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Tourism numbers in mountain areas have increased and with them the risk of accidents and cardiac arrests. In such cases, prompt rescue is vital. Rescue in remote and inaccessible places, however, can be difficult. Our research teams are investigating drones as a possible solution, testing them in a project that combines our knowledge in the field of sensor technology and in mountain emergency medicine.

Are we on the right track?

Our place in the world

On Eurac Research's thirtieth birthday, I asked if we were on the right track? It's a question that we have to ask ourselves again and again, and to which there are answers from different perspectives. One yardstick is the indicators, a comprehensive catalogue of qualitative and quantitative data that the Innovation, Research, University and Museums Department uses to assess our performance; another is the assessments undertaken by our inspectors, comprised of thirteen international teams of expert arbitrators. In addition to this external view, there is the internal view of our employees, which is determined every two years via the Great Place to Work platform. Here our staff share what their relationships with the Eurac Research 'company' are, as well as how they feel about management and colleagues? Now that the evaluation has once again earned us international certification as an excellent place to work and the external assessment was favorable to enthusiastic, we can rest easy. However, as researchers, we know that we will continue to play a key role in overcoming the global challenges of conflict resolution, climate neutrality, biodiversity conservation, minority protection, social justice, governance, and many others. Our networking with institutions such as UNESCO, UNEP, UNU, international energy agencies and global research networks, our joint doctoral studies with 35 universities and, last but not least, our collaborations with companies from South Tyrol and around the world will continue to play a decisive role in ensuring we do stick to the right track.

Roland Psenner, President



For the local population and economy

From the very beginning, an important motive for establishing research in South Tyrol was the resulting benefit for the local population and economy. Today, these benefits can be seen in a variety of impressive ways.

With the CHRIS population study, in which more than 13,000 people are now taking part, we are setting a milestone for biomedical research and breaking new ground in local healthcare together with the South Tyrolean Health Service. Our 18 laboratories at the NOI Techpark are now being used not only by our researchers, but also by local companies to test solar panels, drones, and functional clothing, among other things.

Our independent scientific work provides valuable guidance for political decision-making processes when it comes to setting the course for the future. In consultation with the state government, we have developed a specific digital climate plan monitoring system, which makes it possible to track the development of emissions in the various sectors.

At EU level, we played a key role in the first climate risk analysis, which shows the Commission where it needs to act to limit damage.

Stephan Ortner, Director

Collaborative and transparent science

Open Science is collaborative, accessible and transparent. It must not only disclose its results, but also its methods, data, protocols and sources which are also highly valuable fruits of research. Therefore, in 2023 we developed our second Open Science strategy: the 'Research Data and Source Code Management Policy' which aims to ensure that data and code are managed in line with international best practices.

In the coming years we will invest even more in support systems for open science, such as digital repositories. We already have two significant archives: the Environmental Data Platform for data of different nature (including from sensors, ground measurements, IoT devices) and the Eurac Research CLARIN Centre for linguistic data repository. A further example of open science is the CHRIS biobank. The team that created it won our 2023 internal Open Research Award: the biobank makes not only biological samples, but also the data sets and results available to the international scientific community. As such, data from the Bolzano biobank has contributed to important international studies, with the results from one study making it possible to identify the genetic regions associated with kidney function and thus determine the genetic risk of chronic kidney failure.

Roberta Bottarin, Vice Director



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To the point

Collecting data is the foundation of any research work. Whether qualitative or quantitative, the more the better. Results are then analyzed for patterns from which new insights can be gained on topics such as biodiversity, climate change or migration.





The study areas for vascular plants and grasshoppers each measure 10 m². Researchers conduct surveys on bats, birds and soil.



Biodiversity monitoring South Tyrol: a new milestone

Biodiversity was surveyed at 320 points throughout South Tyrol and now, the first five-year survey period is complete. From now on, the research team will return to the same locations and be able to precisely observe the developments of the various species and what influences them at each site.

More than anything, it's 'landscape mosaics' –structurally rich and diverse cultivated landscapes interspersed with natural hedges, individual trees, embankments, herbaceous borders, dry stone walls and vegetable gardens, that promote the diversity of butterfly, bat, and bird species. This was clearly evident following the first survey period in which South Tyrol's various habitats were analyzed. The wetland habitats in particular stand out as highly important for local

biodiversity, especially birds and bats but also insects and plants – and are therefore particularly worthy of protection. Extensively managed meadows and pastures are similarly valuable, especially for grasshoppers and butterflies. In comparison, orchards and vineyards have a lower diversity of species; this varies depending on the location and landscape structure. Settlement areas proved to be surprisingly species-rich, although mainly generalist – less demanding species, and many newly immigrated species were recorded there. Biodiversity monitoring in South Tyrol, which also includes 120 survey points in flowing waters, is being continued on an ongoing basis. It serves not only as basic research, but also as a scientific basis for political decisions on spatial planning, agriculture, and nature conservation.

Our blogs: what's happening now

In 2022, the war in Ukraine caused the number of refugees in Italy, as in the whole of Europe, to skyrocket. Over a hundred thousand people, mainly women and children, had arrived in Italy by the time the blog post "I rifugiati ucraini in Italia: dove sono e quanto conta la comunità ucraina preesistente" was published in early May. How close this topic is to many people can also be seen from the interest in this article: in 2023, the analysis by political scientists Verena Wisthaler and Ilaria Signori was still one of the most-read texts on our blogs platform.

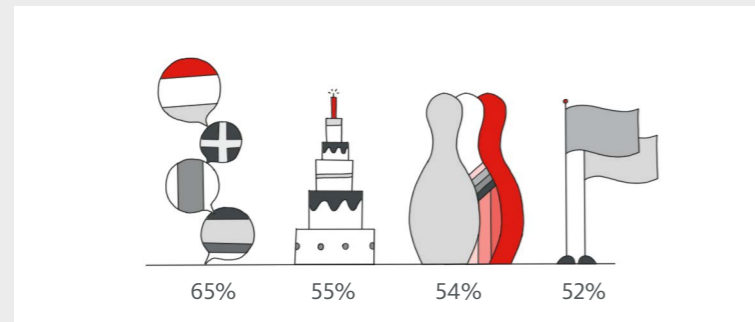


- **95**
- new posts were
- published last year in
- Eurac Research's 7
- science blogs. 721 pieces
- in total since the first
- blog went online in
- 2019.
-
-
- **Over 97,000**
- people read our posts in
- 2023 alone. Eurac
- Research's science blogs
- have been online for 5
- years, and since then
- they have been viewed
- about 400,000 times.

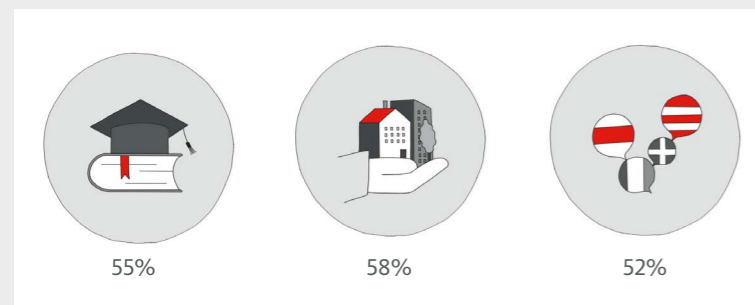
How is diversity perceived in the workplace?

