

IUGG – General Assembly, Melbourne, June 28-July 7, 2011

Report on IAPSO Activities by S. Sparnocchia (IAPSO National Delegate and member of the IAPSO Executive Committee)

The following report highlights the IAPSO activities in Melbourne, divided into business meetings and scientific activities. The official reports on Executive Committee and General Business meetings will be made public by the Secretary General J. Rodhe, on the IAPSO website (recently relocated at <http://iapso.iugg.org>).

Report on Business Meetings

During the General Assembly in Melbourne, two EC Business meetings (29/06 and 02-03/07) and one General Business meeting (01/07) took place. The EC meetings are restricted to the participation of the members, while the GB meeting is open to the participation of National Delegates, EC members and invited guests.

The agendas of the EC meetings are enclosed in Appendix A, and that of the GB meeting with its annexes is in Appendix B.

Business Meetings Highlights:

- List of elected officers for the IAPSO Bureau and EC 2011-2015

The following members were proposed by the Nominations Committee (see annex B) and elected during the GBM for the new 2011-2015 Bureau and EC of IAPSO (18 National delegates have voted):

President	Eugene Morozov	(Russia)
Secretary General	Johan Rodhe	(Sweden)
Past President	Lawrence Mysak	(Canada)
Treasurer	Fred Camfield	(USA)
Vice President 1	Denise Smythe-Wright	(United Kingdom)
Vice President 2	Isabelle Ansorge	(South Africa)
EC members	Sivia Blanc	(Argentina)
	Toshiyuki Hibiya	(Japan)
	Chris Meinen	(USA)
	Ken Ridgway	(Australia)
	Satheesh Sheno	(India)
	Stefania Sparnocchia	(Italy)

- Nomination of IAPSO representatives to Union Commissions

Satheesh Sheno	Data and Information Commission
Diana Greenslade	Geophysical Risk and Sustainability
Gordon Swaters	Mathematical Geophysics

- Appointment of new Liaison Officers

Eugene Morozov	IAPSO Liaison Officer to SCOR
Stefania Sparnocchia	IUGG Liaison Officer to UNESCO/IOC

- IAPSO Medals

Prince Albert I Medal 2011

The Prince Albert I Medal 2011 has been awarded to Trevor McDougall from CSIRO, Australia, in recognition of his work on ocean fluid mixing dynamics. The presentation of the medal was held on 1

July when Dr McDougall also delivered the Prince Albert I Medal Memorial Lecture titled 'Detecting signatures of ocean mixing – the forensic science aspect to ocean mixing'.

Nomination Committee for Prince Albert I Medal 2013

The 2013 Prince Albert I Medal Nomination Committee had been formed and comprised of the following:

Isabelle Ansorge	Chair, new appointment
Denise Smythe-Wright	re-appointed
Julie Hall	re-appointed
Bill Crawford	new appointment
Mitsuo Uematsu	new appointment
Claudia Simionato	new appointment
Trevor McDougall	new 2011 Medallist

Call for nominations will be in one year before the Gothenburg Joint Assembly in 2013 and National Delegates were urged to put names forward as nominations in the past have been small in number.

The EC and National Delegates all agreed that nominations of highly regarded scientists of strong international standing and preferably fellows of their National Academy of Sciences should be encouraged.

Eugene LaFond Medal

The 2011 LaFond Medal was awarded to Dr. Towhida Rashid from Bangladesh for her oral presentation "Holocene relative sea level change in Bangladesh" on July 1st, 2011 in the IAPSO symposium " Global and regional sea-level change". The 2011 LaFond Medal committee consisted of Eugene Morozov (Chair), Isabelle Ansorge, Denise Smythe-Wright, Johan Rodhe and Stefania Sparnocchia.

- **Commissions, Services and Working Groups**

The **Permanent Service for Mean Sea-level and Commission on Mean Sea level and Tides (CMSLT)** report (see annex B) was approved by the Committee.

Philip Woodworth provided a report back on this commission at the General Business meeting. It was reported that Gary Mitchum would become the new President of CMSLT and Simon Holgate would become the new Vice-President.

Simon Holgate gave an overview of the PSMSL and its achievements during 2007-2011. He provided a presentation highlighting the importance of their new website and the ease in which data could now be distributed globally. Support from GLOSS (Global Sea Level Observing System) had enabled the Commission to set up training courses. Holgate also highlighted the new Tsunami report for the Indian Ocean and provided an overview of the publications and citations during this period.

SCOR/IAPSO WG 127 - Thermodynamics and equation of state of seawater (see report in annex B). Dr Trevor McDougall gave an overview of this WG to the GBM. This is a very successful WG, with a number of meetings and papers as well as the international adoption of their TEOS-10 salinity unit by the international community, IOC and SEABIRD ocean instruments. McDougall suggested to establish a new standing committee to ensure that this work would carry on.

SCOR/IAPSO WG 129 - Deep Ocean Exchanges with the Shelf - DOES (see report in annex B). A special issue of Ocean Sciences has been prepared by the WG.

SCOR/IAPSO WG 133 – OceanScope - No report was provided by this working group.

SCOR/IAPSO WG 136 – Climatic Importance of the Greater Agulhas System (see report in annex B). It is a new WG, approved in Beijing 2009, led by Drs Lisa Beal and Arne Biastoch. Dr Lisa Beal provided an overview of this WG during the GBM.

Their first meeting occurred during the Ocean Sciences meeting in February 2010. Since then the WG have published in Nature and have been involved along with JCOMMPS in a capacity building workshop specifically aimed at African scientists in Mauritius, May 2011. At this meeting it was decided that an application for a Chapman Conference would be submitted and should this be successful the conference would be held in Grahamstown, South Africa in September 2012. In addition, the WG has submitted a report to CLIVAR suggesting that a sustainable network of in-situ measurements south of Africa be approved.

- IAPSO budget

Financial quadrennial report 2007 – 2010

The quadrennial financial report for 1 January 2007 to 31 December 2010 (see annex B) was presented by the Secretary General in the absence of the IAPSO Treasurer Fred Camfield. IAPSO is currently in surplus due to the Victoria State Government offering a waiver on registration fees as well as the treasurer's preference to pay SCOR every second year. The need for IUGG to raise financial support for future Assemblies was noted.

Budget 2011 – 2012

The Secretary General presented a financial budget for 1 January 2011 to 31 December 2012 prepared by the Treasurer (see annex B).

Mysak reminded the meeting that delegates need to identify/tick the IAPSO box when registering to ensure that IAPSO received full financial support at every Assembly.

- Scientific programme proposals for the Joint 2013 Assembly in Gothenburg 2013

The assembly is co-sponsored by IAPSO, IAHS, IASPEI. It will be held over 5 days and about 1300 delegates are expected. The brochure is ready and a LOC, led by Prof David Turner, has been formed. Registration fees will be less than 500 Euros.

Ideas for session topics were requested. Suggestions from the committee included the Arctic, the Baltic Sea, Health and pollution studies, continental and shelf seas, the impact of volcanic ash, waves and tsunamis as well as a session on operational oceanography highlighting the ships of opportunity programme.

