



**International Association for Biological Oceanography (IABO)
Report of activities
2015-2019**

Prepared for the International Union of Biological Sciences (IUBS)

**Prepared by Patricia Miloslavich
President of IABO**

July 2019

Annual Report of the International Association for Biological Oceanography (IABO) 2015-2016

IABO General Assembly

The IABO General Assembly was held in conjunction with the 3rd World Conference in Marine Biodiversity in Qingdao, China on 13-16 October 2014 <http://wcmb2014.csp.escience.cn/dct/page/1>. The IABO Executive Committee met on 15th October 2014 at the World Conference of Marine Biodiversity.

IABO thanks SCOR for grants for delegates from Developing Countries to its GA (WCMB III).

These grants, and some others, have now been offered to applicants.



Ten delegates from developing countries received travel grants from SCOR to the IABO General Assembly, i.e.:

1. Sanna Durgappa (India)
2. Girish Beedessee (Mauritius)
3. Mhairi Alexander (South Africa)
4. Fernando A. Zapata (Colombia)
5. Joel Kareithi Gatagwu (Kenya)
6. Olesia S. Vishchuk (Russia)
7. Hoang Dinh Chieu (Vietnam)
8. Junior Vitor (Peru)
9. Nadeem Nazurally (Mauritius)
10. Tammy (Tamara) Robinson (South Africa)

The 4th WCMB will be held in Montreal in May 2018 (Table 1).

Table 1. Statistics on the WCMB.

	Location	Dates	Delegates	Talks	Posters
1 st	Valencia, Spain	11-15 November 2008	600	200	160
2 nd	Aberdeen, Scotland	26-30 September 2011	800	500	400
3 rd	Qingdao, China	12-16 October 2014	480	154	89
4 th	Montreal, Canada	May 2018			

Keynote talks at the IABO GA and 3rd WCMB

A recurring theme in many of the keynote presentations was the value and insights from collaborative international research:

- Angelika Brandt described exciting discoveries of deep-sea diversity and productivity in the Kurile Kamchatka Trench by joint German and Russian cruises.
- Suchana Apple Chavanich reviewed the state of marine biodiversity in the Western Pacific (SE Asia) following disturbances ranging from over-fishing to tsunami, and how new international scientific programmes are leading research in the region.
- Sun Song described the factors influencing how jellyfish blooms near Qingdao which may provide a template for how such blooms occur elsewhere in the world.
- Graham Edgar summarised some of the analyses from a replicated global survey of over 2,400 sites through collaboration with citizen scientists in the Reef Life Survey programme
- Emmett Duffy introduced approaches to develop methods for monitoring ecological interactions that can be replicated globally.

- Mark Costello illustrated insights from using global species databases to see trends in taxonomic discovery and biogeographic patterns in species richness, including latitudinal gradients, involving over 65,000 species.
- John Gunn presented recent efforts to define “essential ocean variables” that could be a basis for monitoring trends in the oceans at global scales, and the need for a top-down approach to their definition.

The first keynote speaker and President of IUBS, Nils Stenseth, was unable to attend due to illness.

A call for **new committee members** resulted in 6 new members. Thus the present committee (with country and affiliations) of

- David Paterson (Scotland, convenor WCMB II)
- Patricia Miloslavich (Venezuela)
- Annelies Pierrot (Past-President, Netherlands);
- Michael Thorndyke (Sweden)
- Sun Song (China, convenor WCMB III, SCOR Vice-chair)
- Mark Costello (President, New Zealand, WoRMS, GEO BON)

is joined by

- Eulogio Soto (Chile)
- Tina Molodtsova (Russia)
- Isabel Sousa Pinto (Portugal) (IPBES, GEO BON)
- Suchana Apple Chavanich (Thailand, IOC/WESTPAC)
- Prof Siew Phang Moi (Malaysia)
- Philippe Archambault (Canada, 4th WCMB convenor)

Other activities

The committee and the President of IUBS published a joint paper calling for greater coordination within the marine biodiversity community:

Costello, M. J., Archambault, P., Chavanich, S., Miloslavich, P., Paterson, D. M., Phang, S. M., Sousa Pinto I., Pierrot-Bults A., Song S., Soto E.H., Stenseth N.C., Molodtsova T.N., Thorndyke, M. 2015. Organizing, supporting and linking the world marine biodiversity research community. *Journal of the Marine Biological Association of the United Kingdom*, 95(3), 431–433.

ICSU

IABO’s nomination, Dr Annelies Pierrot, was selected to the ICSU ad hoc panel for the review of SCAR and SCOR.