How does diversity management work in South Tyrol? An interdisciplinary research team interviewed people in charge of a number of companies and, with the cooperation of AFI/IPL (Labor Promotion Institute), gathered the opinions of 500 employees. “We investigated the perception of diversity among employed

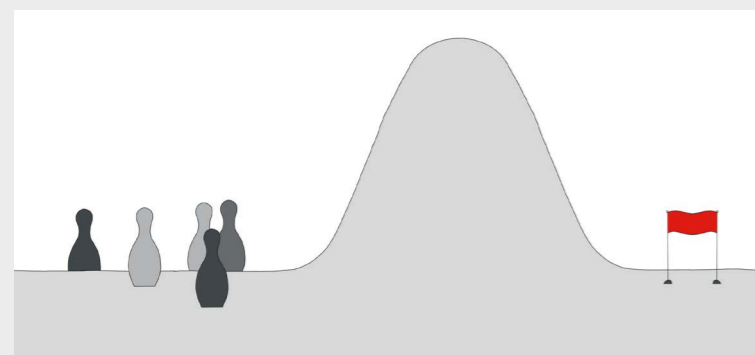
people to understand what factors are relevant in fostering diversity, how discrimination is experienced, what measures companies take against it,” explains Johanna Mitterhofer, a social anthropologist and minority rights expert.



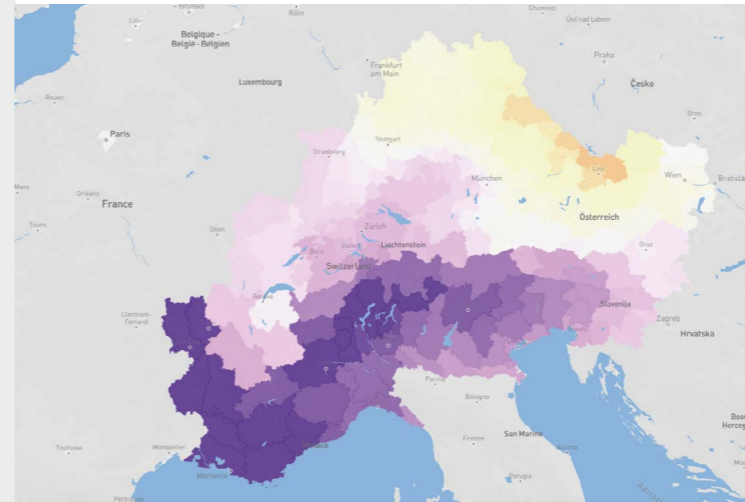
The dimensions of diversity that were experienced by those surveyed: language (65 percent), age (55 percent), gender (54 percent), and origin/nationality (52 percent).



Regarding diversity management policies within individual companies, 55 percent of those surveyed said that their companies offered training, mediation and outreach. More than 58 percent said that their companies were active with support services for their staff, such as in finding housing, and 52 percent confirmed the use of languages other than German and Italian.



“These discriminations indicate the presence of unequal power distribution within organizations: this is the first obstacle to be addressed in order to achieve valuing diversity,” says Political Scientist, Marzia Bona.



Map of the Alpine Drought Observatory. The colors indicate how wet or dry it is, dark purple: very wet, orange: very dry.

How dry is the Alpine region?

Data is often difficult to put into words. Visualization helps to provide better understanding: with the Alpine Drought Observatory, Eurac Research is providing the private and public sector with a tool to gain an overview of drought situations in the Alpine region.

The digital platform Alpine Drought Observatory (<https://ado.eurac.edu>) provides an overview of drought in the Alps with continuously updated maps and graphics. Eurac Research has harmonized and optimized the data from all Alpine countries with high resolutions. The large amount of satellite data, meteorological and hydrological data that has been incorporated and continues to be incorporated, has been elaborated in process chains to such an extent that the result is completely self-explanatory: you can see at a glance what the drought situation in the Alps is like, you can click on a time series and see how much drier it is today than it was in the past. Experts from the fields of meteorology, agronomy, hydrology, environmental engineering, remote sensing and IT worked on the transnational, interdisciplinary project. The freely accessible portal is visited on average 200 times a week. The Alpine Drought Observatory received the Open Research Award from Eurac Research in 2023. In 2024, the province commissioned our team of experts to develop a hydrological atlas for South Tyrol in a similar design to the Alpine Drought Observatory.

Online course for ESA

The European Space Agency ESA commissioned Eurac Research to develop a Massive Open Online Course (MOOC). In the “Cubes and Clouds” lessons, researchers learn to work in cloud platforms which make an enormous volume of satellite data freely available as well as providing the necessary software tools to process the data in the cloud and share it with others. As cloud technologies are relatively new, but are developing rapidly, there is a lack of appropriate teaching material for scientists. With this course, ESA is closing this gap and utilizing the expertise of Eurac Research and project partners in the field of cloud computing for earth observation.

eo-college.org

The ESA partnership was extended in 2024. The next step will be to integrate Pangeo, a platform for big data in geosciences into the MOOC. In the spirit of interoperability, the aim is to make the data freely available and accessible to as many communities as possible.



< Andrea Eccher, terraXcube technician, in one of the climatic chambers where the experiments on human perception of temperature were conducted.



Experiments on temperature sensitivity

How sensitive are we to temperature changes? The terraXcube extreme environment simulator was engaged to give us the answer. An experiment by Laura Battistel, a doctoral student of neuroscience at Eurac Research and the Interdepartmental Mind/Brain Center at the University of Trento, involved the use of the simulator's four climatic chambers at temperatures ranging from 23 to 25 °C. Each participant was asked to move from one chamber to the other and then say whether the second chamber was warmer or cooler than the first. Each participant made 120 comparisons

between different pairs of chambers: a total of 3,120 comparisons. The results of the experiment showed that the threshold for perceiving temperature differences was only 0.92 °C. Laura Battistel's research is the first to investigate human perception of room temperature and has potential implications for the field of heating, ventilation and air conditioning in buildings. In fact, changing the air temperature without exceeding the calculated perception range could save a lot of energy.

Minority languages and dictionaries: digital divides and bridges

Words and their meanings play a fundamental role in our lives: communication becomes difficult if we don't understand. Words are traditionally recorded in dictionaries, at an international conference in Bolzano we investigated dictionaries and their relevance and challenges, especially for smaller language groups. Together with the Accademia della Crusca and the Istitut Ladin Micurá de Rù, we organized the "Traditional and digital lexicography in a multilingual everyday life" conference and discussed a wide range of topics including language atlases, the digitization of historical dictionaries and the semi-automatic creation of new dictionaries as well as the need for reliable information systems such as one for a uniform legal system for the European Union that standardizes legal and administrative terminology throughout the EU and yet maintains multilingualism as vital European heritage and addresses the challenges for minority languages. We discussed topics like how a Ladin dictionary could be designed and how to deal with the limited availability of data as well as the potential for IT tools to deal with languages that are only spoken and written by a small number of people.

COHERENCE IN ACADEMIC ITALIAN

How do South Tyrolean students write in Italian? Are they able to write coherent texts and argue their ideas? As part of the ITACA project, a research team collected evidence from about 700 teenagers in Italian-language secondary schools. The aim of the project is to create a network between schools and research to improve writing skills.

SPECIALIST TERMINOLOGY AND TRANSLATIONS

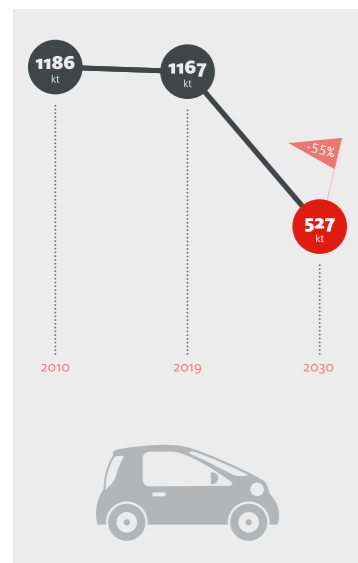
Our expert linguists in terminology also work with the Autonomous Province of Bolzano and professional associations on translations, revisions and linguistic standardization of materials for training and have taught courses on translation for the Free University of Bolzano-Bozen and the University of Bologna. On the topic of occupational safety, our experts have compiled a glossary which contains hundreds of terms in German, Italian, and English.

