

Name of the Union
Activities' Report - Year 2021

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1. Introduction

The International Association of Cryospheric Sciences (IACS) is the youngest of the associations in IUGG. In 2007, during the General Assembly of Perugia, IACS became the eighth association within the IUGG as a transformation from the IAHS International Commission on Snow and Ice.

One of the main objectives of the IACS is to support the cryosphere sciences by promoting and sponsoring workshops and symposia organized by its divisions, working groups, as well as by other organizations.

In February 2019 the new IACS website was opened: <https://cryosphericsscience.org/>

The IACS Bureau posts an "IACS NEWSLETTER" which reports the activities of the IACS and is downloadable in pdf format from the website.

Please note that individual registration to the IACS is free. You can register at the following link: https://cryosphericsscience.org/members/membership/#iacs_stats

At the same link you can find interesting statistical information, with data updated in real time. These data show a continuous increase in individual IACS memberships, which have practically doubled since 2019. Members from European countries are predominant and the category that is most represented is that of PhD students. Both data, which are also of relevance for our country, demonstrate the interest and importance of these issues closely related to the ongoing climatic variations in which the cryosphere plays an important role. The statistics shows a limited participation (30.9%), even if not negligible, of women.

It should be remembered that the IACS does not have a reference association in Italy, as is the case for the other IUGG associations.

2. Main activities carried on by (Union name) during 2021 relevant for Italy and for CNR

Unfortunately, no significant activities were carried out due to the persistence of the COVID-19 pandemic situation in 2021.

The IACS-IAMAS-IAPSO Scientific Assembly, scheduled for South Korea in July 2021 has been cancelled, and a series of virtual seminars have been organized in its place, "*The Virtual Atmosphere-Cryosphere-Ocean seminar series (VACO-21)*", 19-23 July 2021, with free registration.

The next time the IACS meets in person it will be at the IUGG 2023 General Assembly in Berlin.

3. Activities carried on by (Italian Delegate name) within the Union during 2021 and impact on the Italian scientific community

Unfortunately, even in 2021, no activities were carried out in the presence due to the persistence of the COVID-19 pandemic situation.

The activities focused on:

- dissemination of information and newsletters arriving from the IACS to the Italian glaciological community, the Italian glaciological committee and CNR-ISP.

- virtual participation at the IACS plenary assembly on 11/17/2021. The meeting was held twice at two different times to cover the hourly needs of the different nations. There were brief presentations on the activities of all the IACS Working Groups (<https://cryosphericsscience.org/activities/working-groups/>), of the Standing Groups (<https://cryosphericsscience.org/organization/standing-groups/>) and the Joint Commissions (<https://cryosphericsscience.org/organization/joint-commissions/>). At the links you can find all the relevant

information. Additionally, the meeting was recorded, and a copy can be found in the news bar on the right-hand side of the IACS homepage, <https://cryosphericsscience.org/>

-Involvement of polar science doctoral students (Ca 'Foscari University of Venice) at "The Virtual Atmosphere-Cryosphere-Ocean seminar series (VACO-21)", 19 and 23 July 2021, organized in place of the IACS-IAMAS-IAPSO Scientific Assembly, expected in South Korea in July 2021 which was cancelled.

I kept the Italian glaciological community informed by sending information and the IACS newsletter to colleagues from the Institute of Polar Sciences of the CNR and to the Italian Glaciological Committee. On these occasions I renewed the possibility of individual memberships to the IACS. Attention was also always paid to deadlines and the possibility of sending nominations for the Early-Career Scientist Award that the IACS promotes every year.

4. Evaluation of the participation in terms of benefits and membership cost

As I have already observed in previous reports, even in the face of limited supports, the involvement and sponsorship of events by the IACS in the context of the cryosphere is of fundamental importance for enhancing the activities of the Italian scientific community at an international level. I believe that participation in the Union is of fundamental importance. The presence of a CNR Institute of Polar Sciences and a PhD in Polar Sciences at the Ca 'Foscari University of Venice (<https://www.unive.it/pag/35949/>), are already clear reasons to continue the Italian participation in the IACS and the IUGG.

