



Annual Report of the International Association of Meteorology and Atmospheric Sciences (IAMAS) 2020

www.IAMAS.org

Submitted by Steven A Ackerman, IAMAS Secretary-General

Introduction

IAMAS is the specialized association of the International Union of Geodesy and Geophysics (IUGG) that deals with all aspects of the gaseous envelope around the Earth and other planets. The main research work is carried out, coordinated and communicated through IAMAS's 10 International Commissions (IC), which, in alphabetical order, are the:

- International Commission on Atmospheric Chemistry and Global Pollution (ICACGP)
- International Commission on Atmospheric Electricity (ICAE)
- International Commission on Climate (ICCL)
- International Commission on Clouds and Precipitation (ICCP)
including the Committee on Nucleation and Atmospheric Aerosols (CNAA)
- International Commission on Dynamical Meteorology (ICDM)
- International Commission on the Middle Atmosphere (ICMA)
- International Commission on Planetary Atmospheres and their Evolution (ICPAE)
- International Commission on Polar Meteorology (ICPM)
- International Ozone Commission (IOC)
- International Radiation Commission (IRC)

All of the international commissions, and IAMAS as a whole, play a leading role in global coordination, communication and discussion of the latest research through organization of and participation in a wide range of scientific meetings that are open to all scientists.

This year of 2020 has been like no other in recent history. The global pandemic has necessitated the cancellation or postponement of multiple conferences, workshops and field programs (<https://www.iamas.org/meetings/>). Reduced transportation and other industrial activities, resulted in an observable reduction in some greenhouse gases (e.g. CO₂, CH₄) as well as pollutant gases (e.g. CO and NO₂).

Administration and strategic planning.

i) IAMAS Bureau Meetings

Regular administrative meetings have all been held virtually. The planned meeting at the University of Bremen in April 2020 was not feasible.

ii) Improving the engagement of early career scientists in IAMAS

An IAMAS goal is to engage early career scientists in our activities. As discussed in Assembly meeting in Montreal in 2019, to help move this forward IAMAS decided to include an early-career scientist on the IAMAS Bureau, with same responsibilities as other IAMAS Bureau members (see <http://iamas.org/bureau/>). The term of appointment will be two years. Nominations were submitted by IAMAS commissions and after consideration of a slate of excellent nominations, Dr. Jing Li of Peking University, China will be joining the Bureau of IAMAS as our Early Career Representative. Dr. Li will be involved in the day-to-day running of our association and helping to promote the activities of IAMAS and its commissions amongst the next generation of atmospheric scientists. Dr. Sarah Perkins-Kirkpatrick, from Climate Change Research Centre at UNSW, will collaborate and assist Dr. Li in IAMAS early career scientist activities.

The commissions are encouraged to bring ECSs into their membership and management groups to ensure that the views and requirements of the next generation of scientists are taken into account. IAMAS has formed an early career scientist (ECS) coordinating group, which consists of ECS representing each commission. This coordinating group will be led by Drs. Li and Perkins-Kirkpatrick, who will report out at IAMAS Bureau meetings on progress and activities. Activities include Webinars on specific topics of interest for IAMAS ECS researchers, coordinating virtual/online ECS Event around and as part of the “BACO 21” online assembly 18-23 July 2021.

We have established an early career committee to advocate for and build a community among this critical science group.

iii) Funding

Because of the pandemic, many meetings and conferences were forced into virtual formats or postponed to a later date. Funds approved for commission workshops and meetings, were approved for use next year.

Activities

An IAMAS-IACS-IAPSO virtual assembly will be held the week of 19-23 July 2021. The program and technical details of the online assembly will be finalized and announced by the organizers in the first three months of 2021. The virtual assembly will comprise invited speakers selected to speak for a limited period each day to enable all members of IAMAS around the world to hear simultaneously the selected talks.

While vaccines are sure to help make 2021 more sociable, the new approaches to virtual formats of meeting will continue.

In 2019, a new website design was developed for IAMAS to modernize the look and

support user needs. The official website of IAMAS was migrated to a secure web server. We are now in the process of moving the web pages of our commissions to the same server, as noted below in commission summaries. We anticipate this will provide for better continuity in the websites moving forward as the commissions' leadership change.

Two e-newsletters were published (<https://www.iamas.org/newsletters/>).

Awards:

Prof. Joyce Penner, President of IAMAS, was the recipient of the AMS Syukuro Manabe Climate Research Award.