Climate Plan Monitoring: where does South Tyrol stand on climate neutrality?

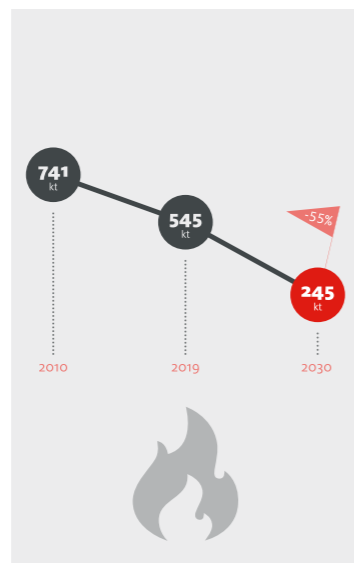
Although there has been a clearly positive development in the heating sector, the consumption of diesel and petrol in the transport sector, has increased by four percent since 2010. The development of emissions in South Tyrol can be continuously observed online with Climate Plan Monitoring, a platform where Eurac Research has compiled data on fossil fuel consumption in the heating, transport, and industry sectors from various sources since 2010 to the present day.

Designed and developed in line with a monitoring system based on the South Tyrol Climate Plan, the platform also includes indirect indicators on emissions such as the number of buildings renovated to make them more energy efficient, the prevalence of district heating, the number of cars sold by broken drive type and mileage – both in individual traffic and by public transport.

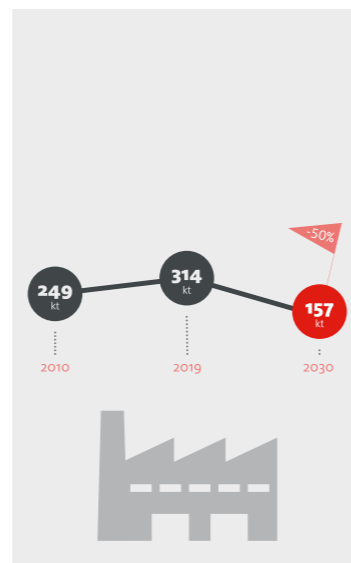
<https://www.eurac.edu/it/data-in-action/monitoraggio-del-piano-clima-alto-adige>



CO₂ emissions from traffic



CO₂ emissions from the heating sector



CO₂ emissions from the industrial sector

A climate risk assessment for the European Commission

Europe is warming faster than other continents. A first climate risk analysis by the European Environment Agency sets out the possible future impacts on Europe’s environment, society, and economy. The diagnosis, in which a team from Eurac Research played a key role, provides the European Commission with a tool that shows where urgent action is needed to limit the damage. The European Climate Risk Assessment is available online at www.eea.europa.eu/publications/european-climate-risk-assessment



Consequences of climate change terrify us

A survey has proven that fear of the effects of the climate crisis is widespread in South Tyrol where people are particularly worried about more drought and water shortages as well as heavy rainfall and flooding. The survey also shows that many citizens are not satisfied with the current efforts to protect the climate and feel powerless and frustrated in relation to mitigation efforts. Most of the population believes that the burden of the climate crisis will be unevenly distributed and demands that issues of justice should be given greater consideration in climate debates.

The study is the result of a collaboration between Eurac Research and ASTAT – the Provincial Institute for Statistics and is the second joint study by the two institutions. The results will be presented in June 2024 and published in the form of a brochure as well as on the Eurac Research website.

The “Emotions and inequalities in the climate crisis” survey

The survey targeted members of the South Tyrolean population aged between 18 and 80. The method was a random sample survey which allowed conclusions to be drawn about the entire population of the region. In total 1,028 people were surveyed between July and August 2023.

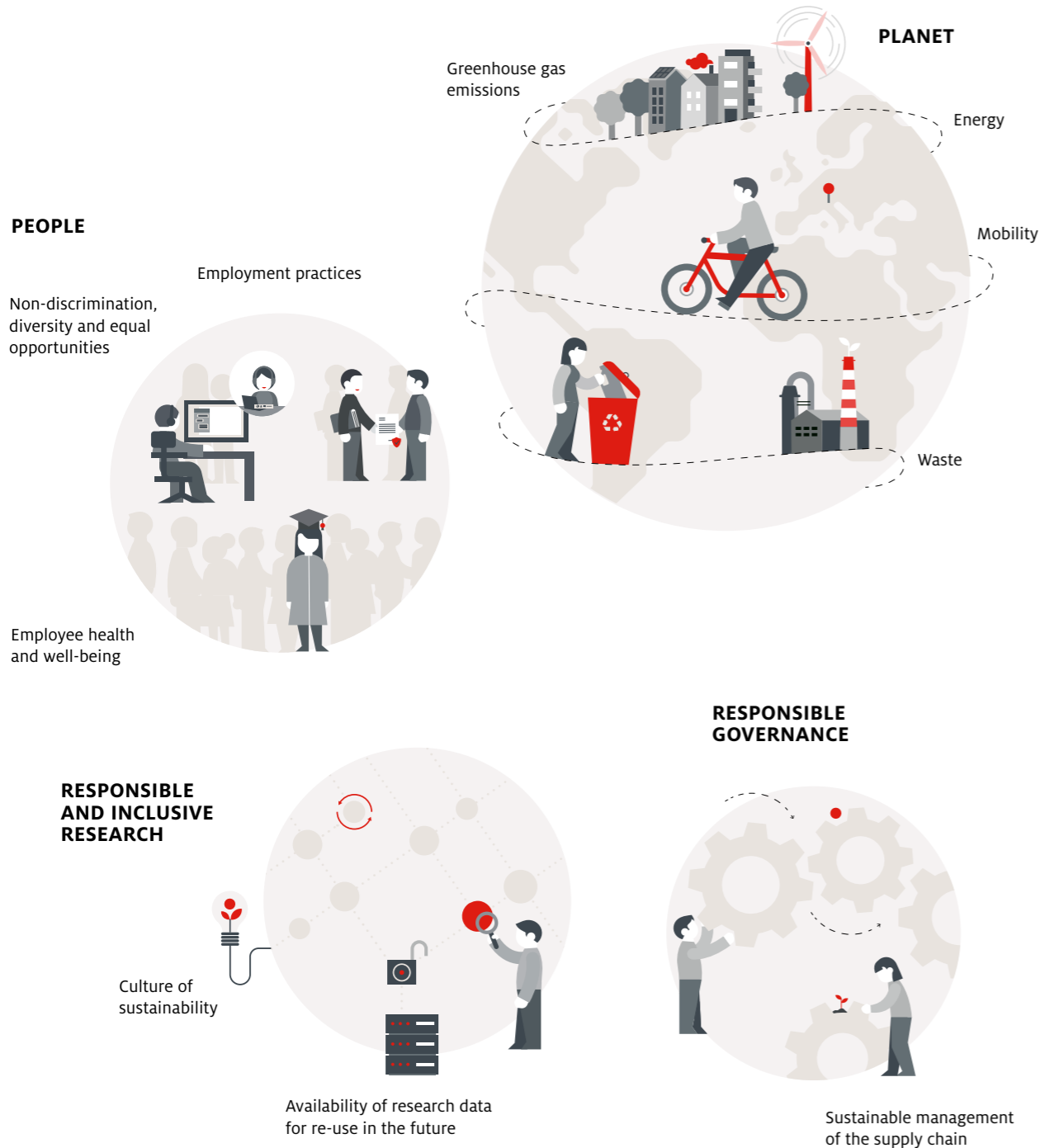
How fit for the future is South Tyrol’s social sector?

Using in depth surveys “Perspectives for social policy in South Tyrol - needs and recommendations from the field” analyzed the most important concerns of many interest groups and reported: more professionals are needed in the social sector, organizations and services need to work more closely together and network better, the volunteer system needs to be strengthened and individually tailored housing options are needed for everyone.