5. Evaluation of Italians' attendance and how to improve interest and involvement

The possibility to adhere individually and free of charge to the IACS has certainly led to greater involvement of the Italian scientific community, and in particular of young researchers, in activities related to IACS and statistics confirm the importance of opening individual registrations to scientific associations. The creation of new working groups within one of the currently existing divisions, or participation in existing ones, which currently do not see the presence of Italians in the positions of division heads, could increase the involvement of the scientific community. Worth noting is the renewed interest in the APECS (Association of Polar Early Career Scientists) which in 2021 saw the promotion of various initiatives at a national level and which could be involved in the promotion of activities in the IACS area.

As already mentioned last year and as highlighted in the introduction, although there are many organizations/institutes at national level that deal with the various aspects and with different capacities on the issues of interest to the association, to date there is no reference community that identifies itself in it as it happens in other sectors. An action to strengthen identity and better coordination of the national community, promoted through seminars, workshops, exchanges would certainly lead to a benefit and better positioning within the associations. It is believed that such actions can be continued once the pandemic situation improves. Unfortunately, even 2021 saw the persistence of the pandemic situation with a consequent difficulty in organizing events in the presence, certainly more decisive.

6. Italian experts with important roles within the Union or within related Commissions and Programs (if known)

There are no Italian experts with top positions within the IACS but there are experts in other related programs such as:

Carlo Barbante national delegate of the IUGG International Arctic Science Committee (IASC) and representative, appointed by the Minister of University and Research, at the European Polar Board; *Giovanni Macelloni* is national delegate (alternate) of the IACS / IUGG, Italian focal point of the Global Cryosphere Watch - of the WMO (GCW-WMO) and member of the Cryonet Team of the same organization; *Silvano Onofri* is president of the National Scientific Commission for Antarctica; *Carlo Baroni* is the Italian focal point of the Global Cryosphere Watch of the WMO (GCW-WMO; <https://globalcryospherewatch.org/about/focalpoints.html>), national correspondent of the WGMS (World Glacier Monitoring Service; <https://wgms.ch/contact-ncs/>), national representative of the Standing Committee on Antarctic Geographic Information (SCAGI) at SCAR (<https://www.scar.org/resources/scagi/members/>), member of the CNR-IUGS (International Union of Geological Sciences).

It should also be noted that *Giovanni Macelloni* (CNR-IFAC) was appointed by the Minister of University and Research as national delegate to the SCAR (Scientific Committee on Antarctic Research). SCAR is part of the ISC (of the International Science Council), which brings together representatives from 45 countries. SCAR has the task of initiating, developing and coordinating international scientific research in the Antarctic region and on the role of the Antarctic region on the earth system. In addition to its scientific role, the SCAR also

provides objective and independent scientific advice to the Antarctic Treaty Consultative Meetings and to other organizations such as the UNFCCC and the IPCC. The scientific activity of SCAR is conducted through its Science Groups where all the scientific disciplines active in the Antarctic research are represented. In addition to the periodic scientific meetings, the SCAR meets every two years, on the occasion of the meeting of its national delegates, for the formulation of its policy and strategy. *Giorgio Budillon* (Full Professor - University of Naples Parthenope) was designated as alternate to the same group. For more information on SCAR <https://www.scar.org>

7. If Union with CNR Commission, short summary about the 2021 CNR Commission activities

The undersigned and / or the alternate, Giovanni Macelloni, participated by e-mail and videoconference in the various activities and requests from the CNR-IUGG Commission. The videoconference meetings were held on 04/28/2021 and 12/20/2021.

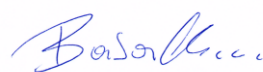
8. Notes (if any)

Nothing

9. Conclusions

The free and individual membership to the IACS, the sending by the association of a newsletter on a regular basis and a greater "*liveliness*" of the website have already led to a greater involvement of the Italian scientific community in the activities of the IACS, also through information that has been disseminated at national level. Unfortunately, the persistence of the pandemic situation also in 2021 has led to a slowdown in activities and a cancellation of all activities in presence. In the past years the IACS had financed international initiatives with an important involvement of the Italian scientific community by supporting young researchers to participate in the General Assemblies.

Signature



Venice, 29/04/2022