITH THE GROUP AT THE ITSU 6th SESSION.

THAT WAS THE TIME WHEN GERRY DOHLER FROM CANADA WAS THE CHAIR OF THE GROUP, GEORGE PARARAS-CARAYANNIS WAS DIRECTOR OF ITIC, GUNTER GIERMAN REPRESENTED IOC, AND I WAS A MEMBER OF THE SOVIET DELEGATION.

I LEFT THE MEETING AS AN ENTHUSIASTIC SUPPORTER OF THE PROGRAMME, WITH ADMIRATION TO THE EXPERTS I MET AND APPRECIATION OF THEIR DEDICATION TO MITIGATE TSUNAMI IMPACTS.

I ALSO BROUGHT FROM THE MEETING A TROPHY, TAD MURTHY'S BOOK ON TSUNAMIS, WHICH JOINTLY WITH RUSSIAN PROFESSOR LEONID LOPATUCHIN WE TRANSLATED INTO RUSSIAN FOR PUBLICATION. THIS WAS MY FIRST INPUT TO ITSU AWARENESS/OUTREACH.

I COULD NOT IMAGINE THAT IN TWO YEARS I WOULD BECOME A MEMBER OF IOC IN CHARGE OF ALL DATA COLLECTION AND MANAGEMENT SYSTEMS, AND IN 1982 WHEN GUNTER GIERMAN LEFT THE SECRETARIAT, WOULD ALSO TAKE CHARGE OF THE TSUNAMI PROGRAMME.

MY FIRST ITSU MEETING, AS THE IOC SECRETARY, WAS IN SUVA IN 1982. SINCE THEN TILL THE 18th SESSION IN CARTAGENA IN 2001 I MISSED ONLY ONE SESSION IN 1989 IN NOVOSIBIRSK.

A FEW YEARS AFTER TAKING RESPONSIBILITY WE STARTED FORMULATING THE VISION OF THE PROGRAMME. 'THE MASTER PLAN FOR THE YEARS TO COME' WAS PUBLISHED IN 1989.

THIS PLAN CONTAINED INFORMATION ON THE CURRENT STATUS OF HAZARD ASSESSMENT, WARNINGS AND RESPONSE, SHORTCOMINGS OF THE SYSTEM AND PRIORITIES FOR THE FUTURE.

FROM THE VERY BEGINNING THERE WAS A COMMON UNDERSTANDING THAT TO ACHIEVE AN EFFECTIVE TSUNAMI WARNING SYSTEM TODAY'S TECHNOLOGY SHOULD BE EMPLOYED, APPROPRIATE SCIENTIFIC AND TECHNOLOGICAL TRAINING PROVIDED, AND PUBLIC EDUCATION AND AWARENESS CAMPAIGNS OF TSUNAMIS DANGER BE CARRIED OUT ON A CONTINUING BASIS.

LATER IT WAS ELEGANTLY PRESENTED BY EDDIE BERNARD IN THE 'TROIKA' PROPOSAL – TSUNAMI REDUCTION OF IMPACTS THROUGH THREE KEY ACTIONS: HAZARD ASSESSMENT, MITIGATION, AND AWARENESS GUIDANCE.

THERE WAS ALSO A GENERAL APPRECIATION OF THE FACT THAT TSUNAMI DANGER IS NOT A REGIONAL THREAT, IT IS REALLY A GLOBAL THREAT.

AND WE WERE ALL AWARE THAT TO BE SUCCESSFUL IN MEETING OUR MAIN OBJECTIVE OF SAVING LIVES WE NEED WORKING TOGETHER IN A CONSTRUCTIVE AND FRIENDLY MANNER AND COOPERATE CLOSELY WITH LOCAL, REGIONAL AND INTERNATIONAL ORGANIZATIONS DEALING WITH NATURAL HAZARDS TO MAKE THEIR KNOWLEDGE, EXPERIENCE AND INSTRUMENTS AVAILABLE AND USED FOR THE ADVANCEMENT OF ITSU.

LET ME USE THIS OPPORTUNITY TO THANK IUGG TSUNAMI COMMISSION, WDC-A FOR SOLID EARTH GEOPHYSICS, EUROPEAN UNION AND EUROPEAN GEOPHYSICAL SOCIETY AND MANY OTHER GOVERNMENTAL AND NON-GOVERNMENTAL ORGANIZATIONS FOR THEIR READINESS TO HELP.