Sustainability as our goal

Through a series of participatory processes, ten themes which were grouped into four macro-categories were identified as sustainability priorities for Eurac Research. Over the course of 2023 we set up working groups and organized dedicated workshops which were attended by 150 participants.

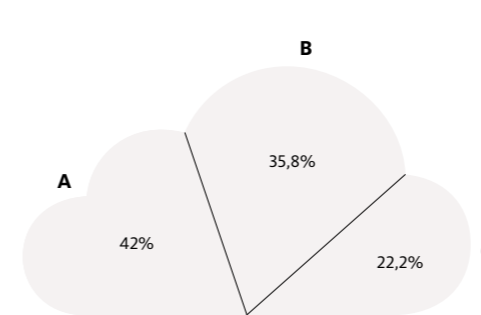
Through the Mission Sustainability project, we are monitoring the impact of our work activities, setting goals, and developing strategies and action plans to increase sustainability in all its dimensions: environmental, social and economic.



We are developing a computer system to automate the calculation of greenhouse gas emissions (GHG) to monitor and mitigate the carbon footprint of our activities. Here's how we did in 2023.

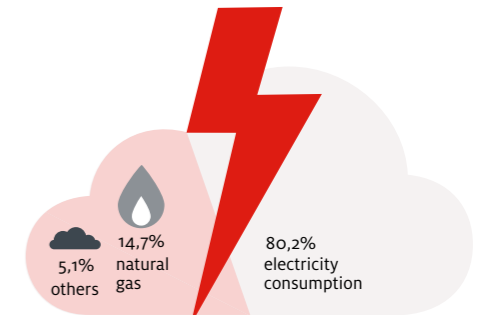
Greenhouse gas emissions

Divided in sectors monitored



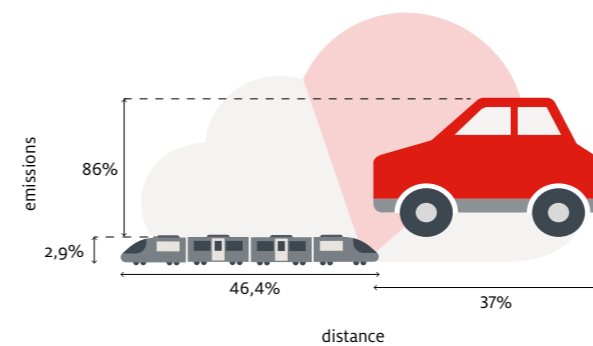
We refer to the scopes as per the GHG Protocol: ghgprotocol.org. Of the emissions in scope 3, we currently collect those related to business trips and commutes between home and work.

A) From directly controlled as well as purchased and consumed energy sources (scope 1 and 2, respectively) total: 684 tCO₂e*



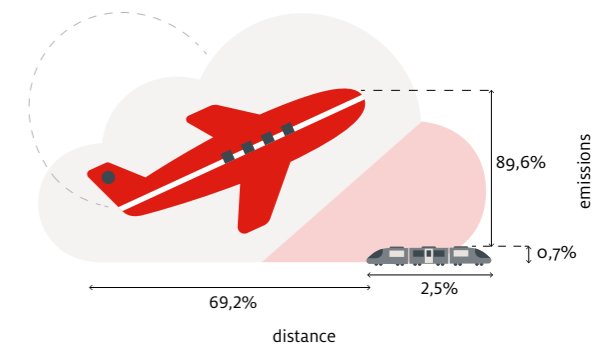
*The unit of measurement: tCO₂e (tons of CO₂ equivalent) expresses the impact of all greenhouse gases relative to the same amount of carbon dioxide. The data related to scope 2 was calculated using a location-based method which accounts for the standard Italian power breakdown and applies the relevant emission coefficient. The energy we purchase is 100% certified from renewable sources

B) Emissions from commutes between home and work (scope 3.7) total: 582 tCO₂e over 6.9 million km



The data on commutes between home and work were derived from an internal questionnaire. The results from a response rate of 70 percent was extended to estimate our total number of employees.

C) Emissions from business trips (scope 3.6) total: 360 tCO₂e over 2.7 million km



Source: internal databases. Reference period: 01.01-31.12.2023. In infographics B and C, only the two main emission items are depicted.

- **more than 5**
- laps of the equator equal the distance
- that we cycled or walked in 2023 for our
- commutes: that's more than 200,000 km
- with no emissions.

Reshuffling the cards

When conventional methods and means of data collection are not sufficient, innovation is required: hemispheric photography to investigate the health of the forest, or a wind tunnel we developed which makes it possible to test the flight capability of drones in extreme weather conditions.



Researching and training for emergencies

Successful communication within the rescue team is one of the key factors in rescuing seriously injured people in extreme situation, which is exactly what emergency physicians from all over the world used the terraXcube extreme climate simulator for in October 2023. In simulated winds, freezing cold and utter darkness, participants from the International Commission for Alpine Emergency Medicine (ICAR), the University of Bicocca in Milan, the University of Insubria, the Ospedale Maggiore Bologna, the CNSAS (Corpo Nazionale Soccorso Alpino e Speleologico), the South Tyrolean Mountain Rescue Service, the South Tyrolean Medical Service and the Aiut Alpin Dolomites came together as partners in the two-day training course.

In addition to the simulated mountain rescue attempts in extreme conditions, the participants were able to try out a range of innovative emergency medical procedures: using the world's smallest ECMO machine and training with REBOA – retrograde balloon occlusion of the aorta. The team also practiced difficult intubation techniques at -20 °C.

For the training, the terraXcube was used to simulate darkness, wind and temperatures of -20 °C.





Neuroscientist Mattia Volta in the new Eurac Research biomedicine lab at NOI Techpark

RIT2 gene: a risk factor for Parkinson's disease

After years of experiments, a research team from Eurac Research and Canada's Laval University has shown that one of the risk factors for Parkinson's disease is related to the expression of the RIT2 gene. If its expression is reduced, it is more likely to activate the process that triggers the disease. This finding contributes significantly to studies for the early recognition of biological mechanisms which underly Parkinson's. "Unfortunately, there are currently no available treatments other than to alleviate symptoms, so any strategy to

prevent and recognize the onset of the disease as early as possible is crucial," explains Eurac Research Neuroscientist Mattia Volta. For the time being, these have been gene-level interventions, but researchers are hopeful that with time a system can be developed to intervene more directly on the RIT2 gene by regulating it and thus lowering risk factors for many.

"Integration is still a marginal issue in South Tyrol"

Migration expert Verena Wisthaler reports on a study in which she examined integration policy in South Tyrol. In brief: many initiatives, no concrete actions

Is too little being done in South Tyrol to ensure good coexistence?

Verena Wisthaler: I don't think too little is being done. There are many projects in the municipalities especially for women such as language courses. What doesn't exist however, is a long-term strategy for integration at both municipal and state level.

How do integration officers working in South Tyrolean municipalities feel about their work?

Wisthaler: It's always the same: at the start, they're extremely motivated, then at some point, they realize that nothing is actually happening and they feel abandoned. This leads to integration officers becoming increasingly demotivated and eventually giving up. The big challenge is to ensure that these people don't lose their motivation. The budget is usually not high, and there is not much recognition in the local council because integration tends to be considered a marginal issue.

What needs to be done about migration policy in South Tyrol?

Wisthaler: The issue needs more public attention, but in a positive sense – it tends to be viewed as a problem and a security issue. Commitment to the integration of new citizens belongs to us and to South Tyrol and we must face this social change, do something to ensure that it is accepted by everyone and see its positive sides.

What will happen with the results of the study?

Wisthaler: The results are the basis for the province's long-term integration plan.