- IAPSO resolutions

IAPSO put forward a resolution at the IUGG Council Meeting on July 6 encouraging the adoption of the new equation of state of sea water and the method of calculating absolute salinity, both of which arose out of the SCOR/IAPSO WG 127, chaired by McDougall.

Scientists should be encouraged to start using the new unit in all publications; although a 5 year timeline has been suggested.

- Visibility of IAPSO and links to biological organisations

The President reported that the visibility of IAPSO was a problem because a membership list doesn't exist, just an email list of National Correspondents and past attendees of IAPSO assemblies. Compared to other Associations, IAPSO does not receive any publishing royalties and only meets every second year. The strength of IAPSO is currently its involvement with SCOR. A suggestion from the GBM was the need to draw scientist's attention to IAPSO and explain more clearly what it is and what the association can do. One way to raise IAPSO's profile is to have an open Association meeting during the next Joint Assembly in Gothenburg. A further suggestion from the delegates was for a dedicated IAPSO session at the 2012 Ocean Sciences meeting in Salt Lake City, USA and EGU in Vienna, Austria thus improving the association's visibility and raising its profile.

A continued crucial aspect was how to increase biogeochemistry activities in IAPSO. Links with IABO were established in the past, e.g. at the assembly in Mar del Plata, Argentina in 2001 and at the EGU

meeting in Vienna, Austria in 2005. There had been a move to include more biogeochemistry into IAPSO assemblies over the last 10 years and the programme for the next Joint Assembly would include strong links to current biogeochemical research. This would help improving the association's visibility and raising its profile. It was suggested that the vision document for IAPSO should be revised and become more multi-disciplinary to overlap with current biological and fisheries scientific research.

Italian delegation meetings: two meetings have been performed (involving A.Marcellini,G.Panza, F.Sansò, S.Sparnocchia and L.Vigliotti) to decide about format of reports and possible future constitution of a IUGG-Italy Committee.

Participation to the IUGG-GA

The final numbers communicated by the Organizing Committee is 3500 participants from over 91 countries (with 2831 oral presentations and 4758 abstracts in general).

Report Scientific Activity

The International IAPSO activity has been organized in 7 Symposia according to the following scheme:

CODE	SYMPOSIA	LEAD CONVENOR/S
P01	General topics of ocean physics and chemistry	Eugene Morozov
P02	Physical and biogeochemical processes in marginal enclosed and semi-enclosed seas	Stefania Sparnocchia
P03	Ocean mixing	Trevor J. McDougall
P04	Thermohaline Circulation (THC) and Deep Currents	Andrea Bergamasco
P05	New insights from Sustained Ocean Observing Systems	Susan Wijffels
P06	Eastern and Western Boundary Currents	Lisa Beal
P07	Ocean acidification, including Coastal Coral Reef Oceanography	Denise Smythe-Wright

In addition IAPSO has co-organized with other IUGG Association the following 3 Joint Symposia:

CODE	SYMPOSIA	LEAD CONVENOR/S
J-P01	The Southern Ocean in a changing world	Isabelle Anserge
J-P02	Future state of the Arctic and potential impact	Bruno Tremblay
J-P03	Global and regional sea-level change	Simon Holgate

These have all been chaired by IAPSO. Moreover IAPSO has co-sponsored without leadership other 21 Joint Symposia.

A total of 231 oral presentations and 98 posters were scheduled in P0x and J-P0x Symposia. The electronic abstracts book is available here: <http://hosted.arinex.com.au/iugg2011abstracts/>

Italian Delegation to IAPSO: this has been restricted to 5 persons only due to the venue. The scientific activity has been performed by 7 oral presentations and 6 posters. The business activity has been conducted by S.Sparnocchia in Council and E.C.

Encl./

October 2011

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Appendix A

to the Report on IAPSO Activities

by S. Sparnocchia

Agenda of IAPSO General Business Meeting on 1 July 2011, in Melbourne (08:30 - 10:00)

Participants: National Delegates, Executive Committee Members and invited

1. Introduction of IAPSO Executive Committee (EC) and National Delegates;
2. Approval of the agenda
3. Approval of the minutes of the GBM in Montreal on July 22, 2009 (Minutes are available on the IAPSO website, <http://iapso.iugg.org/>, and will be distributed at the meeting)
4. Business arising out of the minutes
5. Election of new Executive Committee Members for 2011-2015

Presentation by Nomination Committee Chair Shiro Imawaki
List of Nominated new members will be sent to the National Correspondents before the meeting and will be available at the meeting. (Lists of present and earlier EC Members are available on the IAPSO website)

President Lawrence Mysak will automatically be new Past President, Secretary General Johan Rodhe and Treasurer Fred Camfield are elected for 2007-2015.

6. IAPSO Liason Officers for 2011-2015
 - a) UNESCO IOC
 - b) SCOR: New IAPSO President
7. Report on actions taken by the IAPSO EC and Officers (Lawrence Mysak)
 - a) 2011 Prince Albert I Medal – Trevor McDougall
 - c) 2009 Eugene LaFond Medal – Bamol Sow (Medal and Diploma was sent to him after the assembly in 2009)
 - d) Creation of a New SCOR/WCRP/IAPSO WG 136: Climatic Importance of the Greater Agulhas System
 - d) Award committee for 2013 Prince Albert I Medal; generation of nominations
 - e) Award committee for 2011 Eugene LaFond Medal
8. Quadrennial financial report 2007 - 2010 (enclosed)
9. Budget 2011 – 2012 (Will be distributed at the meeting)
 - a) 10. Reports on IAPSO Commissions, Services, and Working Groups
 - a) Commissions: Mean Sea Level and Tides, (CMSLT), Tsunami,

Geophysical Risk and Sustainability, Mathematical Geophysics, Data and Information, International Ocean Network

b) Permanent Service for Mean Sea Level, PSMSL

c) SCOR/IAPSO WG 127 - Thermodynamics and equation of state of seawater

d) SCOR/IAPSO WG 129 - Deep Ocean Exchange with the Shelf

e) SCOR/IAPSO WG 133 – OceanScope

f) SCOR/WCRP/IAPSO WG 136 - Climatic Importance of the Greater Agulhas System

11. Reports to IUGG and SCOR on IAPSO activities

(Reports are available on the IAPSO website, and will be distributed at the meeting)

12. Reports on activities of IUGG

13. The visibility of IAPSO and Links to biological organizations – IABO

14. Report on plans for Joint Assembly in Gothenburg 2013

15. Report on the plans for the IUGG General Assembly in 2015 – location?

16. Call for any resolutions

17. Other Business

Agenda of IAPSO EC Second Meeting on Saturday 2 July, 6.00 – 7.30 (possible continuation on Sunday 3 July, 12.00 – 1.30 pm), 2011 in Melbourne

Participants

EC members:

Observers: new EC Members

1. Approval of the agenda
2. Welcome of new EC members
3. Business arising out of the GBM on 1 July 2011
4. Preliminary assessment of IUGG11
5. Information about the IUGG Meetings during IUGG11 (Lawrence Mysak/Johan Rodhe)
6. Eugene LaFond Medal (preliminary report)
7. Scientific Program proposals for 2013 Joint Assembly in Gothenburg (continuation)
8. IAPSO Assembly 2013 (continuation)
9. Information about the coming SCOR EC Meeting in Helsinki, September 2011 (Lawrence Mysak/Johan Rodhe)
10. Consideration of any resolutions
11. Other business

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Appendix B

to the Report on IAPSO Activities

by S. Sparnocchia

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Presentation by Nomination Committee Chair Shiro Imawaki
List of Nominated new members will be sent to the National Correspondents before the meeting and will be available at the meeting. (Lists of present and earlier EC Members are available on the IAPSO website)

President Lawrence Mysak will automatically be new Past President, Secretary General Johan Rodhe and Treasurer Fred Camfield are elected for 2007-2015.

