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Caravan of Glaciers 2023

Closing statement of the fourth edition of the international campaign promoted by Legambiente, with the scientific partnership of the Italian Glaciological Committee and in collaboration with CIPRA

Italian, Austrian and Swiss glaciers are all united by the same devastating depletion due to the climate crisis, with retreating glacial fronts and significant losses in volume.

From the Belvedere Glacier (Piedmont) which has lost up to 60 meters in thickness over the last 10 years (equal to a 20-storey building) to the Dosedè Est Glacier (Lombardy) which has lost 47% of its surface area since 1932

To the Ochsentaler Glacier (Austria), which has seen a retreat of about 2400 meters between 1850 and today, and the Morteratsch Glacier (Switzerland) which has receded by almost 3 km. since 1878.

Legambiente is launching the "Manifesto for the governance of glaciers and related natural resources", the result of the international round table which took place in Salecina (Switzerland) between some of the major glaciologists and climate experts in Europe.

7 actions to be implemented internationally to create a vision of the glacier as a resource to be recognised as the source of important ecosystem services

Link to the digital press kit: [click here](#) Link to the Manifesto: [click here](#)

Glaciers in the inner Alps, from Italy to Austria and to Switzerland, are condemned to disappear as a result of the climate crisis and global warming, with retreating fronts and massive volume losses. This is why Legambiente has chosen the "Caravan of Glaciers 2023", to launch the "Manifesto for a governance of glaciers and related natural resources" proposing 7 actions to be implemented internationally to ensure governance of glaciers and water resources. The Manifesto, already signed by leading glaciologists and climate experts*, was drawn up in response to the increasing awareness of glaciers as a resource to be recognised for their importance in providing ecosystem services, and to highlight how the reduction or even disappearance of which causes serious consequences for public safety, the economy and the environment. The document was previewed at the last stage of the campaign at the end of an international conference in Salecina (Maloja, Switzerland) which brought together glaciological experts from all the Alpine countries. The sharing of experiences and scientific data highlighted the alarming situation regarding the progressive decrease in glacier resources in the Alps.

Indeed, no geographical boundary can render those 'white giants' immune to the effects of the climate crisis. From the Rutor Glacier (Valle d'Aosta), which since 1865 has recorded a loss of surface area of about 4 km², of which 1.5 km² in the last 50 years, to the Belvedere Glacier (Piedmont), whose surface area has shrunk by 20% since the 1950s and has lost up

to about 60 metres in thickness in the last 10 years (equal to a 20-storey building). Then there is the Dosdè East Glacier (Lombardy), which has retreated more than 1 km since 1932 and has lost 47% of its surface area, with an average loss of 1.6 hectares (equivalent to about 2.5 football fields) per year. The Mandrone Glacier (Trentino-Alto Adige) - part of the Adamello Glacier, the largest glacier in Italy - which has lost 50 hectares of surface area (equivalent to 70 football pitches) since 2015. And then, across the border, in Austria, the Ochsentaler Glacier - one of the largest in the Silvretta group - which has receded by about 2,400 metres since 1850, recording dramatic retreats in 2018/2019 (-86.7 metres) and 2021/2022 (-42.8 metres). In Switzerland, the Morteratsch Glacier - the largest glacier in the Bernina range of the Graubünden Alps - has receded by almost 3 kilometres since 1878, losing 23 metres in 2022 alone.

This is the chilling picture that emerges from the monitoring activities carried out during the 4th edition of the "Caravan of Glaciers", the international campaign promoted by Legambiente with the scientific partnership of the Italian Glaciological Committee (CGI) - in collaboration with Allianz Foundation, with main partner FROSTA, supporting partners Sammontana and Seiko, and technical partner Ephoto - which this year has taken on an international dimension thanks to the collaboration of CIPRA (International Commission for the Protection of the Alps). The twenty one day journey, from 20 August to 10 September, traversed high mountains, involved hiking for around 72 kilometres and surpassing a difference in altitude of 4000 metres, as well as meetings with citizens, volunteer institutions and experts. The writers Paolo Cognetti, Matteo Righetto and Michele Nardelli were testimonials of excellence along with the actor Giuseppe Cederna and the Berlin artist Theresa Schubert.

"The climate crisis knows no boundaries, nor does the retreat of glaciers, a phenomenon that involves the entire Alpine arc. This is the premise at the heart of the common proposal, created with the collaboration from experts from all the Alpine countries, for a European governance of glaciers," comments Giorgio Zampetti, national director of Legambiente. "The Manifesto which was presented is the first step towards setting up effective measures to slow down the phenomenon, through concrete mitigation policies and urgent adaptation actions to deal with the consequences that are already evident today, from water resources to the hydrogeological risk. We must be aware that what is happening at a high altitude also impacts the territory downstream. Therefore, in order to address the phenomenon of Alpine glacier retreat, actions must not be limited to mountain areas alone but require policies to be applied on a vastly wider scale."