Professor John P. Burrows vice President of IAMAS was elected to become a member of the German Academy of Science, the Leopoldina

Highlights from the IAMAS International Commissions

iCACGP (<http://www.icacgp.org/>)

iCACGP convened several sessions at the 27th IUGG Assembly in Montreal in July 2019. These included M08 - Air Quality in the Changing Anthropocene, M09 - The Arctic in the 21st Century: A Hotbed of Global Change and the joint session, JM02 - Anthropogenic changes in Chemistry and Physics of the Atmosphere: Evidence and Attribution Studies (IAMAS, IAVCEI, IAG). All sessions were well attended, with the M08 session extending to 9 time slots. The commission also held its annual meeting in Montreal, which was attended by 23 commissioners who developed the strategic direction for iCACGP over the 2019-2021 period. iCACGP working with IGAC, SOLAS, and GAW have been successful in the submission of several proposals for sessions at the Sustainable Research and Innovation 2020 conference focusing on atmospheric chemistry and the Sustainability Development Goals <https://sri2020.org/>.

ICAE (<http://www.icae-iamas.org>)

Activities of 2020

1. The new website for ICAE (<http://www.icae-iamas.org>) has been online from June 2020. The content of the former ICAE website, www.icae.jp, was transferred to the new website.
2. ICAE published two issues of newsletters in 2020. All the two ICAE newsletters were distributed to the ICAE mailing list.
3. The ICAE 2020 Executive Committee virtual meeting was held on November 19, 2020. The issues on 17th General Assembly of ICAE was discussed, and it will be held on 18-24 June 2022 at Tel Aviv, Israel. Two young researchers were nominated for the Candidate of IAMAS early career scientists (ECS) coordinating group. The ICAE topics for Busan IAMAS-IACS-IAPSO Joint Assembly were discussed.
4. The complete issues of ICAE newsletters back from 1990 were collected in 2020, and all issues can be accessed through <http://www.icae-iamas.org/Newsletter.html>.
5. The ICAE mailing list has been updated.

Plans for 2021

1. Prepare the 17th ICAE General Assembly (ICAE2022).

2. Participate in the virtual IAMAS-IACS-IAPSO Joint Scientific Assembly 2021 (BACO-21)
3. Issue two newsletters, one in spring and one in the fall.
4. Maintain the website for ICAE.
5. Update the ICAE colleague mailing list as needed.

ICCL (<http://www.iccl-iamas.net/>)

ICCL Highlights 2020:

1. Organization at EGU 2020 (May 3-8, 2020) of the session AS1.16: “The global monsoons in current, future and palaeoclimates and their role in extreme weather and climate events”. The session was presented online on Tuesday 5th May 2020, and some ICCL members participated and discussed on the research of monsoon in the past and future.
2. Nomination of a candidate for the IAMAS Early Career Medal.
3. Preparation for the IAMAS-IACS-IAPSO Joint Assembly 2021 (BACO-21) from 18th-23rd June 2021 at Busan in Korea. ICCL prepared ten sessions for the BACO21, but all of them had to be cancelled due to the pandemic situation.

ICCL Plan 2021:

1. Organize and participate at EGU 2021 (April 19-30, 2021) session “The global monsoons in current, future and palaeoclimates and their role in extreme weather and climate events”.
2. Organize and participate in virtual international workshop on “ Asian Monsoon variability and dynamics from astronomical time scale to decadal time scale” in the second half year (say September) of 2021.
3. Organize and participate of the biennial meeting (virtual) of the ICCL member in June or July 2021.

ICCP (<https://www.iamas.org/iccp/>)

ICCP moved their web page onto the IAMAS hosted web page.

The ICCP 2020 was postponed due to the COVID-19 pandemic. The ICCP commission, in consultation with the LOC, has decided that the upcoming ICCP 2021 will be a hybrid/virtual meeting, with the structure of the sessions depending on the degree of improvement in the global pandemic situation.

ICDM (<https://www.iamas.org/icdm/>)

At the end of 2019, the new leadership of ICDM conducted an online election to fill the vacant positions due to several members leaving the commission after the 26th IUGG Assembly in Montreal, Canada. The following members were elected as new members: Frederic Vitart (UK), Hannah Christensen (UK), Daniel Kirshbaum (Canada), Jim Doyle (USA), Leila Carvalho (USA)

In 2020, ICDM developed nine symposia descriptions for the joint IAMAS-IACS-IAPSO assembly 2021-BACO in Busan. Unfortunately, the assembly had to be significantly altered due to the COVID-19 pandemic and none of the proposed symposia will be conducted.

ICDM also used the opportunity in 2020 to move its webpage

(<https://www.iamas.org/icdm/>) to the new IAMAS webpage (<https://www.iamas.org/>). The new consistent layout for IAMAS and its commissions is highly appreciated.