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Geophysical Risk and Sustainability, Mathematical Geophysics, Data and Information, International Ocean Network

b) Permanent Service for Mean Sea Level, PSMSL

c) SCOR/IAPSO WG 127 - Thermodynamics and equation of state of seawater

d) SCOR/IAPSO WG 129 - Deep Ocean Exchange with the Shelf

e) SCOR/IAPSO WG 133 – OceanScope

f) SCOR/WCRP/IAPSO WG 136 - Climatic Importance of the Greater Agulhas System

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13. The visibility of IAPSO and Links to biological organizations – IABO

14. Report on plans for Joint Assembly in Gothenburg 2013

15. Report on the plans for the IUGG General Assembly in 2015 – location?

16. Call for any resolutions

17. Other Business

Slate of Candidates for Election to the IAPSO Executive Committee for the Period 2011–2015

The Statutes and By-Laws of the International Association for the Physical Sciences of the Oceans (IAPSO) prescribe the composition, appointment/election mechanism, and terms of office of IAPSO Bureau and Executive Committee members. An essential requirement is for rotation of membership to ensure “new blood” but at the same time retain adequate continuity. At the IAPSO Assembly in Montreal, Canada in 2009, a Nominations Committee (NC) comprising John Church, Shiro Imawaki (the Chair), Mike McPhaden, and Liliane Merlivat was appointed, following Article II/10 of the Statutes. The NC has reviewed the present membership of the IAPSO Bureau and Executive Committee and has scrutinized the nominations received in terms of Article II/14 of the By-Laws for vacant positions on the Executive for the period 2011–2015. Where appropriate, the NC has sought additional nominations.

It is accordingly our pleasure to propose the following slate of candidates for consideration by the General Assembly of IAPSO for election as officers. In proposing the slate, we have endeavored to ensure that there is a good disciplinary and geographical balance in keeping with the concepts embodied in IAPSO’s strategic thinking.

The summary is shown first and then brief supporting motivation is provided in respect of our recommendation for Presidents and new candidates. For reference, positions currently occupied are also described.

Slate of candidates of EC members for 2011–2015: Summary

President: Dr. Eugene Morozov

Vice President: Dr. Isabelle Ansorge

Dr. Denise Smythe-Wright; to be re-elected

EC Member: M.Sc. Silvia Blanc; to be re-elected

Prof. Toshiyuki Hibiya

Dr. Chris Meinen

M.App.Sc. Ken Ridgway

Dr. Satheesh Shenoi

Dr. Stefania Sparnocchia; to be re-elected

Supplement: Positions currently occupied

Secretary General: Prof. Johan Rodhe; his second period

Past President: Prof. Lawrence Mysak; from President automatically

Treasurer: Dr. Fred Camfield; his second period

Note: The President, Secretary General, Past President and Treasurer are the Bureau members.

<Motivation for each candidate>

President: Dr. Eugene Morozov (Russia)

Dr. Eugene Morozov is a Principal Research Scientist, Head of Laboratory of Shirshov Institute of Oceanology, Russian Academy of Sciences. He is a physical oceanographer involved in studies on (a) oceanic internal waves, (b) mixing, (c) flows in narrow channels, and (d) general oceanic circulation. He is a field oceanographer, making 38 cruises in the world oceans. He found that the main source of internal tide generation is interaction between the barotropic tide and submarine ridges. He is recently involved in studies on flows in abyssal channels of the Atlantic Ocean. He is the author of more than 170 publications including four books. Dr. Morozov graduated from Moscow Institute of Physics and Technology in 1970, and received his Doctor of Science from Shirshov Institute of Oceanology in 1990. He served as Junior Research Scientist, Senior Research Scientist, and Leading Research Scientist at Shirshov Institute of Oceanology. He is the Chairman of the Oceanographic Section at the Russian National Geophysical Committee. He experienced Visiting Scientists at several universities and institutions in Spain and USA. Dr. Morozov has, since his election as Member of the IAPSO Executive in 1999, been very active in the affairs of the Association. He served as Vice President during 2007–2011. He was conveners of various symposia at various IAPSO assemblies. The National Geophysical Committee of Russian Academy of Sciences has nominated him as a candidate for the IAPSO President, and he has accepted. We can think of no other person better suited for leading IAPSO as the President over the next four years, and we give his candidacy our strongest support.

Vice President: Dr. Isabelle Ansorge (South Africa)

Dr. Ansorge is a Senior Lecturer at the Oceanography Department of the University of Cape Town, South Africa. She is a physical oceanographer involved in studies on the role of the Southern Ocean and its Subantarctic Islands, especially for the position and volume transport of the Antarctic Circumpolar Current. Her recent research interests include the influence that the Southern Ocean has on climate change and biodiversity and in particular on South African climate variability. She published 14 scientific papers on international journals during recent several years. Dr. Ansorge graduated from the University of Plymouth, United Kingdom in 1992, and received her PhD. from the University of Cape Town in 2000. She served as Lecturer at the University of Cape Town. She is the Chair of the South African International Union for Geodesy and Geophysics (IUGG), Committee member for the Southern Ocean Observing System (SOOS), Committee member on the Expert Group for Oceanography of Scientific Council for Antarctic Research (SCAR), etc. Dr. Ansorge was elected as IAPSO EC Member in 2007. She has been very active in the affairs of the Association, especially promoting the oceanography in Africa. The National Research Foundation of South Africa has nominated her as a candidate for IAPSO Vice President, and she has accepted. Considering her activeness in the global community of oceanography as well as in the Association, we strongly support her candidacy for Vice

President.

Vice President: Dr. Denise Smythe-Wright (United Kingdom)

Dr. Smythe-Wright is a Principal Scientist at the National Oceanography Centre, United Kingdom. She has served on the Executive since 1999, as EC Member during 1999–2007 and as Vice President during 2007–2011. She has been very active in the affairs of the Association, especially promoting the biogeochemical oceanography. She is willing to continue to play the role of Vice President, and nominated by the United Kingdom National Committee for IAPSO. Therefore, we strongly support her candidacy for the second term as Vice President.

EC Member: M.Sc. Silvia Blanc (Argentina)

M.Sc. Blanc is a Scientific Research Projects Director at the Argentinean Navy Research Office. She was elected as EC Member in 2007. She has been very active in the affairs of the Association, especially promoting the oceanography in South America. She is willing to continue to serve as EC Member, and nominated by the Argentinean National Committee of IAPSO. Therefore, we strongly support her candidacy for the second term as EC Member.