Link to the study:

<https://works.eurac.edu/Integration-vor-ort.pdf>



A NEW ENTRY

The Center for Migration and Diversity was established in December 2023 to address the diversity of languages, cultures, lifestyles, traditions and religious beliefs across disciplines. The head of our new center is migration expert Verena Wisthaler, formerly a researcher at the Institute for Minority Rights.



< To make predictions about the future development of forests, Marco Mina also uses photography. The forest ecologist peers into the forest canopy waiting for the sun's rays to stop hitting the treetops – a prerequisite for canopy photography.



The future of our forests

Half of South Tyrol is covered by forest. The health of our forests, however, is being undermined by various factors, including climate change and natural disturbances such as windstorms and pathogenic insect attacks. Using vast amounts of data collected over hours and hours in the field, our forest ecologist Marco Mina creates virtual models of South Tyrol's woodlands, and then simulates their changes according to future climate scenarios. In doing so, Mina and his team were able to assess the effects climate change will have on the ability of our forests to protect us from landslides, rockfalls, debris flows and avalanches.

"We already know that forests will undergo drastic

changes," says Mina. Thanks to the predictions we can now make using mathematical models, possibilities to design management interventions that make forests more resilient are opening up. "For example, by planting certain tree species that have a better chance of surviving and thriving despite changes in climate, as well as by encouraging the growth of forests with a more complex structure, made up of trees of different ages. In this way, in the event of an unexpected disturbance or mortality phenomena, the forest would be able to recover more quickly." Explains the ecologist, who is now a senior researcher at Eurac Research through a Marie Skłodowska-Curie (MSCA) fellowship.

Opportunities for young talent, international mobility, and project funding

The Marie Skłodowska-Curie fellowship (MSCA) is a funding program through which researchers from around the world can spend two years at Eurac Research. In 2023, Eurac Research hosted seven MSCA Postdoctoral Fellows, three MSCA Doctoral Fellows, and five Seal of Excellence Fellows. The latter is a quality seal awarded to project proposals that are ranked above a predefined quality threshold and were not funded due to budget constraints. In 2023, the Seal of Excellence was awarded to three proposals.

Additional opportunities are targeted funding opportunities such as Fusion Grants supported by Bolzano's Fondazione Cassa di Risparmio. In 2023, four of our projects won the call for proposals administered by NOI Techpark aimed at young postdocs under 40 (among them, the Drone-AED project recounted on page 2). The funding is awarded to projects that involve collaboration between the world of research in the technology park's research labs and South Tyrolean companies.

What smoking does to our oral flora

We are colonized by millions of microbes, in our guts, our mouths and on our skin. Since science has established how important this microbiome is for our health, it has been intensively researched – especially that of the intestine. In contrast, there has hardly been any major research into the salivary microbiome. Now, one of the largest studies of its kind in the world has been made possible thanks to data from the CHRIS study in Val Venosta/Vinschgau in which a team from Eurac Research and the University of Michigan used samples from more than 1,600 people to investigate two central questions: what happens to the bacterial communities in our mouths when we smoke? And what effect does giving up smoking have afterwards? The analyses showed that smokers carry a significantly different microbial community in their mouths than people who have never smoked; the number of bacteria that need oxygen decreases with increasing cigarette consumption; and those who quit are only distinguishable from someone who never smoked after having given up for five years.

Communities as protagonists

“When a community contacts us to come up with a local development plan, we make it clear right away that we don’t have magic formulas, but that we can help people become aware of the situation they are in and the future they want,” explains Federica Maino, an environmental engineer who specialises in conflict management and participatory methods. Whether it’s enhancing the landscape or reducing disaster risks, the approach is method-oriented rather than goal-oriented. “For us it’s about the involvement of the community, those who administer it, and the economic actors. If strategies arise from a participatory process, they succeed in resisting the tests of time,” Maino concludes.

Thanks to its strong emphasis on collaboration, participation, and inclusion, Vital Mountains is one of three projects honored by our Open Research Awards 2023.

Our interdisciplinary teams not only accompany processes for land enhancement, but also on climate transition strategies and climate change adaptation plans in different parts of Italy. They are also involved in more than ten projects for the elaboration of scenarios for the development of provinces and regions, as well as for the creation of renewable energy communities. They are currently working in the Verbanco Valleys of Piedmont, the Marche region, and the Valle dei Laghi in Trentino.

Literature and science: a perfect pairing

Many authors are fascinated by the world of science. Successful books are often preceded by intensive scientific research. In the novel “Ich bleibe hier” (I’m staying here), author Marco Balzano brings to life the contemporary history of the South Tyrolean Option against the background of the mountain village of Graun in the Vinschgau/Venosta Valley.

Regional development expert Thomas Streifeneder is convinced that books like these can impart lasting knowledge to readers.

With this in mind, he organized – together with Literatur Lana – the international workshop

“Literature & Science” at the end of October 2023 where renowned authors – including Sepp Mall, Oswald Egger, Ivan Senoner and Roberta Dapunt – gave readings followed by a discussion with scientists on how art and science can benefit from each other. The Museum of Nature, the Free University of Bolzano-Bozen and the Romansh Department of the University of Zurich (Rhaeto-Romanic Literature and Culture) also curated two seminars on nature writing and Ladin literature. A conference volume is in preparation.



Innovation from the mountains

At this year’s Mountain Innovation Fair, sustainable projects from mountain regions around the world were presented at the NOI Techpark at the invitation of Eurac Research.

Due to their remoteness, exposure to natural hazards and vulnerability to changing climatic conditions, it has always been important for people in mountain regions to constantly adapt to their environments - demonstrating clearly that challenging living conditions are drivers of innovation.

At the Mountain Innovation Fair held in October 2023, a total of 29 projects for sustainable development and adaptation in the Alpine region, the Carpathians, the Balkans, the South Caucasus and East and South Africa were introduced and discussed. The Mountain Innovation Award went to Mantopi Martina Lebofa from Lesotho for her project “Breaking down barriers by promoting female entrepreneurs in the mohair wool and beekeeping sector”. In Lesotho, women and girls provide for their families and often work for free in agriculture. Because females are predominantly dependent on male family members, child marriages are not uncommon. “Our project supports female entrepreneurs and builds on the local circular economy by involving everyone, from farmers to industry and politics to schools,” explains the award winner.

The innovation fair was organized by the United Nations Environment Programme (UNEP) and the Global Mountain Safeguard Research Programme (GLOMOS), a joint initiative of the United Nations University and Eurac Research. It was financially supported by the Austrian Development Cooperation (ADC).

Flight tests in extreme conditions

The ice tunnel was developed at the terraXcube, in collaboration with the Politecnico di Milano. The unique technology, housed in the main chamber of our extreme environment simulator, expels a high-pressure jet of air and water from a huge metal tube making it possible to recreate the same conditions an aircraft would encounter passing through freezing clouds. Doctoral and postdoctoral students from several institutions, including Free University of Bolzano-Bozen, University of Padua and Polytechnic University of Turin, have been working on a variety of research projects using the ice tunnel. “The goal is to use this tool to conduct tests that enable certifications for drones to fly in conditions currently considered prohibitive,” explains Riccardo Parin, one of the project’s creators. The first tests were conducted by the Swiss Air Rescue Guard on the components of a prototype drone used for searching for missing people in the mountains.



- 35
- is the number
- universities we have
- been collaborating
- with for PhDs in
- 2023.



Above, the ice tunnel used to test the rotor of a rescue drone. This Swiss Air Rescue Guard prototype is equipped with technology that, by counteracting the formation of ice on the propellers, could allow it to fly in prohibitive conditions.

Left, the propeller of a drone after having been exposed to a jet of freezing air produced by the tunnel.



Antarctica, Bolzano

A special suit designed by D-Air Lab was tested inside the terraXcube. The Antarctic suit was designed for scientists working in extreme conditions such as polar expeditions.