I DO NOT HAVE TIME IN MY SHORT PRESENTATION TO GIVE A COMPLETE LIST OF ACHIEVEMENTS OF ITSU DURING THE PERIOD 1981-2001. LET ME JUST REMIND YOU OF SOME PRINCIPAL ACTIVITIES:

- IN ISSUING WATCH AND WARNINGS

BASED ON INFORMATION ABOUT LOCATION OF THE EARTHQUAKE, FOCAL DEPTH, SOURCE SIZE AND DURATION, PROCEDURES AND CRITERIA WERE DEVELOPED FOR ISSUING WARNINGS, WATCHES AND CONCESSIONS TO MAKE TSUNAMI WARNINGS TIMELIER, ACCURATE AND EFFECTIVE;

STUDIES ON TSUNAMI WAVES PROPAGATION WERE CARRIED OUT, TSUNAMI TRAVEL TIME CHARTS DEVELOPED AND PUBLISHED IN THE FORM OF AN ATLAS;

TSUNAMI GLOSSARY WAS PUBLISHED WITH DEFINITIONS ON TSUNAMI CLASSIFICATION, MEASUREMENTS AND SURVEY, GENERAL TSUNAMI TERMS AND OTHERS.

- IN TSUNAMI PREPAREDNESS AND POST DISASTER SURVEYS

A SURVEY WAS CONDUCTED IN THE COUNTRIES OF THE PACIFIC TO DETERMINE GAPS IN THEIR READINESS TO MEET AND RESPOND EFFECTIVELY TO TSUNAMI HAZARDS AND TO RECOMMEND WAYS TO IMPROVE SEISMIC AND TSUNAMI MONITORING CAPABILITIES;

ITSU EXPERTS TOOK PART IN A NUMBER OF POST TSUNAMI SURVEYS ORGANIZED WITH THE IOC SUPPORT IN 90ies.

THE RESULTS INCLUDED THE PUBLICATION OF 'THE POST TSUNAMI SURVEY GUIDE'; FORMULATION OF A PROPOSAL FOR INTERNATIONAL TSUNAMI SIGNS AND SYMBOLS; AND OF THE GUIDELINES ON THE ESTABLISHMENT OF TSUNAMI FIELD SURVEY TEAMS WITH THE PROCEDURES TO CONDUCT THE FIELD INVESTIGATIONS, RECOMMENDATIONS ON FIELD SURVEY EQUIPMENT AND ON THE CONTENT OF A POST-TSUNAMI EYEWITNESS INTERVIEW QUESTIONNAIRE.

- IN THE AREA OF COMMUNICATION AND USE OF MODERN TECHNOLOGY

COMMUNICATION PLAN WAS REGULARLY UPDATED AND WIDELY DISTRIBUTED, MONTHLY TESTS WERE IMPLEMENTED AND THE WORK STARTED ON AN ELECTRONIC VERSION OF THE PLAN;

PACIFIC RAPID RESPONSE PROJECT WAS INITIATED ON INSTALLATION OF IMPROVED WATER LEVEL STATIONS CAPABLE OF TELEMETERING THEIR DATA VIA SATELLITES AND USING WMO GIS COMMUNICATION NETWORKS.

- IN THE DEVELOPMENT OF DATA BASES

A CD-ROM 'TSUNAMI IN THE PACIFIC, 7 BC -2000 AD' WITH A MANUAL TO ACCOMPANY IT AND WITH THE WEB-VERSION WAS MADE AVAILABLE DUE TO THE EFFORTS OF RUSSIAN SCIENTISTS AND PERSONALLY DR. GUSIAKOV;

IMPORTANCE OF BATHIMETRIC DATA, SO NEEDED FOR TSUNAMI MODELLING AND MITIGATION, WAS EMPHASIZED AND STEPS MADE FOR THE DEVELOPMENT OF DIGITAL BATHYMETRY DATABASE. WORKSHOPS WERE IMPLEMENTED IN 1998 IN USA AND IN 1999 IN UK;

TSUNAMI BIBLIOGRAPHY WITH A NUMBER OF ENTRIES CLOSE TO 4,000 WAS PREPARED BY A GROUP OF SCIENTISTS LED BY PROFESSOR SOLOVIEV FROM RUSSIA.

- IN TSUNAMI MODELLING

TSUNAMI INUNDATION MODELLING EXPERIMENT (TIME) WAS CARRIED OUT WITH THE DEVELOPMENT OF A COMPUTER PROGRAMMES AND PUBLICATION OF THE TIME MANUAL IN 1997 THANKS TO JAPAN AND PERSONALLY PROFESSOR SHUTO.

DEVELOPMENT AND PUBLICATION OF THE MANUAL OF NUMERICAL SIMULATION OF TSUNAMI WAS CONSIDERED.

- IN TRAINING AND EDUCATION

TSUNAMI VISITING EXPERTS PROGRAMME CONTINUED TO BE IMPLEMENTED UNDER THE AUSPICES OF ITIC;

NATIONAL TRAINING COURSES WERE IMPLEMENTED IN SOME COUNTRIES OF THE PACIFIC UNDER THE GUIDANCE PROVIDED BY ITSU, SUCH AS TIME COURSES IN MEXICO AND CHILE.