EC Member: Prof. Toshiyuki Hibiya (Japan)

Dr. Hibiya is a Professor at the Graduate School of Science, University of Tokyo, Japan. He is a physical oceanographer involved in studies on (a) parameterization of diapycnal mixing processes in the deep ocean, (b) accurate modeling of the upper ocean response, (c) dynamics of the Kuroshio meander, etc. He has published more than 60 scientific papers on international journals. Dr. Hibiya graduated from Faculty of Science, University of Tokyo in 1980, and received his PhD. from Graduate School of Science, University of Tokyo in 1985. He served as Research Associate at the University of Tokyo, and Associate Professor at Hokkaido University and the University of Tokyo. He served as Secretary of the Local Organizing Committee of the XXIII General Assembly of the International Union of Geodesy and Geophysics (IUGG) in 2003. He is a Member of Science Advisory Committee for the International Pacific Research Center of the University of Hawaii, and the Editor-in-Chief of Journal of Oceanography. Dr. Hibiya received the Okada Memorial Prize and the Society Prize of the Oceanographic Society of Japan. The Japanese National Committee for IAPSO has nominated him as a candidate for IAPSO EC Member, and he has accepted. Therefore, we strongly support his candidacy for EC Member.

EC Member: Dr. Chris Meinen (USA)

Dr. Meinen is an Oceanographer at the Atlantic Oceanographic and Meteorological Laboratory, National Oceanic and Atmospheric Administration (NOAA), USA. He is a physical oceanographer involved in studies of (a) Atlantic meridional overturning circulation, (b) variability in deep western boundary current transports, (c) the structure and transport of the Gulf Stream and North Atlantic Current, (d) interannual variability in warm water exchange between the tropical Pacific and the subtropics, etc. He has published about 40

scientific papers in international journals. Dr. Meinen graduated from Luther College, USA in 1992, and received his PhD. from the University of Rhode Island in 1998. Prior to joining NOAA in 2004, he served as Affiliate Researcher at the University of Hawaii at Manoa, and Assistant Scientist at the Cooperative Institute for Marine and Atmospheric Studies, University of Miami. He served as Member of the Phenomena, Observations, & Synthesis Panel of U.S. Climate Variability and Predictability Study (CLIVAR). The U.S. National Committee for IUGG has nominated him as a candidate for IAPSO EC Member, and he has accepted. Therefore, we strongly support his candidacy for EC Member.

EC Member: M.App.Sc. Ken Ridgway (Australia)

M.App.Sc. Ridgway is a Principal Research Scientist at the Marine and Atmospheric Research of Commonwealth Scientific and Industrial Research Organisation (CSIRO), Australia. He is a physical oceanographer involved in studies on large-scale ocean circulation, especially for (a) western boundary currents, (b) East Australian Current, regional currents around Australia, (c) observation techniques and design, (d) ocean climatology, (e) validation of ocean models, etc. He has published more than 30 scientific papers on international journals. M.App.Sc. Ridgway graduated from Monash University, Australia in 1973, and received his M.App.Sc. from Deakin University in 1983. He served as Experimental Scientist, Senior Experimental Scientist, and Senior Research Scientist at CSIRO. He is a Founding Member of Executive Committee of South Pacific Climate and Circulation Experiment (SPICE), and Member of Ocean Surface Topography Science Working Team for the NASA/CNES Jason-1, TOPEX/POSEIDON and EOS Satellite Missions, etc. The Australian National Committee for IAPSO has nominated him as a candidate for IAPSO EC Member, and he has accepted. Therefore, we strongly support his candidacy for EC Member.

EC Member: Dr. Satheesh Shenoi (India)

Dr. Shenoi is the Director of Indian National Centre for Ocean Information Services. He is a physical oceanographer involved in studies on (a) coastal currents around India, (b) hydrography, water masses, warm pool and subsurface barrier layer in the southeastern Arabian Sea, (c) heat budget of the near-surface Arabian Sea and Bay of Bengal, (d) near-surface circulation and kinetic energy in the tropical Indian Ocean, etc. He has published about 60 peer-reviewed scientific papers. Dr. Shenoi graduated from the University of Kerala, India in 1978, and received his PhD. from Cochin University of Science and Technology in 1984. He served as various levels of Scientist at the National Institute of Oceanography, India starting as Trainee Scientist and ending as Scientist G. He was elected as a Fellow of National Academy of Sciences, India in 2009. He is a Member of Executive Council of the Indian Geophysical Union, the Chair of Working Group on Tsunami Detection, Warnings and Dissemination of Intergovernmental Coordination Group of IOC/UNESCO, etc. The Indian National Committee for IUGG has nominated him as a candidate for IAPSO EC Member, and he has accepted. Therefore, we strongly support his candidacy for EC Member.

EC Member: Dr. Stefania Sparnocchia (Italy)

Dr. Sparnocchia is a Research Scientist at the Institute of Marine Sciences of the National Research Council, Italy. She was elected as EC Member in 2007. She has been very active in the affairs of the Association, especially for international cooperation in Europe. She is willing to continue to serve as EC Member, and nominated by the National Research Council, the Italian adhering organization of IUGG. Therefore, we strongly support her candidacy for the second term as EC Member.

<Supplement>

Secretary General: Prof. Johan Rodhe (Sweden)

Dr. Rodhe is a Professor Emeritus of the University of Gothenburg, Sweden. He was elected as the Secretary General for two 4-year periods during 2007–2015. He has worked hard and is willing to continue to play the role of the Secretary General for his second period.

Past President: Prof. Lawrence Mysak (Canada)

Dr. Mysak is an Emeritus Professor of McGill University, Canada. He has proved himself a dynamic President over past four years, after serving the Association as Vice President for four years. He is willing to continue to serve on the Executive as the Past President until 2015.

Treasurer: Dr. Fred Camfield (USA)

Dr. Camfield was elected as the Treasurer for two 4-year periods during 2007–2015, after serving the Association as the Secretary General for twelve years. He has been very active and is willing to continue to play the role of the Treasurer for his second period.

The present slate was prepared in June 2011 by the IAPSO Nominations Committee composed of four members:

John Church

CSIRO (Commonwealth Scientific and Industrial Research Organisation), Australia,
Shiro Imawaki; the Chair as the Past President

JAMSTEC (Japan Agency for Marine-Earth Science and Technology), Japan,
Mike McPhaden

NOAA/PMEL (Pacific Marine Environmental Laboratory), USA, and
Liliane Merlivat

Université Pierre et Marie Curie, France.