IABO Email list

IABO has an email list with ca. 1,000 subscribers. It welcomes SCOR Working Groups and associated organisations to subscribe and send out news of new positions available, meetings, publications and questions to subscribers.

- MARINE-B, the MARine Research Information NETWORK on Biodiversity
 - official email network of the International Association for Biological Oceanography www.iabo.org
 - for communication related to marine biodiversity research
 - Archived at <https://listserv.heanet.ie/marine-b.html>
 - to join send message "SUBSCRIBE MARINE-B firstname surname" to listserv@listserv.heanet.ie
-

IABO report to SCOR 2016-2017

IABO Executive Committee

Mark Costello, *President* – University of Auckland (New Zealand)
Annelies Pierrot-Bults, *Past President* – University of Amsterdam (The Netherlands)

Members:

Philippe Archambault – *Chair of the 4th WCMB* - Université Laval (Canada)
Suchana Chavanich - Chulalongkorn University (Thailand)
Adrian Glover – Natural History Museum (UK)
Patricia Miloslavich, *SCOR representative* – University of Tasmania (Australia) and Universidad Simón Bolívar (Venezuela)
Tina Molodtsova – Shirshov Institute of Oceanology (Russia)
David Paterson – University of St. Andrews (UK)
Siew Moi Phang – University of Malaya (Malaysia)
Eulogio Soto – Universidad de Valparaíso (Chile)
Isabel Sousa-Pinto – CIIMAR, University of Porto (Portugal)
Sun Song – Institute of Oceanology, Chinese Academy of Science (China)
Mike Thorndyke – University of Gothenburg (Sweden)

2016-2017 Activities

Organization: the 4th World Conference on Marine Biodiversity (May 13-16 2018)

The *World Conference on Marine Biodiversity* has become the major focal assembly for sharing research outcomes, management and policy issues, and for discussions of the role of biodiversity and biodiversity conservation in sustaining ocean ecosystems. In this context, the 4th World Conference on Marine Biodiversity (<http://www.wcmb2018.org>), and its main partners (Convention on Biological Diversity secretariat, Fisheries and Oceans Canada, and Canadian Healthy Ocean Network) are inviting all marine biodiversity stakeholders to Montreal (Canada) in 2018. The theme, *Connecting with the living ocean*, will underline the need to replace our current exploitation relationship with the oceans's living resources, with a sustainable connection based on scientific knowledge.

The 4th WCMB will be the perfect forum to exchange and try to make a difference at all levels, from the discovery to the management of our oceans. Presentations by leading scientists and practitioners from around the world will bring to light the very latest developments, innovations and discoveries in marine biodiversity.

The WCMB is open to partners, exhibitors, and scientists to share scientific results and discuss about the importance of marine biodiversity for our planet. Registration and abstract submission are now open. The next IABO General Assembly will be held in Montreal in May 2018 during the WCMB.



Establishment of the International Award in Marine Biodiversity

IABO has established an international award, similar to what IAPSO has had for several years: <http://www.wcmb2018.org/carlo-heip-award.html>. Inaugurated in recognition of Carlo Heip's leadership in marine biodiversity research and founding of the World Conference on Marine Biodiversity, the Carlo Heip International Award for outstanding accomplishments in marine biodiversity science will congratulate an individual who has demonstrated exemplary leadership in marine biodiversity science. IABO invites SCOR members to encourage their scientists to nominate people for this new award.

Communications

The IABO email list, MARINE-B, has been expanded to over 1,100 scientists. A Facebook page is also in progress. MARINE-B provides news and relevant information related to biological oceanography, marine biology and biodiversity, including funding, job and studies opportunities, relevant papers and reports, conferences, etc.

Associations

IABO encourages international networking and cooperation in marine biological science. To that end, it endorses the following global scale marine initiatives and encourages its members and members of SCOR to support them:

- Ocean Biogeographic Information System OBIS (www.iobis.org)
- Marine Biodiversity Observation Network MBON (<http://geobon.org/networks/thematic-bons/marine-bon/>)
- World Register of Marine Species WoRMS (www.marinespecies.org)
- Global Ocean Observing System – GOOS Biology and Ecosystem Panel (www.goosocean.org)

IABO also endorses the collaboration agreement signed by GOOS, the Ocean Biogeographic Information System (OBIS), and the Marine Biodiversity Observation Network (MBON) of the Group on Earth Observations Biodiversity Observation Network (GEOBON) (http://www.iobis.org/documents/GOOS-BioEco-OBIS-GEOBON-MBON_collaboration_SIGNED.pdf). Aims of the agreement are to:

- build a unified and globally consistent observing system
- encourage open access and data sharing
- enhance existing observation capacity
- use the best available resources
- implement best practices and international standards
- enhance global capacity
- ensure continuity and sustainability of global marine biological and ecosystem observations

IABO report to SCOR 2017-2018

IABO held its General Assembly held at the 4th World Conference on Marine Biodiversity (4th WCMB), Montreal, 13-16 May, 2018. A new IABO Executive Committee was elected.