TO ACHIEVE A CHANGE IN THE ATTITUDE OF POPULATION IN RELATION TO RISK PREVENTION WHEN NATURAL DISASTER OCCURS, TSUNAMI AND EARTHQUAKE TEXTBOOKS FOR DIFFERENT CHILDREN AGE-GROUPS STARTING FROM A KINDERGARDEN WERE WRITTEN AND PUBLISHED IN SPANISH IN CHILE UNDER THE GUIDANCE OF CAPTAIN HUGO GORZIGLIA. THE TEXTBOOKS WERE ACCOMPANIED WITH METHODOLOGICAL INSTRUCTIONS FOR TEACHERS;

LATER THEY WERE PUBLISHED IN RUSSIAN AND ENGLISH LANGUAGES. IN SOME COUNTRIES THEY WERE USED AS A MODEL FOR THE PRODUCTION OF NATIONAL TEXTBOOKS;

DUE TO THE EFFORTS OF GEORGE PARARAS-CARAYANNIS THE 'TSUNAMI WARNING' CARTOON BOOK FOR CHILDREN WAS PUBLISHED IN ENGLISH LATER IT WAS TRANSLATED IN MANY OTHER LANGUAGES INCLUDING SPANISH, THAI, INDONESIAN. JUST TWO YEARS AGO WHILE ON MISSION TO IRAN I WAS PRESENTED WITH THIS BOOK TRANSLATED INTO FARSI.

- IN THE AREA OF AWARENESS INCREASE

A PRESS KIT WAS DEVELOPED;

A WEB-SITE, TSUNAMI NEWSLETTER, AND TSUNAMI BULLETIN BOARD WERE DEVELOPED AND HOSTED BY ITIC;

AND MATERIALS WERE PROVIDED TO expo-98 RELATED TO TSUNAMI MITIGATION AND TSUNAMI WARNING SYSTEM IN THE PACIFIC. THE UN PAVILION WHERE THESE MATERIALS WERE DEMONSTRATED, WAS VISITED BY MILLIONS OF VISITORS AND IOC TSUNAMI PROGRAMME RECEIVED UNIQUE PUBLICITY.

- IN THE AREA OF COOPERATION

MEMBERS OF THE GROUP, CONTRIBUTED TO THE DEVELOPMENT AND IMPLEMENTATION OF EU –FUNDED PROGRAMMES, LIKE 'GENESIS AND IMPACT OF TSUNAMIS ON EUROPEAN COASTS'.

AS A CONTRIBUTION TO THE INTERNATIONAL YEAR OF THE OCEAN A JOINT IOC/EU INTERNATIONAL CONFERENCE ON TSUNAMIS WAS ORGANIZED IN 1998 IN PARIS. PROCEEDINGS OF THE CONFERENCE WERE PUBLISHED IN JUNE 1999.

ITSU CONTRIBUTED TO THE IMPLEMENTATION PLAN OF A STRATEGY FOR FUTURE ACTIONS ENTITLED 'A SAFER WORLD IN THE 21ST CENTURY: RISK AND DISASTER REDUCTION' DEVELOPED BY IDNDR FINAL FORUM IN 1999.

I WOULD NOT BOTHER YOU WITH A COMPLETE TEXT, JUST TWO QUOTES FROM OUR CONTRIBUTION – 'DEVELOP GLOBAL TSUNAMI OBSERVATION AND COMMUNICATION NETWORKS AND ASSOCIATED STANDARDS; CO-ORDINATE REGIONAL TSUNAMI WARNING SYSTEMS AND THE PACIFIC-WIDE TSUNAMI WARNING SYSTEM WITHIN AN OVERALL FRAMEWORK OF GLOBAL OPERATIONS'.

- WE ALWAYS CHERISHED A DREAM OF A GLOBAL TSUNAMI WARNING SYSTEM. AT THE END OF 80-ies BEGINNING OF 90-ies IOC ORGANIZED MISSIONS OF TSUNAMI EXPERTS TO THE SOUTHERN PART OF THE PACIFIC OCEAN, TO THE BAY OF BENGAL, AND THE CARIBBEAN REGION WITH THE OBJECTIVE TO EXPLORE THE NEED AND OPPORTUNITIES FOR ESTABLISHING TSUNAMI WARNING SYSTEMS IN THESE AREAS.

DRAFT PROJECT PROPOSALS WERE FORMULATED AND MEMBER STATES INVITED TO SUPPORT THEIR FURTHER DEVELOPMENT.