<end>

IAPSO QUADRENNIAL REPORT 1 JANUARY 2007 TO 31 DECEMBER
2010

Receipts to IAPSO Account

IUGG Allocations (4)\$109,637.20
From IUGG2007 LOC..... 11,918.60
From 2009 Assembly LOC..... 16,906.67
Interest and Dividends.....389.03

Total

Receipts.....\$138,851.50

Expenditures from IAPSO Account

IAPSO Executive Committee Expenses.....\$39,029.14
Expenses for SCOR/IAPSO WGs..... 25,019.00
Other Travel Grants from IAPSO.....25,958.31
Miscellaneous Expenses..... 2,427.85

Total

Expenses.....\$92,434.30

NET GAIN TO IAPSO ACCOUNT\$46,417.20

IAPSO Biannual Budget - 1 Jan 2011 to 31 Dec 2012

Surplus carried forward from previous quadrennium operations \$46,417.20

Funds received during biennium

IUGG 2011 Subvention.....\$25,000 (estimated)
IUGG 2012 Subvention.....25,000 (estimated)
IUGG2011 Registration surcharge.....12,000 (estimated)
Misc. Income (interest).....24

Total Receipts.....62,024

Expenditures during biennium (estimated)

EC Support for 2011 Assembly.....24,000
(includes EC business meetings)
Support for other participants.....57,000
SCOR/IAPSO WG, 2012.....5,000
IUGG EC meeting 2912.....3,000
Prince Albert Award Recipient 2011.....0
(recipient from Australia)
IUGG Scientific Program Comm. 2011.....0
(met in Vienna instead of Melbourne)
Misc. Expenditures.....2,000

Total Expenditures.....91,000

Reduction in Previous Surplus.....28,976

Operating Surplus Carried forward to next biennium.....17,441.20



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Report of the IAPSO Commission on Mean Sea Level and Tides to the XXV IUGG General Assembly, Melbourne, 28 June – 7 July 2011

The Commission last met at the IUGG in Perugia in 2007 and discussed a number of topics which have since been followed up.

Plans for the PSMSL 75th Anniversary – the Permanent Service for Mean Sea Level reports formally to the IAPSO CMSLT in addition to having its own Advisory Group. The PSMSL can date its founding to the IUGG General Assembly in Lisbon in 1933 when a ‘Committee on Mean Sea Level’ was established. During 2008, three large events were organised to celebrate the 75th anniversary, along with a set of promotional material (CD, brochure etc.). The first event was a special session on sea level changes at the EGU’08 in Vienna; the second was the co-sponsorship of the 2008 William Smith meeting at the Geological Society in London; the third was a special session as part of the British Association Festival of Science in Liverpool.

The PSMSL has been a longstanding member of the Federation of Astronomical and Geophysical Data Analysis Services (FAGS) of the International Council for Science (ICSU). During 2008, ICSU decided to merge FAGS with the World Data Centres to form a new World Data System (WDS). Since then, methods of accreditation to the WDS have been established and the PSMSL will apply to become a member of that new System in 2011.

TIGA Workshop – the meeting in Perugia expressed a wish that a workshop be held to review progress with the TIGA (GPS at Tide Gauges) project which has the aim of determining rates of vertical land movement at tide gauge locations. A successful workshop was held in 2009 in Paris, alongside the 11th meeting of the GLOSS Group of Experts, with the workshop co-organised by Tilo Schöene, Guy Wöppelmann, Gary Mitchum and others.

One outcome of the workshop was an appreciation of the impact of reference frame errors on global sea level rise estimates from altimetry. These concerns were since shared at the following Seattle meeting of the OSTM/Jason-2 Science Working Team and a variety of international groups have since taken up this issue.

Bottom Pressure Data Bank – the Perugia meeting asked that more resources be put into centralised collection of bottom pressure data, for use in studies such as deep ocean tides, and for comparison to data from space gravity. The PSMSL is responsible to the CMSLT for the archiving of such information. However, there has been little scope for further development of this activity in the last few years, in spite of its relevance to GRACE gravity studies. The



status of the topic needs to be reviewed between the CMSLT and PSMSL.

Future Altimetry Needs – the Perugia meeting discussed how the CMSLT might input into studies of requirements of future altimetry. This topic has not since been pursued in a CMSLT context, but many of the same individuals were closely involved in preparation of position papers for the Oceanobs'09 Conference in Venice, at which the future needs of altimetry was discussed. In particular, one can note the encouraging developments in coastal altimetry.

Ocean Tides – since Perugia, a successful meeting on ocean tides was held at the University of Hamburg which brought many members of the tidal community together. A second meeting was planned, to which the CMSLT would have lent support, but this has so far not taken place. Detlef Stammer has meanwhile offered to lead a new assessment of recent ocean tide models, now that the earlier studies (Andersen et al. 1995, Shum et al. 1997) are many years old.

Changes in MSL and Extremes – no separate activity has taken place in these topics within a CMSLT context. However, many of the individuals involved were engaged in completing the book on 'Understanding Sea-Level Rise and Variability' which followed from the World Climate Research Programme (WCRP) conference on sea level at UNESCO in Paris in 2006. The book (edited by Church et al.) was published by Wiley-Blackwell in August 2010.

WCRP and Other Science Conferences – in February 2011, the WCRP organised a second international meeting at UNESCO, this time focused on regional rather than global variability. No book or other publication is planned following this event, many participants anyway being heavily involved in IPCC AR5 activities. The CMSLT has of course kept in close touch with the WCRP activities, IPCC ones (including a large conference on sea level and cryosphere in Malaysia in 2010), and a workshop at the University of Bern in 2010.

Scanning of IAPO/IAPSO reports – NOC Liverpool and PSMSL undertook to Professor Rohde to convert to pdf form as many of the historical IAPO and IAPSO reports that are in the Liverpool library. This work has since been completed and pdf files passed to IAPSO.

Topics for Consideration in the Next Few Years – It would be interesting to know the topics which the CMSLT might be able to help to spin up over the next two years. Suggestions should be sent to the new Commission President. For example, there are clearly many overlaps of interest with the observational (e.g. space), palaeo-sea level and impacts communities, aside from the oceanographic and geodetic ones, which could be developed.

Commission Membership:

The CMSLT has always had a policy of considering as members any researchers who express interest in the topics of mean sea level and tides. Scientists who were either at the Perugia meeting or who have since corresponded on CMSLT matters have included: Gary Mitchum, Mark Merrifield, Laurent Testut, Guy Woppelmann, John Church, Jonathan Gregory, Steve Nerem, Tilo Schoene, Chris Hughes, Richard D Ray, Florent Lyard, Svetlana Jevrejeva, Simon Holgate, Bruce Douglas, Thorkild Aarup, Alakkat S. Unnikrishnan, Roland Gehrels, Lesley Rickards, Alexander Rabinovich, Afranio Mequita, Detlef Stammer, Philip Woodworth.

Philip L. Woodworth, President IAPSO CMSLT, June 2011

Report of IUGG Tsunami Commission Activities

Kenji Satake (chair)

July 2, 2011

1. The 24th International Tsunami Symposium was held for July 14-16, 2009, in Novosibirsk, Russia. The total number of participants was 90 (38 from Russia, and the other 52 are from Australia, Belorussia, Bulgaria, Germany, Greece, France, Indonesia, India, Italy, Japan, Mexico, New Zealand, Norway, Portugal, Turkey, USA). Sixty-five (65) oral presentations were grouped into six half-day sessions, and 40 posters were presented
2. The Technical Workshop was held on Friday, July 17, 2009 jointly with IOC/UNESCO on the coastal and deep-water tsunami measurements and real-time detection. Fourteen (14) papers were presented and a round-table discussion was held.
3. The Tsunami Commission business meeting was held on July 14, 2009 and various activities, such as working groups or coordinating with IOC are reported. Detailed report is posted at the following site.
<http://www.ngdc.noaa.gov/hazard/jtc/tsunami2009BM.pdf>
4. As a proceeding volume of the 2009 ITS, topical volume of PAGEOPH was edited. Two volumes (18 papers in volume 1 and 15 papers in volume 2) will be published in 2011. The papers are already accessible through Springer's website.
5. For the 25th IUGG General Assembly, tsunami session (JS01: Advances in Tsunami Science, Warning and Mitigation) was proposed (conveners: K. Satake, V. Titov and A. Rabinovich). Late papers for the 2011 Tohoku tsunamis were called and three additional sessions were given. In total, twelve 1.5 hours sessions with 69 oral presentations plus 41 posters are planned.
6. Information exchange and planning for international tsunami survey teams have been made for recent tsunami events (the 2010 Chilean, 2010 Indonesian, and 2011 Tohoku tsunamis) through ITIC Tsunami Bulletin Board. Close collaboration with UNESCO/ITIC has been made.