ICMA (<http://icma.iaa.es/>)

Assembly symposia

ICMA provided suggestions for invited speakers at the IAMAS-IACS-IAPSO virtual assembly to be held in July 2021.

Business meetings / Internal affairs

ICMA elected two nominees for IAMAS Early Career Scientist Coordinating Group. Gabriel Chiodo (Switzerland) was finally selected as ICMA representative.

The next business meeting is planned for June/July 2021 and will be held online.

ICMA sponsored Workshops

The ICMA sponsored 8th IAGA/ICMA/SCOSTEP Workshop on Vertical Coupling in the Atmosphere-Ionosphere System, planned to be held in Sopron/Hungary in July 2020, has been cancelled. The ICMA sponsored 1st VolMIP workshop, planned to be held in fall 2020 in Venice, has been postponed to 2021. Similarly, the 11th International Workshop on Long-Term Changes and Trends in the Atmosphere has been postponed to May 2021.

IO3C website: www.io3c.org

1. Due to the Covid-19 crisis, the Quadrennial Ozone Symposium QOS2020 has been postponed to 3 - 9 October 2021. It will be held online.

<http://qos2021.yonsei.ac.kr/>

2. The re-election of the IO3C officers and election of new members.

Half of the Commission has been renewed: <http://www.io3c.org/members-international-ozone-commission>

3. Press Release: The International Ozone Commission, on the 33th anniversary of the Montreal Protocol, reports successes and remaining challenges for understanding ozone layer recovery

<http://www.io3c.org/press-release-international-ozone-commission-33th-anniversary-montreal-protocol-reports-successes>

4. IO3C has co-sponsored the ASOPOS 2.0 report on the Assessment of Standard Operating Procedures for Ozonesondes, to be published by WMO soon in 2021.

5. Election of one of the IO3C members, Ayman Badaway, to the IAMAS Early Career Committee

6. Participation in the WMO GAW meetings to discuss the modernization of the ways WMO runs its activities and "more effectively deliver to the global ozone agenda and respond to the increasing societal needs for broader integration of science and services." (Greg Carmichael, Chair, SSC, GAW)

7. Participation in the ORM11 technical meeting to discuss approaches to identification of gaps in the global coverage of atmospheric monitoring of controlled substances under the

Montreal Protocol and options to enhance such monitoring.

8. Participation in the Ozone/UV SAG session and reporting on IO3C activities. discussion of enhancing collaborations between IO3C and WMO GAW.

9. Leading 2 SPARC activities, LOTUS and OCTAV-UTLS, that are focused on ozone trends and will be contributing to the next WMO Ozone Assessment.

ICPAE ([website under construction within the IAMAS website framework](#))

ICPAE did not organize meetings or workshops in 2020 but increased its active members by 70% in 2020. A workshop previously scheduled in 2021 was cancelled because of the COVID-19 situation.

ICPM (<http://www.icpm-iamas.aq/>)

The International Commission on Polar Meteorology (ICPM) had plans for an active year in 2020, however, the pandemic has impacted those activities. The ICPM-endorsed 15th Workshop on Antarctic Meteorology and Climate (WAMC) scheduled in association with the SCAR2020 conference in Hobart, Tasmania, Australia was canceled due to the pandemic. Only a few reports regarding the Antarctic Automatic Weather Station networks and the new Antarctic Meteorological Research and Data Center were made available in lieu of the meeting (found here: <http://amrc.ssec.wisc.edu/meetings/meeting2020/program.shtml>). The largest effort of this past year was fully establishing the ICPM's new website, <https://www.iamas.org/icpm/> that is now integrated with the IAMAS new website. In a positive development of 2020, ICPM members have joined in the new IAMAS Early Career Scientist committee.

ICPM planning for sessions at the BACO-21 meeting will be re-focused and re-tooled for the IUGG meeting planned in Berlin in 2023, post-pandemic. The ICPM-endorsed 16th WAMC will be a virtual meeting hosted by The Ohio State University, Byrd Polar Climate and Research Center, with dates to be revised and finalized in the coming weeks. Efforts for ICPM in 2021 will be to engage more directly with early career scientists along with the ICPM's first virtual business meeting.

IRC (<http://www.irc-iamas.org/>)

The IRC, like every other organization, had its plans interrupted by the COVID-19 global pandemic. In March 2020 the quadrennial symposium of the IRC, scheduled for July 6-10, 2020 at the Thessaloniki Concert Hall Convention and Cultural Center, in Thessaloniki, Greece, was rescheduled at the same venue for 14–18 June 2021. In January 2021 it was determined that an additional year delay was necessary to hold an in-person symposium. The new date for what will now be called IRS 2022 is 4-8 July 2022, again at the same site in Thessaloniki. Please see <https://www.irs2020.org/> for updates.