IN 2001 THE IOC ASSEMBLY RECOMMENDED THAT “CAREFUL CONSIDERATION OF EXTENDED RESPONSIBILITIES OF THE ICG/ITSU IN THE PACIFIC TO OTHER THAN THE PACIFIC REGIONS SHOULD BE CARRIED OUT”.

HOWEVER THESE EFFORTS AND CALLS HAVE NEVER BEEN WELL ACKNOWLEDGED. IT WAS FRUSTRATING TO SEE THAT EVEN IN THE IOC SECRETARIAT THERE WERE PLANS TO TERMINATE THE TSUNAMI PROGRAMME.

THE INDIAN OCEAN TSUNAMI OF 26 DECEMBER 2004 SHOOK THE WORLD AND CHANGED THE VIEWS OF MANY SCEPTICS.

IT PROVED THAT TSUNAMI EXPERTS, LIKE YOU, WERE RIGHT IN ADVISING THEIR GOVERNMENTS AND ORGANIZATIONS AT ALL LEVELS THAT TSUNAMI WAVES ARE REAL AND DANGEROUS, AND IF YOU ARE IN A COASTAL AREA, YOU ARE ALWAYS UNDER THE RISK OF LOSING YOUR LIFE.

IGNORANCE OF OUR CALLS COSTED THE WORLD HUNDREDS OF THOUSANDS OF LIVES AND MILLIONS OF DOLLARS TO REPAIR DAMAGES.

HERE I JUST WANT TO SAY THAT IT WAS DUE TO YOUR EFFORTS, YOUR DEDICATION, HARD WORK AND ACHIEVEMENTS THAT IOC WAS GRANTED BY THE UNITED NATIONS THE RESPONSIBILITY FOR COORDINATING THIS AMBITIOUS PROJECT.

THE PICTURE OF THE GROUP ACHIEVEMENTS DURING THE 80ies-90ies WILL NOT BE COMPLETE IF I DO NOT MENTION THAT ALL OF THE ACTIVITIES WERE ACCOMPLISHED WITH LITTLE BUDGET OF 20,000-30,000 USD AND NO FULL TIME STAFF IN THE IOC SECRETARIAT.

TO A BIG DEGREE THE GROUP SUCCESS WAS DUE TO THE FACT THAT DURING ALL THOSE YEARS WE HAD COUNTRIES AS USA, CANADA, JAPAN, RUSSIA, FRANCE, CHILE, AND INDIVIDUALS WHO WERE NOT ONLY

DECLARING THE IMPORTANCE OF THE PROGRAMME BUT PROVIDED REAL FINANCIAL ASSISTANCE IN KIND OR IN FUND.

AND THE FIRST NAMES WHICH ARE COMING TO MY MIND IN ADDITION TO THOSE I HAVE ALREADY MENTIONED ARE

THE NAMES OF DICK HAGEMEYER AND OF HIS WIFE HELEN FROM THE UNITED STATES, WHOSE SUPPORT AND HOSPITALITY WERE INDISPENSABLE FOR THE SUCCESS OF THE PROGRAMME AND CREATING THE ATMOSPHERE OF FRIENDSHIP;

GORDON BURTON, MIKE BLACKFORD, AND CHIP McCREERY – DIRECTORS OF PTWC;

GEORGE PARARAS-CARAYANNIS WHOSE DEEP KNOWLEDGE OF THE PROGRAMME AND FLAMBOYANT CHARACTER WAS ALWAYS HELPING IN CREATING ATMOSPHERE OF EASINESS AND RELAXATION;

GERRY DOHLER MY FIRST CHAIRMAN AND A PERSON WHO MADE ME TO UNDERSTAND BETTER THE PROGRAMME AND THE VALUE OF HUMAN RELATIONSHIP;

HUGO GORSIGLIA, ANOTHER GROUP CHAIRMAN, A CAPTAIN OF THE NAVY, FATHER OF MANY CHILDREN AND A FUTURE DIRECTOR OF IHO. DUE TO HIS EFFORTS ITSU WAS AMONG THE INTERNATIONAL PIONEERS IN BRINGING THE ISSUE OF MARINE HAZARDS IN SCHOOL CURRICULARS.

I AM VERY SORRY THAT DUE TO THE LACK OF TIME I AM NOT ABLE TO GIVE THE NAMES OF MANY OTHERS WHO, DURING MY TERM OF SERVICE, MADE THE PROGRAMME SO SUCCESSFUL.

THANK YOU VERY MUCH FOR THE OPPORTUNITY TO SHARE WITH YOU THE HISTORY OF ITSU, FOR YOUR ATTENTION AND PATIENCE,

I WISH YOU ALL AN EXCELLENT MEETING AND DO NOT FORGET THAT I AM ALWAYS AT YOUR DISPOSAL IF THERE IS A NEED FOR MY KNOWLEDGE AND EXPERIENCE.