Tsunami Commission website:

<http://www.ngdc.noaa.gov/hazard/jtc/tsunamicommission.html>

ITIC Tsunami Bulletin Board <tsunami_bb@infolist.nws.noaa.gov>

International Ocean Networks (ION)
Quadrennial Report (2007-2011)

Ralph A. Stephen, Chairman

8 June, 2011

The past four years have seen dramatic progress in the development of ocean bottom observatories for academic research. Canada, Europe, Japan and the United States have seafloor observatory programs in various stages of development. Each program has its own extensive web site and all of them address a variety of multi-disciplinary scientific problems. ION's objectives "to facilitate international cooperation in the development of ocean-bottom observatories" has been tremendously successful. As the observatory infrastructure becomes installed the onus transitions to data exchange and the dissemination of scientific results. For example, the ION-sponsored interagency symposium at the 2011 IUGG meeting will be the first international, multi-disciplinary session to address the "Scientific Results from Seafloor Networks".

Detailed activities over 2007, 2008 and 2009 are summarized in the minutes available from the ION web site: <http://msg.whoi.edu/ION>. Draft minutes from the 2010 meeting in San Francisco, without the Appendices, are attached. The Appendices are included in the full (37 page) minutes available from the WHOI ftp site, <ftp.whoi.edu>, in the folder, [pub/users/ralph](ftp://pub/users/ralph). At the Melbourne ION meeting the Chairmanship of ION will transition to a representative from Japan.

Report to SCOR and to IAPSO from SCOR/IAPSO WG127

June 2011

**SCOR/IAPSO Working Group 127 on the
Thermodynamics and Equation of State of Seawater**

Full Members

Trevor J. McDougall, Chair (Australia)
Rainer Feistel (Germany)
Chen-Tung Arthur Chen (Taiwan)
David R. Jackett (Australia)
Brian A. King (UK)
Giles M. Marion (USA)
Frank J. Millero (USA)
Petra Spitzer (Germany)
Dan Wright (Canada) (deceased 8th July 2010)

Associate Members

Peter Tremaine (Canada)
Steffen Seitz (Germany)
Rich Pawlowicz (Canada)

Working Group Meetings

SCOR/IAPSO WG127 has not met since the final (4th) meeting in September 2009 in Arnhem, the Netherlands.

Assessment of Progress

The 2010-2011 year started very badly for WG127 with the tragic and untimely death of one of our key members, Dan Wright of Canada. Dan played a central role in most of the achievements of SCOR/IAPSO WG127, and we still miss his energy and his wisdom.

Since the adoption of TEOS-10 by IOC in June 2009, the efforts of WG127 have centered on providing the oceanographic community with computer software and appropriate documentation to implement the new thermodynamic to the properties of seawater, ice and of humid air. The major outcomes of WG127 in the past twelve months can be listed as follows

- In mid 2010 two papers appeared in *Ocean Science* describing the most comprehensive set of ~400 computer functions (the Seawater-Ice-Air (SIA) library) .
- In September 2010, the TEOS-10 Gibbs function for sea air (moist air in contact with seawater) was adopted as an IAPWS Guideline at the annual IAPWS meeting at Niagara Falls Canada. This completes a series of four Gibbs functions, all constructed by Rainer Feistel (pure water IAPWS-09, seawater IAPWS-08, ice IAPWS-06, and sea-air IAPWS-10), which have been issued as Releases and a Guideline of IAPWS and which form the backbone of TEOS-10 for oceanographers.
- In October 2010 our web site www.TEOS-10.org was substantially upgraded by Dr Paul Barker (of CSIRO) and the SIA computer software library was served from this web site, along with version 2.0 of the Gibbs-Seawater (GSW) Oceanographic Toolbox of computer functions (also by Paul Barker of CSIRO). The two introductory documents “What every oceanographer needs to know about TEOS-10” and “Getting Started with TEOS-10 and the Gibbs Seawater (GSW) Oceanographic Toolbox” also appeared on the web site.
- Between October 2010 and May 2011 we have had 6000 hits on our www.TEOS-10.org web site, and 4000 of these visits have also viewed the software page.
- In early June 2011, version 3.0 of both the GSW and SIA computer libraries of TEOS-10 are being released on the www.TEOS-10.org web site. The GSW Oceanographic Toolbox now contains ~160 functions concerned with basic seawater properties and also with the use of TEOS-10 in the analysis of ocean data (geostrophic streamfunctions etc.). Each of the ~160 functions has its own help file.
- Coinciding with the release of version 3.0 of our computer software, we have printed 2000 copies of the introductory document “Getting started with TEOS-10 and the Gibbs Seawater (GSW) Oceanographic Toolbox” and plan to distribute these at upcoming oceanographic meetings (e.g. CMOS in Victoria B.C., and the IUGG in Melbourne, in June 2011) and to the major oceanographic teaching centers where it is hoped that this little document might form part of “Oceanography 101” courses.
- The GFDL/NOAA ocean model MOM4/MOM5 is being modified to be TEOS-10 compliant by a small group at CSIRO (Simon Marsland, Russ Fiedler, Steve Griffies (of GFDL, NOAA) and Trevor McDougall).
- Two members of SCOR/IAPSO WG127 (McDougall and Pawlowicz) are meeting four Seabird staff for a day of discussion in Victoria B.C. on Friday 10th June 2011. Seabird is keen to incorporate TEOS-10 into their software and the managing director and three other staff are coming to this meeting.
- In addition to these activities, we have continued to publish the pipeline of papers on TEOS-10. There are now just a few papers that are yet to appear in print.
- We have an agreement-in-principle from SCOR, IAPSO and IAPWS to combine SCOR/IAPSO WG127 and the Seawater Subcommittee of IAPWS into a single committee in the near future.

Next Steps

WG127 is now busy promoting and guiding the use of TEOS-10 in the oceanographic community, and this work will need to continue for several years. This activity does not, of itself, require face-to-face meetings of the working group.

There are a number of research areas which should be pursued in order to further the science of the thermodynamics of seawater. These science topics will be listed in the terms of reference of the new Joint Seawater Committee of SCOR/IAPSO/IAPWS, but in the absence of funding for face-to-face meetings, these topics will likely advance only slowly. If it is deemed appropriate at a later date to ramp up these activities, they may well be the subject of a subsequent proposal for a SCOR/IAPSO Working Group.