The IABO Nominating Committee, chaired by the Past President Annelies Pierrot, recommended the following five people who were elected as:

President,

1. Patricia Miloslavich – University of Tasmania (Australia) and Universidad Simón Bolívar (Venezuela)

Secretary,

2. Suchana Chavanich - Chulalongkorn University (Thailand)

General members,

3. Siew Moi Phang – University of Malaya (Malaysia)
4. Matt Frost – Marine Biological Association (UK)
5. Tina Molodtsova – Shirshov Institute of Oceanology (Russia)
6. Eulogio Soto – Universidad de Valparaíso (Chile)
7. Isabel Sousa-Pinto – CIMAR, University of Porto (Portugal)

In addition, there are two ex-officio positions

8. Mark Costello, *Past President* – University of Auckland (New Zealand)
9. Philippe Archambault – *Ex-officio as Past Chair of the 4th WCMB* - Université Laval (Canada)

Additional people offered to help IABO and the committee would discuss roles for others. Through the Marine-B list, there will be a second call for interest in participating in the IABO committee

2017-2018 Activities

Organization and completion of the 4th World Conference on Marine Biodiversity (May 13-16 2018)

The *World Conference on Marine Biodiversity* is the major focal assembly for sharing research outcomes, management and policy issues, and for discussions of the role of biodiversity and biodiversity conservation in sustaining ocean ecosystems. The 4th World Conference on Marine Biodiversity (<http://www.wcmb2018.org>) was held during the 13-16 of May in Montreal in partnership with the Convention on Biological Diversity secretariat, Fisheries and Oceans Canada, and Canadian Healthy Ocean Network under the theme *Connecting with the living ocean*.

The conference objectives were:

- To address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society;
- To reduce the direct pressures on biodiversity and promote sustainable use;
- To improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity;
- To enhance the benefits to all from biodiversity and ecosystem services and;
- To enhance implementation through participatory planning, knowledge management and capacity building.

The 4th WCMB was a great success and gathered more than 600 participants from over 50 countries, including scientists, managers, policy makers and leading specialists in the field. Main topics of discussion across these stakeholders were:

- To assess past, present, and future critical threats to marine systems and consider management strategies
- To encourage inter-disciplinary discussions among researchers, policy makers, NGOs and industry
- To discuss sustainable development in the context of biodiversity
- To identify future research and policy priorities will underline the need to replace our current exploitation relationship with the oceans's living resources, with a sustainable connection based on scientific knowledge

Inaugurated the Carlo Heip International Award for outstanding accomplishments in marine biodiversity science

The Carlo Heip International Award for outstanding accomplishments in marine biodiversity science was inaugurated in recognition of Carlo Heip's leadership in marine biodiversity research and founding of the 'World Conference on Marine Biodiversity' (<http://www.wcmb2018.org/carlo-heip-award.html>). The Carlo Heip International Award for outstanding accomplishments in marine biodiversity science will congratulate an individual who has demonstrated exemplary leadership in marine biodiversity science.

The 1st Carlo Heip Award Recipient was Prof. Carlos M. Duarte, Director of the Red Sea Research Center and Tarek Ahmed Juffalli Chair in Red Sea Ecology of King Abdullah University of Science Technology of the Kingdom of Saudi Arabia. He is a world-wide leading authority on seagrasses and has published on all aspects of seagrass ecology, from population biology to genetics, from depth and geographical distribution patterns to their role in biogeochemical cycles, and from conservation strategies to their sensitivity to climate change. His pioneering work on seagrasses and other vegetated systems eventually led – in collaboration with different UN agencies – to the development of “blue carbon” strategies, which has provided a strong impetus to the conservation of vegetated coastal ecosystems. Carlos Duarte gave a keynote speech during the Award Ceremony Evening on the 15th of May at the Centre des sciences. More info at: <http://www.wcmb2018.org/carlo-heip-award.html>

The Award will become an annual one. The committee will set up jury and deadline for Carlo Heip Award and jointly to short list and encourage nominations more actively.