"Manifesto for glacier governance". According to Legambiente, 7 actions form the basis for a shared governance of glaciers:

- Establish channels for discussion between regional and local administrators, research groups, associations and enterprises, in order to improve governance capability for European glaciers, as well as expertise and scientific and technical know-how.
- Promote and enable the networking of experiences from different geographical, political and climatic situations.

- Create a shared network of multidisciplinary competences to set up a European Glacier Governance (EGG).
- Steer decisions made by the European Union towards the protection of glacial environments, from glaciers to ice caps, and the reduction of all negative impacts on the cryosphere and on land and water use.
- Build a European cryospheric risk monitoring system, by pooling local and regional experiences and creating a common system of rules.
- Collaborate with universities, research centres and schools to raise and increase the awareness of citizens and institutions and to develop training courses to create new professions in the field of mitigation and adaptation.
- Promote and co-ordinate international instruments and policies for climate change mitigation and adaptation in the Alps, in particular those developed by the Alpine Convention such as the Climate Action Plan 2.0, the Guidelines for Local Adaptation to Climate Change in the Alps and relative initiatives for implementation such as the "Budoia Charter for Local Adaptation to Climate Change".

"The fourth edition of the Caravan of Glaciers 2023 is coming to a close," says Vanda Bonardo, National Alpine Coordinator for Legambiente and President of CIPRA Italy, "A journey that we have taken with pride across national borders, experiencing first-hand the record losses of European glaciers caused by global warming and – thanks to having gathered together many of the leading exponents of international scientific research - reflecting on the effects that this has on safety, the economy and the environment. The Manifesto is the tangible result of this encounter: the framework on which to base new projects and alliances".

The Caravan of Glaciers 2023 was a lot more than just monitoring activities, press conferences, artistic interludes, it was an opportunity to promote the 'Budoia Charter for Local Adaptation to Climate Change', a voluntary declaration by Alpine municipalities - promoted by the Italian Delegation to the Alpine Convention and the Alliance in the Alps network of municipalities in Italy - which aims to make the Alps an exemplary territory in the field of climate change prevention and adaptation. With it, the signatories commit to the implementation of local climate change adaptation measures within the planning activities of the municipal administration, to implement actions to assess the potential risks and opportunities of climate change for the municipal territory, to promote public debate and to raise citizens' awareness of climate change-related risks and opportunities at the local level. In addition, at almost every stage, flash mobs drew attention to issues such as elitism, increasing mountain instability, the need for a serious risk mitigation policy, and reminded people of the importance of ecosystem services and natural capital, such as glaciers, increasingly under threat from the effects of the climate crisis.

"The Caravan of Glaciers was an opportunity to bring glaciology professionals into contact with the local populations, to discuss together the current dramatic situation of Alpine glaciers, and to assess possible evolutionary scenarios in high altitude environments," comments Marco Giardino, vice president of the Italian Glaciological Committee and professor of geomorphology at the University of Turin. "Dialogue like this is indispensable for developing solutions to the climate crisis that are based on scientific data, very incisive and fully supported by the territory.

PARTNER STATEMENTS

"The 6 stages along the glaciers of the Alpine arc have allowed us, as FRoSTA, to see close up the real state of our mountains and water reserves," continues Gianluca Mastrocola, CEO of FRoSTA Italia. "This 4th edition of the Caravan has also been an opportunity for educating and raising awareness, and we have been proud to participate and take an active role: now more than ever it is necessary for everyone to play their part in taking care of the environment through daily actions, support for research and dissemination. In July we started by donating a rain gauge to the Alpine Climatology Laboratory on Monte Rosa, and then by participating in the Caravan because it is important to experience at first-hand the state of emergency in our Alpine region to which we cannot remain indifferent."

"The alarming effects of climate change on alpine glaciers highlight the urgent need to address the global climate crisis," says Esra Küçük, CEO Allianz Foundation. "The projected disappearance of these glaciers poses a threat to local water resources, biodiversity and livelihoods, and requires immediate action. The Caravan of Glaciers is playing a crucial role in bringing together local communities, scientists and civil society to address this critical challenge, combining cultural and environmental perspectives. This is why we at the Allianz Foundation have launched the Climate Cultures Appeal, with the aim of promoting cultural change and improving the living conditions of future generations".

Rescuing the white giants. Doing absolutely everything in our power to combat the climate crisis is our gift to future generations, who will live with the effects of our choices now. To support Legambiente's activities on climate change visit [sostieni.legambiente.it/carovana-ghiacciai](https://www.legambiente.it/carovana-ghiacciai). With a small contribution you can support the international Caravan of Glaciers campaign, the activities of the Observatory on the impact of climate change and various mobilisations against the climate crisis and enemies of the environment to obtain concrete changes from the institutions.

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* Early signatories of the Manifesto:

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