The IRC annual business meeting that would have been held during IRS2020 was conducted on 10 August 2020, and held remotely via Zoom. The highlights of the meeting include the election of the new IRC Officers: Peter Pilewskie, President; Manfred Wendisch, Vice

President; and Hajime Okamoto, Secretary. The officers will serve four-year terms that commence in January, 2021. Another major activity at the business meeting was the "sunsetting" of two IRC working groups: Continuous Intercomparison of Radiation Codes (CIRC) and GEWEX Radiation Panel (GDAP).

In October 2020 a call for nominations for new commissioners was conducted. A vote was held and 11 new commissioners were selected to replace the 11 commissioners who completed their second four-year term. The IRC continues its tradition of full global coverage, with the 11 new commissioners representing seven nations.

Plans for 2021 and Beyond

As indicated in our 2020 highlights, the International Radiation Symposium originally scheduled for 2020 was postponed until 2021 and then further delayed to what we now hope will be a firm commitment in July, 2022. Over 550 authors submitted abstracts to the original IRS2020. We will re-open the abstract submission process for 2022 to allow authors to change their abstracts. The 2021 IRC Business Meeting will be held remotely at a date yet to be decided. One of the main agenda items will be the presentation of new Working Group proposals. Finally, with the change of Busan IAMAS-IACS-IAPSO Joint Assembly 2021 (BACO-21) to a virtual meeting with only select invited presentations, the IRC will not be convening special sessions as originally planned.

IAMAS EXECUTIVE COMMITTEE 2019-2023

President:	Joyce E. Penner	USA
Vice-Presidents:	John P. Burrows	GERMANY
	Mary Scholes	SOUTH AFRICA
Past President:	John Turner	UK
Secretary General:	Steven Ackerman	USA
Deputy Secretary General:		USA
Early Career Scientist:	Jing Li	CHINA
Assistant Secretaries General	Leanne Avila	USA
Members at large:	Lisa Alexander	AUSTRALIA
	Keith Alverson	USA / JAPAN
	Iracema Cavalcanti	BRAZIL
	Mu Mu	CHINA
	Michiel R. van den Broeke	NETHERLANDS

IAMAS COMMISSIONS

Atmospheric Chemistry and Global Pollution (ICACGP) www.icacgp.org

President:	Melita Keywood	AUSTRALIA
Vice-President:	Mary Barth	USA
	Christian George	FRANCE
	Stuart Piketh	SOUTH AFRICA
	Tong Zhu	CHINA

Atmospheric Electricity (ICAE) <http://www.icae-iamas.org>

President:	Xiushu Qie	CHINA
Secretary:	Weitao Lyu	JAPAN

Climate (ICCL) <http://www.iccl-iamas.net/>

President:	Jianping Li	AUSTRALIA
Secretary:	Quizhen Yin	CHINA

Clouds and Precipitation (ICCP) www.iccp-iamas.org

President:	Andrea Flossmann	FRANCE
Vice-President:	Greg McFarquhar	USA
Secretary:	Darrel Baumgardner	MEXICO

Committee on Nucleation and Atmospheric Aerosols (ICNP). www.icnaa.org

Chair:	Markku Kulmala	FINLAND
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Dynamic Meteorology (ICDM) <https://www.iamas.org/icdm/>

President:	Thomas Spengler	NORWAY
Secretary:	Craig Bishop	AUSTRALIA

Middle Atmosphere (ICMA). www.icma-iamas.org

President:	Bernd Funke	SPAIN
Vice-President:	Natalia Calv	SPAIN

Ozone (IO3C). <http://www.io3c.org/>

President:	Sophie Godin-Beekmann	FRANCE
Vice-President:	Paul A. Newman	USA
Secretary:	Irina Petropavlovskikh	USA

Planetary Atmospheres and their Evolution (ICPAE). <http://icpae.iaps.inaf.it/>

President:	Feng Tian	CHINA
Vice-President:	Ann Carine Vandaele	BELGIUM
Secretary:	Yeon Joo Lee	GERMANY

Polar Meteorology (ICPM) www.icpm-iamas.org

President:	Matthew Lazzara	USA
Secretary:	Tracy Moffat-Griffin	UK

Radiation (IRC). www.irc-iamas.org

President:	Peter Pilewskie	USA
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Vice-President:
Secretary:

Manfred Wendisch
Hajime Okamoto

GERMANY
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