Communications

The IABO email list, MARINE-B, has over 1,200 subscribers. A Facebook page was launched in May 2018 and currently has 144 members and growing. MARINE-B provides news and relevant information related to biological oceanography, marine biology and biodiversity, including funding, job and studies opportunities, relevant papers and reports, conferences, etc. MARINE-B is administered by Mark Costello and the Facebook page is administered by Suchana Chavanich.

Associations

IABO encourages international networking and cooperation in marine biological science. To that end, it continues to endorse global scale marine initiatives and encourages its members and members of SCOR to support them. These are:

- Ocean Biogeographic Information System OBIS (www.iobis.org)
- Marine Biodiversity Observation Network MBON (<http://geobon.org/networks/thematic-bons/marine-bon/>)
- World Register of Marine Species WoRMS (www.marinespecies.org)
- Global Ocean Observing System – GOOS Biology and Ecosystem Panel (www.goosocean.org)

Some of the goals shared by IABO with these organizations are to:

- build a unified and globally consistent ocean observing system that includes biological measurements
- encourage open access and data sharing
- enhance existing observation capacity
- use the best available resources
- implement best practices and international standards
- enhance global capacity
- ensure continuity and sustainability of global marine biological and ecosystem observations

Planning for the 5th World Conference in Marine Biodiversity (5th WCMB)

The 5th WCMB will be held on the 13-16 December 2020 and will be hosted by the University of Auckland under the auspices of IABO. A mailing list is available for subscription to provide important information and updates about the conference.

Supporting capacity development

IABO thanks SCOR for providing financial support to three PhD students to attend and present their research at the 4th WCMB in Montreal: Hannah Omogoriola (Nigeria), Irawan Asaad (Indonesia), Lisa Mertens (South Africa).



International Association for Biological Oceanography (IABO) 2018-2019

<http://www.iabo.org/>

To celebrate the 55th anniversary of the establishment of the International Association for Biological Oceanography, we have renewed the association's logo. Consistent with the original emblem, the new logo design and colors are inspired in the "Fresco of the Dolphins", a mural in the Knossos Palace in Crete which is estimated to have been created between 1800-1400 BC to represent the natural underwater world.

The goal of IABO is to promote the advancement of knowledge of life in the ocean through the study of marine biology, biological oceanography and other related sciences.

Logo by The Turquoise Well

IABO message to the International Union of Biological Sciences (IUBS) in its 100 anniversary

The International Association for Biological Oceanography (IABO) was founded in 1964 and is one of the scientific members of the International Union of Biological Sciences (IUBS) under the umbrella of the International Science Council (ISC). IABO also serves the Executive Committee of the Scientific Committee for Oceanic Research (SCOR).

The goal of IABO is to promote and advance knowledge of life in the ocean through the study of marine biology, biological oceanography and other related sciences. IABO also promotes interdisciplinary communication between marine biologists and other ocean stakeholders by organizing and supporting international forums such as the World Conference on Marine Biodiversity.

To celebrate the 55th anniversary of the establishment of IABO, we have renewed the association's logo. Consistent with the original emblem, the new logo design and colours are inspired in the "Fresco of the Dolphins", a mural in the Knossos Palace in Crete which is estimated to have been created between 1800-1400 BC to represent the natural underwater world.

IABO congratulates its parent organization, IUBS on its centenary year and wishes the organization success in continuing to achieve its mission of facilitating interdisciplinary cooperation among biological scientists under the principle of unifying biology through diversity.

Summary of IABO activities 2018-2019

(1) Organization and structure

IABO has updated the terms of reference and the organizational structure to adapt it to the present times and needs. These have been reviewed and approved by the Committee.

International Association for Biological Oceanography (IABO) Terms of Reference and organizational structure

Background and goals

The International Association for Biological Oceanography (IABO) was founded in 1964 and is one of the scientific members of the International Union of Biological Sciences (IUBS: <http://iubs.org/>) under the umbrella of the International Science Council (ISC: <https://council.science/>). IABO also works with the Scientific Committee for Oceanic Research (SCOR: <http://www.scor-int.org>) serving as a reporter for SCOR related programs and as a liaison between SCOR's working groups and the SCOR Executive.

In accordance with the objectives of IUBS of promoting the study of biological sciences and of facilitating interdisciplinary scientific research, the goal of IABO is to promote the advancement of knowledge of life in the ocean.