It is now recommended that WG127 continue as a SCOR/IAPSO Working Group until the establishment of the new SCOR/IAPSO/IAPWS joint committee. We in SCOR/IAPSO WG127 will now work on drafting the Terms of Reference of the new committee, and providing suggestions to SCOR, IAPSO and IAPWS regarding membership and the chair, with a view to having this joint committee established before 31 December 2011. As a quick reminder of the topics that will dominate the Terms of Reference of the new committee, we list;

- (1) provide advice and support to the oceanographic research community and instrument manufacturers regarding the implementation of TEOS-10,
- (2) refine the concepts and algorithms to advance the science of estimating Absolute Salinity,
- (3) continue the work on the SI-traceability and the accuracy and long-term stability of IAPSO Standard Seawater,
- (4) provide better estimates of seawater properties at high temperature and high salinity (for use, for example, in cooling towers of power stations and in desalination plants),
- (5) encourage the use of alternative measuring technologies in the ocean (e.g. refractive index and densimeter measurements) which bear on the questions surrounding the several different definitions of salinity.

Trevor J McDougall
Chair, SCOR/IAPSO Working Group 127

Dear Johan,

I attach my report below. Please let me know if it is sufficient. I will not be in Melbourne for the IUGG meeting

Best wishes,
John.

SCOR/IAPSO WG 129 Deep Ocean Exchange with the Shelf (DOES).

This is the last report of the Working Group. At the last meeting of the Group in Montreal, held in conjunction with the DOES Symposium at the IAPSO/IAMAS meeting, the plans for a DOES publication were finalised. Various members and associates of the Working Group provided input for this publication with their views on future research needs in the field of Deep Ocean Exchange with the Shelf.

Research papers were solicited from speakers at the Montreal Symposium and at the earlier DOES workshop held in Cape Town.

The Bibliography of DOES papers has been updated to February 2011 and is available at the SCOR web site http://www.scor-int.org/Working_Groups/WG129/SCOR%20WG129%20DOES%20Bibliography.pdf.

The DOES publication is a special issue of the EGU open access journal Ocean Science. It may be read at http://www.ocean-sci.net/special_issue18.html and contains 13 papers on a mixture of physical and chemical oceanography and numerical models of the shelf regions. The introductory paper summarises the work of the Working Group and makes recommendations for future research on DOES topics. This may be read at <http://www.ocean-sci.net/7/101/2011/os-7-101-2011.pdf>.

The spread sheet collecting data for the SCOR shelf atlas has been made available to members and associates of the Working Group. It covers most shelves of the oceans, but to be useful needs turning into a series of maps.

Various groups have been formed in the last few years to carry out and discuss research in the field of Deep Ocean Exchange with the Shelf, including an Australian consortium, a China-Japan collaboration, a workshop at the AGU Americas meeting and a UK consortium.

Professor John Johnson,
School of Mathematics,
University of East Anglia,
Norwich NR4 7TJ, UK.
J.Johnson@uea.ac.uk

Johan,

Here is our annual SCOR Report summarized into a few paragraphs:

SCOR Working Group 136 On the Climatic Importance of the Greater Agulhas System conducted their second meeting in May 2011, joining with a meeting and capacity building workshop in Mauritius with the WMO/IOC Data Buoy Cooperation Panel (DBCP) (http://www.jcomm.info/index.php?option=com_oe&task=viewEventRecord&eventID=780). There were fifty attendees, about half of whom were regional (mostly East African) scientists.

The SCOR agenda was formulated around the WG136 Terms of Reference:

- (1) To facilitate collaborations between existing and planned studies of the region.
- (2) Write a review paper on the climatic importance of the greater Agulhas.
- (3) Identify key components of the region that deserve further study and/or sustained observations.
- (4) Organize a Chapman Conference with participation of the African science community.

A further goal of the WG is to contribute to capacity building in East African countries which border the Great Agulhas System.

Hence, one of the primary goals for WG 136 at this meeting was to network with East African scientists and contribute to capacity building for the region (TOR 1 and further goal). Four workshops were created and run by WG members. In addition, **IAPSO sponsored the attendance of trainer Pierrick Penven (Associate member) who lead a hands-on capacity building workshop on ocean modelling, demonstrating some basic geophysical fluid dynamics through a hierarchy of models built using ROMS.**

Discussions during the meeting on Resource and Science Planning for the region (TORS 1 and 3) and on the Chapman Conference (TOR 4), have led to (1) a short document (in preparation) on the elements for a sustained observing system in the Greater Agulhas region, to be presented at the 8th International CLIVAR Indian Ocean Panel meeting, and (2) to a Chapman proposal for a conference in Grahamstown, South Africa in September 2012.

In terms of deliverables, WG 136 outlined four products that would come out of their activities: (1) Article in EOS, (2) Review paper, (3) Report to CLIVAR, GOOS etc, (4) Chapman Conference proposal. (1) and (2) are fully completed, (4) will be submitted within the next week, and (3) is currently being drafted.

Sincerely,

Lisa Beal (Co-chair SCOR WG 136)



International Association for the Physical Sciences of the Oceans (IAPSO)

2009-10 IAPSO Activities -- Report to SCOR (June 2010)

IAPSO is a constituent Association of IUGG (The International Union of Geodesy and Geophysics). The main activity of IAPSO is to arrange scientific assemblies. IAPSO also works through Permanent Services to aid the ocean science community, Commissions dealing with specific phenomena with severe impact on society, and through Working Groups jointly with SCOR, which put focus on special scientific questions for some years. In the IAPSO activities, it is important to spread knowledge to developing countries. This is done, by including developing country scientists in the activities, and by financially supporting their attendance at scientific meetings.

Every fourth year IUGG together with its associations arrange a General Assembly. The next IUGG General Assembly "Earth on the Edge: Science for a Sustainable Planet" will take place in Melbourne, Australia 28 June – 7 July 2011. In Oct. 2009 the IAPSO President and SG met with the IUGG EC in Melbourne to start the detailed planning of the Assembly. The main activity of this period has been related to the General Assembly. The scientific program was made public 4 June, see <http://www.iugg2011.com>. Later in June 2010, a call will be sent out to all the IAPSO National Correspondents for nominations for the IAPSO Prince Albert I Medal, which will be awarded at the next IUGG Assembly in Melbourne.

Between two IUGG General Assemblies, IAPSO arranges an assembly jointly with other organizations. The Assembly "MOCA-09 - Our warming planet" in July 2009 was reported to SCOR last year. The next "in-between assembly" will take place in Gothenburg, Sweden, in July 2013 jointly with IAHS (Hydrology) and IASPEI (Physics of the Earth Interior).

IAPSO is currently co-sponsoring the SCOR Working groups OceanScope (WG 133) and The Climatic Implications of the Greater Agulhas System (WG 136). The SCOR/IAPSO Working Groups send their own reports to SCOR.

Report prepared by
Johan Rodhe, SG of IAPSO



IAPSO quadrennial report to IUGG
January 2011, Johan Rodhe, IAPSO Secretary General (SG)

Short introduction of IAPSO:

IAPSO has the prime goal of "promoting the study of scientific problems relating to the oceans and the interactions taking places at the sea floor, coastal, and atmospheric boundaries insofar as such research is conducted by the use of mathematics, physics, and chemistry." IAPSO works mainly through 1) biennial scientific assemblies; 2) working groups; 3) Commissions; 4) Services and 5) website information. Of special importance to IAPSO is to involve scientists and students from developing countries in the activities.