In the climate chamber, some of the conditions to which those using the equipment will be exposed were simulated: altitude of 3,200 masl, an actual temperature of -40 °C and a perceived temperature of -70 °C due to winds. The suit's designer, Alberto Piovesan, tested his creation by performing high-intensity fatigue exercises on a treadmill.

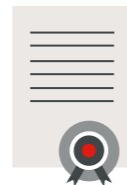
- **More than 180**
- companies and commissioning
- bodies worked with us in 2023.
- These industrial assignments and
- consultations within commissioned
- projects are in addition to our
- funded research projects.
-
- **40%**
- of these companies and commissioning
- bodies are from outside Italy.

A patent for the control of thermohydraulic circuits

Three years after the first submission, our innovative control system for thermo-hydraulic circuits has now been patented. The technology can be used in heating and cooling systems in residential buildings and industrial plants.

In contrast to conventional circuit control systems, which react independently of temperature or flow rate changes, the model-based control eliminates delays due to inertia in the system or interactions between circulating pumps and valves. In this way, high-precision control of temperature and flow rate is achievable.

The invention can be used in climatic chambers and chemical and food processes in which temperature parameters must be maintained with extreme precision.



- **6**
- Eurac Research
- patents are currently
- in force.



An algorithm for efficient ventilation

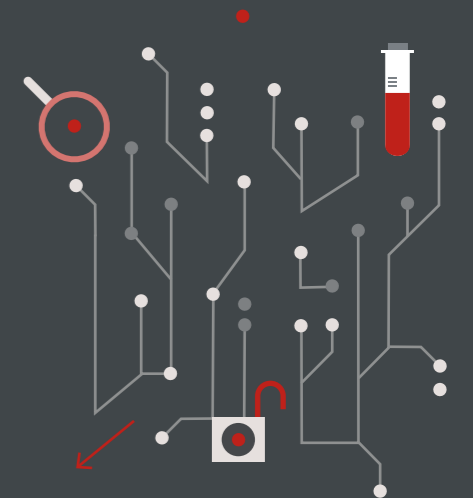
A ceiling fan controlled via wi-fi using an innovative intelligent algorithm that causes the fan's rotational speed to automatically adapt to both the air temperature and relative humidity in a room based on the activity and the amount of people in a room. The algorithm was developed by Eurac Research as part of the H2020 4RinEU project and was then implemented in a control unit by the Vortice company of Milan. Subsequently, Eurac Research oversaw the validation of the algorithm with volunteer groups as part of another H2020 project: Cultural-E – in which Vortice is also a partner. "Ceiling fans are among the most common sources of air movement in buildings. Automatic regulation like this saves energy compared to using an air conditioner while at the same time ensuring, if not increasing, comfort," explains Engineer Francesco Babich, who developed the algorithm.

The experiment fan and control unit in our Façade System Interactions Lab.



New horizons

Open science is the future: it provides free access to research results, methods, and data and facilitates knowledge exchange and Eurac Research's biobank is an emblematic example.



A new picture of Ötzi

Ten years after Ötzi's genome was first analyzed, a research team from the Max Planck Institute for Evolutionary Anthropology and Eurac Research was able to reconstruct his genome much more precisely thanks to improved sequencing technology. In light of the developments we have gained new insights into the Iceman's appearance and ancestry: his skin tone would have resembled that which is common in northern Africa today and as a mature man he would have likely been bald, his genetic makeup indicates that he was 92 percent Anatolian.

The genetic composition Ötzi had in common with the early farmers who immigrated from Anatolia was unusually high in comparison with that of the Iceman's contemporaries, whose codes were used for

contrast in the study. The research team concluded from the findings that Ötzi likely came from a relatively isolated alpine population with little contact to other European groups.

The new findings on his appearance show that until now, our picture of him has been wrong. His skin actually had the same tone we see on the mummy today – until now it was assumed that his long interment in the ice had caused it to become so dark. Additionally, at the time of his death, Ötzi probably did not have long, thick hair, but a sparse crown at most: his genes show a predisposition to baldness, as well as an increased risk of obesity and type 2 diabetes. However, these two factors probably did not affect him due to his healthy lifestyle.

The article with the latest findings from Ötzi's genome, "High-coverage genome of the Tyrolean Iceman reveals unusually high Anatolian farmer ancestry", had the highest Altmetric Attention Score of all Eurac Research articles last year. Co-authors of the publication are Anthropologist Albert Zink, the Microbiologist Frank Maixner and the Biologist Valentina Coia. The Altmetrics index evaluates the influence of research according to how often results are mentioned and shared on the web in online media, blog posts, and other such platforms. Cell Genomics, ISSN: 2666-979X, Vol: 3, Issue: 9, Page: 100377 (2023)

<https://www.sciencedirect.com/science/article/pii/S2666979X2300174X?via%3Dihub>



Publications and Open Science

60 percent of our scientific publications in 2023 were disseminated in peer-reviewed journals. The rest of the total of around 500 scientific publications took the format of books, contributions to conference proceedings and scientific reports.

(Source: Eurac Research internal data bank)



REGENERATING RIVER BIODIVERSITY: A POPULAR READ

One of the articles published in 2023 with a particularly high Altmetric Attention Score (an index that measures the impact of research based on its dissemination in online media) was a vast international long-term study on biodiversity in European rivers. Roberta Bottarin was a co-author. Of around 347,000 articles of a similar age tracked across all journals, not even one percent had a higher AAS. The study shows that the biological quality of rivers is still inadequate in many places but that new measures are needed to further regenerate biodiversity.

The recovery of European freshwater biodiversity has come to a halt
Nature volume 620 (7974), pages 582–588 (2023)
www.nature.com/articles/s41586-023-06400-1

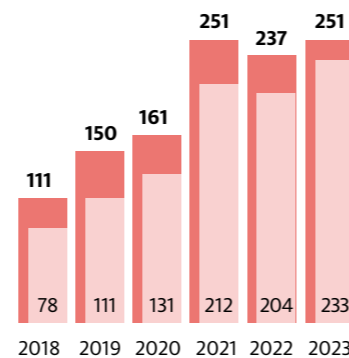
Like most of Eurac Research’s scientific articles, this one was also published as Open Access.

OPEN ACCESS PUBLICATIONS

Compared with last year, the share of articles published in Open Access (OA) increased by more than five percent, from 71.6 to 77.5 percent.



77.5%
of the articles
we published in
2023 were Open
Access



All OA
Gold OA

The graph shows Open Access publications over the years and the relative share of “Gold Open Access,” ones which can be freely accessed from the journals’ website: almost all of our Open Access publications met the gold standard (92.8%) in 2023. (Source: Scopus)

BIA

The BIA (Bolzano/Bozen Institutional Archive) platform is a digital archive that collects not only scientific articles and books, but also other works such as scientific project reports. The BIA serves as both a publishing and distribution platform for all these publications.

You can browse this content here <https://bia.unibz.it>; in 2023, Eurac Research publications contained in the BIA exceeded **9,000** for which there were **almost 20 thousand downloads/file views**.

Open Science

Open Science has many aspects: sharing data and disclosing methods are part of it, but so is the participation of society. Open research experts Maria Bellantone and Liise Lehtsalu share their thoughts.

How does Eurac Research promote open science?

Maria Bellantone: We have had an open access policy since 2018, the success of which is reflected, among other things, in the fact that over three-quarters of our researchers’ peer-reviewed articles were freely accessible in 2023. Since 2021, Eurac Research has also had an open access fund in case researchers have no alternative sources of funding for their publications and books.

Liise Lehtsalu: Eurac Research is a member of the Italian Reproducibility Network, which aims to increase the trustworthiness and transparency of scientific research. The initiative for this came from our



Maria Bellantone



Liise Lehtsalu

scientists. The second Open Science strategy that we have just developed, “Research Data and Source Code Management Policy”, was then able to build on this culture. It is based on the conviction that research data and research software are also valuable results of our work, and it is intended to ensure that data and source codes are managed in accordance with international best practices.