To address this goal, the main objectives of IABO are to:

- Promote the study of marine biology, biological oceanography and other related sciences
- Promote interdisciplinary communication between marine biologists and other ocean stakeholders by organizing and supporting international forums
- Encourage international networking and collaboration between organizations and individuals with similar aims and interests around the world
- Recognize and award outstanding accomplishments in marine biodiversity science

Organizational structure (as for April 2019)

IABO is composed by an Executive Committee, three Task Groups and a Community of Practice.

The **Executive Committee** is formed by the President, Past-president, Secretary and the chairs/co-chairs of each of the three Task Groups.

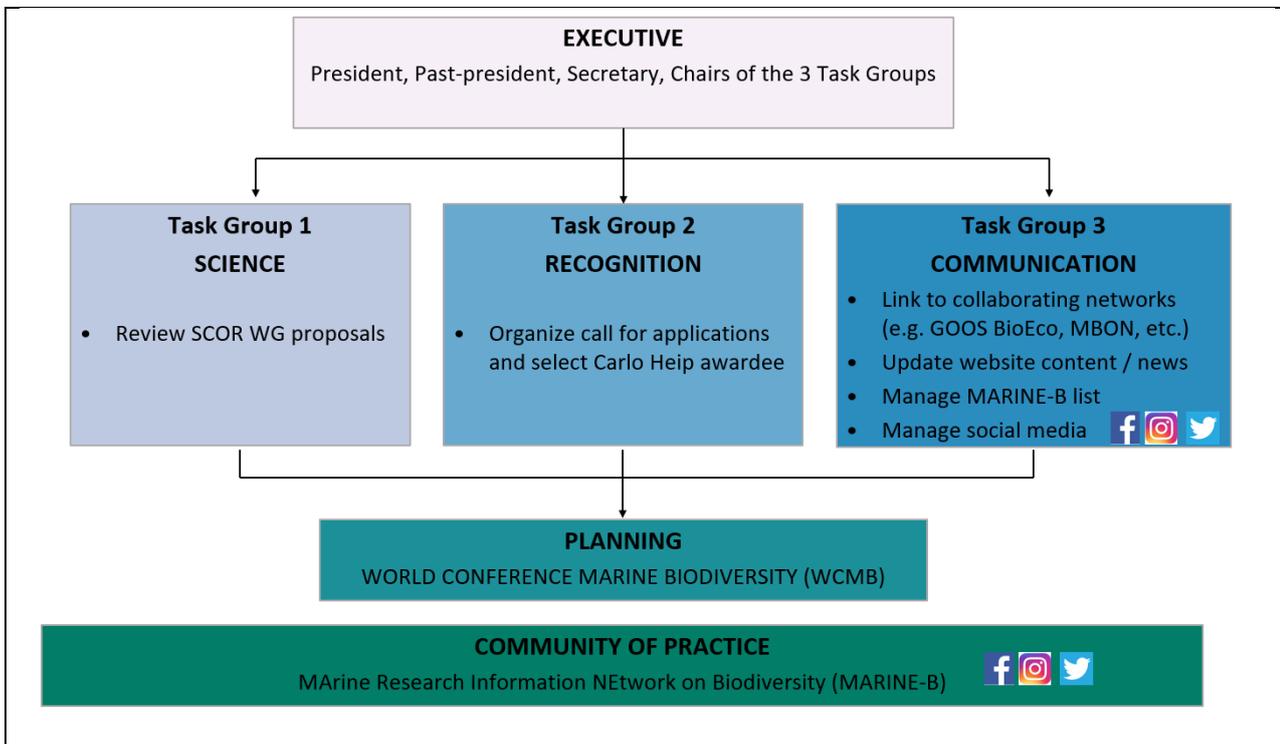
The **Task Groups** are:

- **Task Group 1 – Science:** responsible of reviewing the annual Working Group proposals submitted to SCOR and approved during SCOR's annual meeting.
- **Task Group 2 – Recognition:** responsible for seeking nominations for the annual Carlo Heip International Award for outstanding accomplishments in marine biodiversity science and of examining, discussing and evaluating the nominations.
- **Task Group 3 – Communication:** responsible for (1) linking to collaborating networks such as the GOOS Biology and Ecosystem Panel and its partners in biological observations, the Marine Biodiversity Observation Network of GEO BON, the Ocean Biogeographic Information System (OBIS), etc., (2) to keep the website (<http://www.iabo.org/>) updated and post relevant news, (3) to manage the MARINE-B list, and (4) to manage social media (Facebook, Instagram, Twitter, etc.)