IAPSO maintains formal liaison with other scientific commissions and committees. These include the ICSU's Scientific Committee on Oceanic Research (SCOR), and UNESCO's Intergovernmental Oceanographic Commission (IOC).

For more information see http://iapso.sweweb.net/_db/

Administration

The IAPSO office has been situated at Gothenburg University, Sweden since July 2007, and the day-to-day business has been managed by SG Johan Rodhe, Sweden. The Bureau of IAPSO comprises of the President, Lawrence Mysak, Canada, the Past President, Shiro Imawaki, Japan, the SG, Johan Rodhe, and the Treasurer, Fred Camfield, USA. The SG has been responsible for the IAPSO website.

In December 2010 the LOC for the Joint (IAPSO, IAHS and IASPEI) Assembly in Gothenburg, Sweden, 22-26 July 2013, was formed. The three SsG of the three Associations visited the venue for the Assembly and had a first meeting with representatives of the LOC.

Activities

IAPSO participated in the IUGG GA 2007 in Perugia, Italy. Twelve IAPSO-only symposia and 3 joint symposia were organised by IAPSO. About 300 attendees were registered as IAPSO scientists.

The 2009 assembly, MOCA-09, was arranged jointly with IAMAS and IACS. Ten IAPSO symposia and 21 joint symposia were organised. The total number of attendees was 1338, out of which 337 were registered as IAPSO scientists. IAPSO funded 22 grants to scientists from developing countries.

IAPSO President and SG participated in one SCOR meeting every year: August 2007 in Bergen, Norway; October 2008 in Woods Hole, USA; October 2009 in Beijing, China; and September 2010 in Toulouse, France. One important task during the SCOR meetings is to decide which of the annually proposed SCOR working groups to fund. A review of current working groups is also undertaken.

In August 2008 an IAPSO Vice President (D. Smythe-Wright) and the SG participated in the IUGG EC Meeting in Karlsruhe, Germany.

In May 2009 the SG met with the other IUGG SsG in Munich to start the planning of symposia for IUGG2011.

The following SCOR working groups (WGs), which have received funding from IAPSO, have been active during this period and have published important books and/or special journal issues:

SCOR/LOICZ/IAPSO WG 122 (Co-chaired by G.M.E. Perillo and J. Syvitski): “Mechanisms of Sediment Retention in Estuaries”. Publication: Special Issue of *Estuarine, Coastal and Shelf Science*, Volume 87(2), pp. 175-366, 2010.

SCOR/IAPSO WG 127 (Chaired by T.J. McDougall): “The Thermodynamics and Equation of State of Seawater”. This WG has now completed their extensive work, which involved the introduction of the Gibbs potential function for seawater and a new salinity formulation called Reference Salinity (SR), expressed in g/kg. The new formulation for the thermodynamics of sea water is published as: IOC, SCOR and IAPSO, 2010: *The international thermodynamic equation of seawater – 2010: Calculation and use of thermodynamic properties*. Intergovernmental Oceanographic Commission, Manuals and Guides No. 56, UNESCO (English), 196 pp. It is also available electronically from <http://www.TEOS-10.org>.

SCOR/IAPSO WG 129 (Chaired by John Johnson): “Deep Ocean Exchange with the Shelf”. The results of this WG are published in a special issue of *Ocean Science*; see http://www.ocean-sci-discuss.net/special_issue27.html. It is important to note that several early career scientists from Africa participated in some of the meetings of this WG, thanks in part to IUGG support.

SCOR/IAPSO WG 133 (Co-chaired by T. Rossby and K. Kim): “OceanScope”. This WG held its second meeting in London 12-14 April 2010, and is currently writing up a public document outlining the work plan for this ocean measurement program.

SCOR/WCRP/IAPSO WG 136 (Co-chaired by L. Beal and A. Biastock): "The Climatic Implications of the Greater Agulhas System". This WG held its first meeting 20-21 February 2010 in Portland Oregon. At a future WG meeting in Mauritius, scientists from a number of African countries are planning to attend, again thanks to IUGG support.

A SCOPE/SCOR/IAPSO book "Watersheds, Bays, and Bounded Seas" was published in 2009. The former IAPSO President, Paola Malanotte-Rizzoli, was one of the editors.

IAPSO Commissions and Services:

Commission on Mean Sea Level and Tides, hosted by the Proudman Oceanographic Laboratory, UK. Website: www.pol.ac.uk/psmsl/

An IAPSO co-sponsored publication related to the above Commission: *Sea-Level Rise and Variability*. Edited by John A. Church, Philip L. Woodworth, Thorkild Aarup & W. Stanley Wilson. 2010. Blackwell Publishing Ltd.

Tsunami Commission (Joint with IASPEI and IVACEI). Website: www.iaspei.org/commissions/ICT.html

GeoRisk Commission (Joint with IAMAS, IAHS, IASPEI and IAVCEI). Website: www.iugg-georisk.org/

Permanent Service for Mean Sea Level, hosted by Proudman Oceanographic Laboratory, UK. Website: www.pol.ac.uk/psmsl/

IAPSO Standard Seawater Service, hosted by OSIL, Havant, Hampshire, UK

Prince Albert 1 Medal

In connection with the assemblies IAPSO selects a winner of the Prince Albert I Medal. Prof. Russ Davies, Scripps Institution of Oceanography, USA, was presented the Medal in Perugia 2007, for "excellence in physical and/or chemical oceanography". Prof Harry Bryden, University of Southampton, UK, was presented the Medal in Montreal 2009 "...in recognition of his fundamental contributions to understanding the ocean's role in the global climate system." Dr. Trevor McDougall from CSIRO Marine and Atmospheric Research, Hobart, Australia has been selected to receive the medal in Melbourne 2011 for "his outstanding work on (1) important and fundamental problems of ocean fluid dynamics over the full range of ocean scales, and (2) the thermodynamic properties of seawater".

Eugene LaFond Medal

This Medal, created in honour of Eugene LaFond who was a former SG of IAPSO, is awarded to a scientist from a developing world country for a paper presented at an IAPSO Assembly. In 2007, this Medal was awarded to Dr. Catia Motta Domingues from Brazil, for her presentation of the paper entitled "Towards more accurate estimates of the thermosteric sea level rise" at the IUGG General Assembly in Perugia. In 2009, the Medal was awarded to Dr. Bamol Ali Sow from Senegal for his oral presentation "Simulation of the Senegalese and Mauritanian Upwelling: How are the Winds actually Driving SST Variability and Water Mass Renewal?" at MOCA-9 in Montreal.

Members of IAPSO EC (for 2007-2011):

President: Lawrence Mysak, Canada
Secretary General: Johan Rodhe, Sweden
Past President: Shiro Imawaki, Japan
Vice President: Denise Smythe-Wright, UK
Vice President: Eugene Morozov, Russia
Treasurer: Fred Camfield, USA

EC Members:

Isabelle Ansorge, South Africa
Silvia Blanc, Argentina
W. John Gould, UK
John Middleton, Australia
Temel Oguz, Turkey
Stefania Sparnocchia, Italy