Eurac Research has launched an Open Research Award, who can receive it?

Bellantone: Our researchers who are making science more open. The initiative encourages us to rethink the research cycle and consider where Open Science practices are already in place or where they could be incorporated. Some winning projects of the Open Research Awards 2023 are mentioned in the Activity Report p. 11, 26 and 38

ENVIRONMENTAL DATA PLATFORM (EDP): THE PLATFORM FOR RESEARCH DATA

Created in 2021, the Environmental Data Platform is an evolving research collection that responds to the ever-changing needs of data management and is based on Open-Source solutions. The platform collects heterogeneous data from results of multidisciplinary research projects such as processing from models and data from optical and multispectral sensors as well as IoT devices and from field campaigns. It is a collaborative platform that currently hosts data from about 20 projects involving several of our institutes and centers. Data and code are open and ready to be used even by anyone who can collaborate in maintaining them. The web services and tools provided implement the FAIR principles of data for findability, accessibility, interoperability and reusability.

448
datasets have been provided by
the Environmental Data Platform

EDP data repositories can be cited in scientific articles using the DOI (Digital Object Identifier) that we registered in 2023. One of the results of FAIRness is precisely findability: through the EDP, datasets are exposed and shared widely. One example is ESA’s European observational data portal GEOSS, which republishes data from our catalog, facilitating its dissemination to users in the international scientific community as well as the corporate world.



GETTING THE MAXIMUM FROM EACH SAMPLE

The Eurac Research biobank at the hospital in Bolzano stores the coded samples of 13,000 CHRIS population study participants. The samples, stored up to -197°C include whole blood, red-blood cells and platelets and belong to data sets that are available to researchers worldwide.

Of the 369 applications for data use submitted to date, 96 percent were approved by the Access Committee. Data from the Bolzano biobank has contributed to several large international studies determining the genetic factors that influence the severity of Covid-19 infections as well as using the data to discover new risk genes for kidney failure and to better understand chronic pain. In 2023, Alessandro De Grandi, head of the biobank, and his team received the Open Eurac Research Award for their efforts to make biomedical research more collaborative, more reproducible, and fairer.

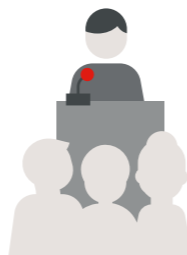
Important Congresses

ANNUAL CONFERENCE OF EARTO: THE EUROPEAN ASSOCIATION OF RESEARCH AND TECHNOLOGY ORGANIZATIONS

EARTO brings together more than 350 organizations involved in research and technology from 32 countries around the world, including renowned centers such as the Fraunhofer and Helmholtz institutes. Eurac Research is part of this association and in 2023, the NOI Techpark hosted EARTO's annual conference for the first time in Italy. The event, which was attended by about 150 people had as its central theme the contribution of research and technology organizations to the implementation of the EU innovation agenda, with specific regard to energy transition. EARTO 2023 not only focused on expansion of technical expertise, but also a radical change in the management of innovation. For Eurac Research and the NOI Techpark, the annual EARTO conference was a unique opportunity to present Bolzano as a reference for research and innovation to an international audience, strengthen its network, and initiate new cooperations.

EUROGEO-WORKSHOP

In October 2023, the EuroGEO workshop took place at Eurac Research and was attended by almost 500 participants from all over the world. Planned as a hybrid event, around 300 participants followed the workshops, hackathons and discussion rounds digitally. EuroGEO bundles and coordinates activities that strengthen the collaboration of the Group on Earth Observation (GEO) within Europe. Discussions included the establishment of the Green Deal Data Space as a European platform for the exchange of geodata and the information derived from it, as well as how interoperability between data-driven models, known as digital twins, can be ensured. The topics covered included climate change, renewable energies, agriculture and the transformation of Europe's mining regions.



- **14**
- scientific conferences and congresses with more
- than 100 participants from
- all over the world held in
- 2023 at Eurac Research.
- By the end of the year, we
- had organized and hosted
- more than 550 events
- with a total of at least
- 18,500 people. That
- number doesn't include
- the people who did not
- have to subscribe to our
- in-person and remote
- events.

Towards sustainable governance

In its 15 years of existence, the “Winter School on Federalism and Governance” training program has created a permanent, cross-border and transdisciplinary network.

Each year, people from different realities encounter each other at the two-week Winter School where academics and practitioners contribute their very different perspectives on multi-level governance and federalism. In addition to lectures, a lot of space is given to practical exchange: with visits to local political institutions, workshops and discussion rounds. This diversity of views is fundamental to the Winter School.

In addition, the Winter School stands out from conventional further education programs in the field of federalism because it takes place in two countries: Austria and Italy. As a joint project of the Faculty of Law and the Faculty of Social and Political Sciences of the University of Innsbruck and Eurac Research, the international project takes place for one week in Innsbruck and the other in Bolzano. The 15th Winter School focused on “Sustainability in Federal Systems” and brought together a total of 28 participants from 19 countries - from Brazil to the Philippines.

PHILOSOPHICAL DISCUSSIONS ON AUTONOMY

Eurac Research opens completely new perspectives with its interdisciplinary series “Philosophical Conversations on autonomy”. In 2023, six events took place at different locations in South Tyrol. They had one thing in common: “Autonomy and Sustainability”. The series for 2024 will follow the theme of “Autonomy and Humor” and seeks answers to questions such as what does psychological research say about humor and life satisfaction? And how do humor and enlightenment fit together?



WHEN RESEARCH AND INDUSTRY TEAM UP

The Multifunctional Façade Lab allows thermal and energy performance of multifunctional façades and envelope elements such as windows and doors, opaque walls, and façade modules to be measured under stationary and dynamic conditions. In 2023, the lab was accredited by Accredia* for its thermal transmittance calculation tests of doors and windows. Thanks in part to this certification, the laboratory has registered an increasing number of contracts with companies over the past year.

Overall, there are now ten standardized tests that we can undertake on behalf of the business sector in our laboratories dedicated to renewable energy and energy efficiency. Eurac Research has a total of 15 indoor laboratories covering an area of almost 4,000 square meters. In addition to these, there are nine facilities which function as outdoor laboratories and external test sites.

*The laboratory is accredited by Accredia, the only Italian accreditation body and performs testing activities in accordance with the requirements of the UNI CEI EN ISO/IEC 17025:2018 standard.



EU-Projects

By and large, the picture is like last year's: we submitted 100 project proposals in 2023, compared to 108 in 2022. However, there are some new highlights for us. For the first time, we are receiving funding from the EIC Pathfinder program (Horizon Europe Innovative Europe). The funding will go to a major research project in the field of climate protection. On top of that, in 2023, we launched more projects than ever before: 47.