The IABO **community of practice** is represented by the MARine Research Information NETwork on Biodiversity (MARINE-B) which communicates through an email list. The MARINE-B email list shares information on career opportunities (studies, scholarships, jobs, internships, etc.) related to marine biology and biological oceanography. The community of practice also shares news through the IABO Facebook page.

Members of the three task groups with the Executive will be responsible for the planning and organization of the World Conferences on Marine Biodiversity (WCMB) which are held every 3-4 years. The first WCMB was held in Valencia, Spain (2008), the second in Aberdeen, Scotland (2011), the third in Qingdao, China (2014), the fourth in Montreal, Canada (2018) and the fifth will take place in Auckland, New Zealand (13-16 December 2020).

The WCMB will be the official meeting venue of the IABO community. During this conference, an open assembly of the community of practice will be held to elect the Executive and Task Group members. The executive will be elected taking account of the recommendations of a nominating Committee of three, consisting of the Past-President and two members of the executive. The terms of office of the President is the period between consecutive WCMB (~3-4 years) and is not eligible for re-election for a consecutive term. The terms of office of the Secretary and Task Group members are also 3-4 years (time between two consecutive WCMB) and they are eligible for re-election, providing that not more than two terms of office in the same category are served consecutively. After two consecutive periods in one category, members may be elected to serve on a different category. The organizing Chair and the immediate Past-Chair of the WCMB will be members of Task Group #3 on Communication.



Note:

Originally, national IABO representatives were nominated by their national science academies. IABO currently does not have a process to alternatively select national representatives, either by election or nomination, therefore, in this IABO re-structuring, the figure of “National representatives” disappears because the individuals are not nominated by any national academy nor official government organization but supporting IABO on their own behalf without championing any institution nor country. IABO aims to have a diverse composition of its Executive Committee so it broadly represents the international community in terms of nationality, ethnicity, gender, and culture. To broaden participation as much as possible, any person or individual scientist can be part of the community of practice and/or of the executive and task groups.

Financial support

IABO has no funding base nor sources of revenue, therefore, the work of the executive and the task groups is entirely voluntary. This is a severe constraint on embarking on and supporting new initiatives. It is envisioned that funds will be raised through the organization of the WCMB that will allow to support at least basal activities of the Executive and Task Groups. IABO receives in-kind contribution from the Flanders Marine Institute (VLIZ) in providing the commemorative medal for the International Carlo Heip Award. SCOR also provides funding (around US\$ 3-5K in total) to co-support students from developing countries to attend the WCMB.

Benefits of being involved in IABO

As mentioned before, IABO has no funding and all work by its members is voluntary. However, some of the benefits of being involved in IABO are:

- Increased opportunities for networking and scientific collaboration with international peers and groups, which may facilitate scientific and technological exchanges, capacity-building opportunities, and help access new sources of funding
- Increased opportunities to engage in SCOR working groups and research projects and participation in the selection process for new SCOR working groups
- Increased opportunities to engage in the organization of the WCMB and participation in the conference
- Increased opportunities to engage in the UN Decade for Ocean Science and Sustainability
- It can support and endorse (sponsor in-kind) scientific meetings and proposals as contributing to the IABO goals and as of scientific merit

(2) Collaboration

IABO continues to encourage international networking and collaboration between organizations and individuals with similar aims and interests. Some of these are the GOOS Biology and Ecosystems Panel, the Marine Biodiversity Observation Network (MBON), the Ocean Biogeographic Information System (OBIS) and the World Register of Marine Species (WoRMS).

Some of the goals shared by IABO with these organizations are to:

- build a unified and globally consistent ocean observing system that includes biological measurements
- encourage open access and data sharing
- enhance existing observation capacity
- use the best available resources
- implement best practices and international standards
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(3) Communication

The IABO email list, MARINE-B, has over 1,350 subscribers. A Facebook page was launched in May 2018 and currently has 253 members and growing. MARINE-B provides news and relevant information related to biological oceanography, marine biology and biodiversity, including funding, job and studies opportunities, relevant papers and reports, conferences, etc. MARINE-B is administered by Mark Costello and Patricia Miloslavich the Facebook page is administered by Suchana Chavanich and Patricia Miloslavich.

A version of the new logo was also posted in the Fb page:



(4) 'Recruiting' new members - Expression of interest to join IABO

An online survey carried out in August 2018 was completed by ~70 people interested in being more involved with IABO. The survey collected information on institutional affiliation, career level and professional skills