As of December 2023 there were 94 ongoing projects, funded through ten programs:

94

10

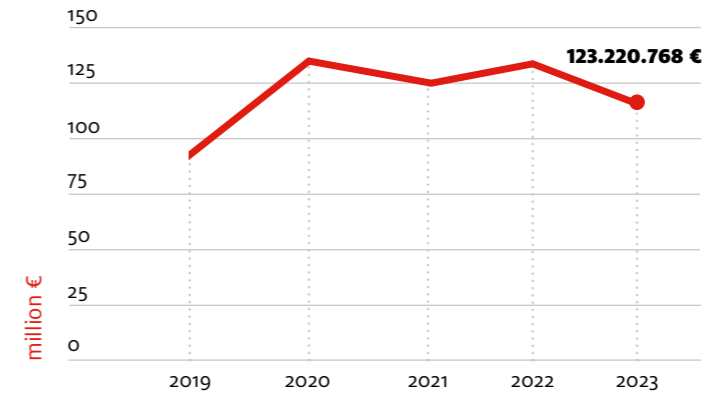
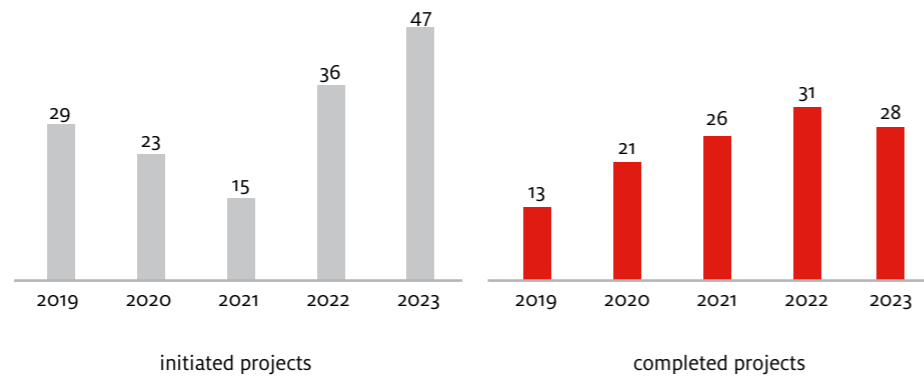
Horizon Europe (25), Horizon2020 (21), ERDF (12), Life+ (11), European Territorial Cooperation (6 Interreg Italy-Austria, 5 Alpine Space, 3 Central Europe), Erasmus+ (5), Joint Programming Initiative (5), COSME (1)

EU PROJECTS INITIATED AND COMPLETED IN THE PAST FIVE YEARS

The number of new projects launched reached an all-time high: 47 in 2023. The average funding per project was about 300,000 euros.



• **>35%**
 • Is the share of
 • new European
 • projects we
 • became lead
 • partners of.
 • 47 projects
 • launched in the
 • year 2023 and
 • 17 of them are
 • coordinated
 • by us.



• **Over 100 million**
 • For the fourth consecutive year,
 • our cumulative budget is in ex-
 • cess of 100 million euros.
 • This is the total amount
 • we administered in 2023 for all
 • the ongoing EU projects that we
 • coordinate: this budget is partly
 • managed by Eurac Research
 • and partly redistributed to our
 • project partners. From the EU
 • projects launched in 2023 Eurac
 • Research received funds of
 • about 5.5 million euros.

ENERGY: A MAJOR TOPIC

Eurac Research manages a particularly large budget for two projects that started in 2023 and are financed by the European Regional Development Fund (ERDF). Eurac Research is the lead partner in both projects:

FAIR – Development of tools and methods for testing, monitoring and controlling the performance of ventilated façades (1,033,949 euros)

SUSTAINHEAT – Sustainable heating systems for the decarbonization of buildings (899,206 euros)

We are also lead partner in a major project in the EIC Pathfinder program:

ZERAF – Adaptive opaque facades to enable carbon-neutral buildings (889,000 euros)

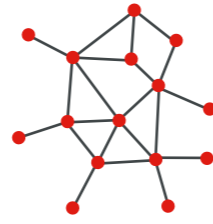
Data as of 31.12.2023 (exported 31.01.2024). Source: internal databases.

NOT ONLY EU

We submitted 50 project proposals for funding from the Autonomous Province of Bolzano, significantly more than in 2022 (26) and 2021 (19). Six projects have been approved so far, five are still in the evaluation phase.

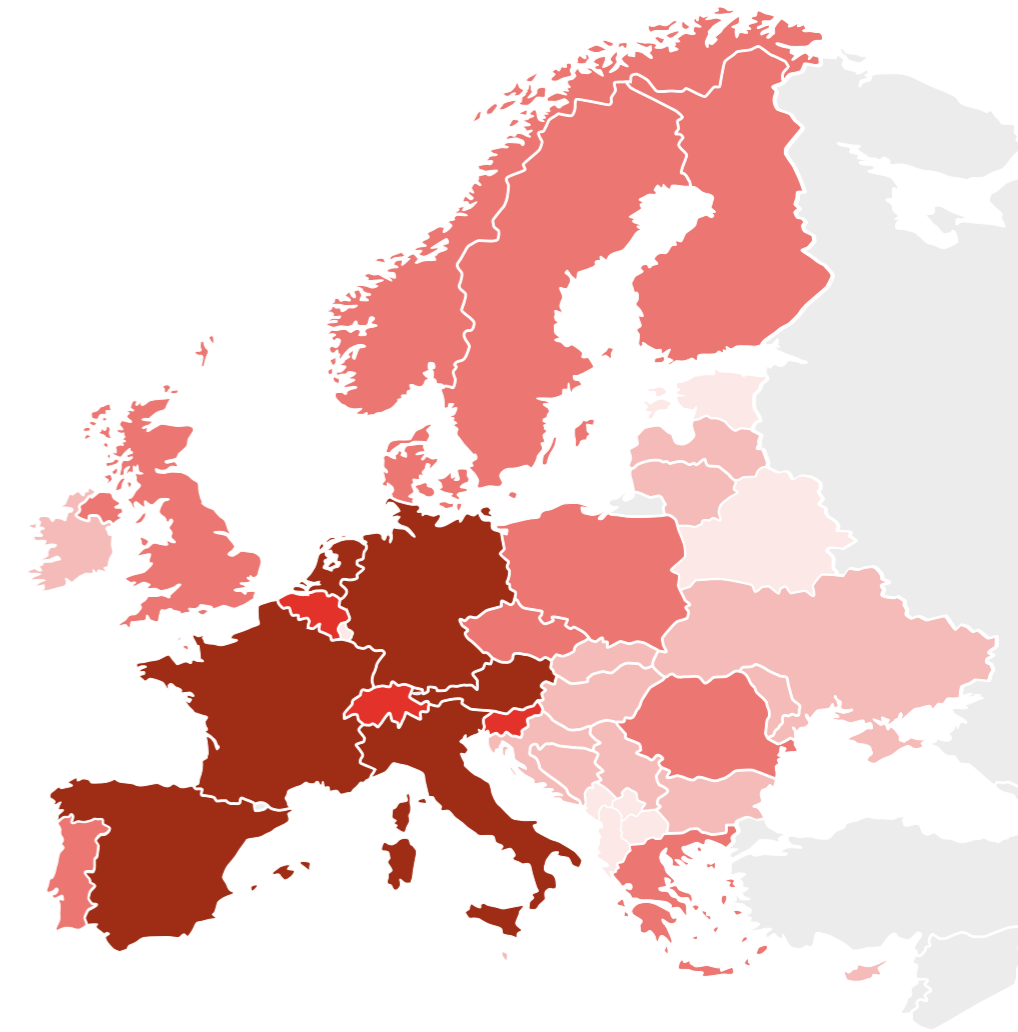
Our network

Our network is expanding, not just with new collaborations within projects and assignments, but also with new horizons at the institutional level. Eurac Research contributed to the founding of the “International Education and Research Alliance” (IERA): a non-governmental, non-profit body, based in Yerevan, Armenia which aims to develop a network of academic and research institutions from Western Europe to the countries of the Caucasus, the Middle East and Central Asia. The entity’s goal is to promote international exchange and collaboration programs which support all partner institutions in achieving standards of excellence based on the common values enshrined in the EU Charter of Fundamental Rights.



More than 1400 partners worked with us over the course of 2023.

- < 3 partners
- 3-10 partners
- 11-30 partners
- 31-50 partners
- > 50 partners



We collaborate with

1,090 partners in research projects



73.1%



18.7%



8.2%

182 companies and other bodies that have commissioned us for research topics.



41.2%



28.6%



30.2%

208 institutions we have collaboration contracts with



28.9%



48.5%



22.6%



international

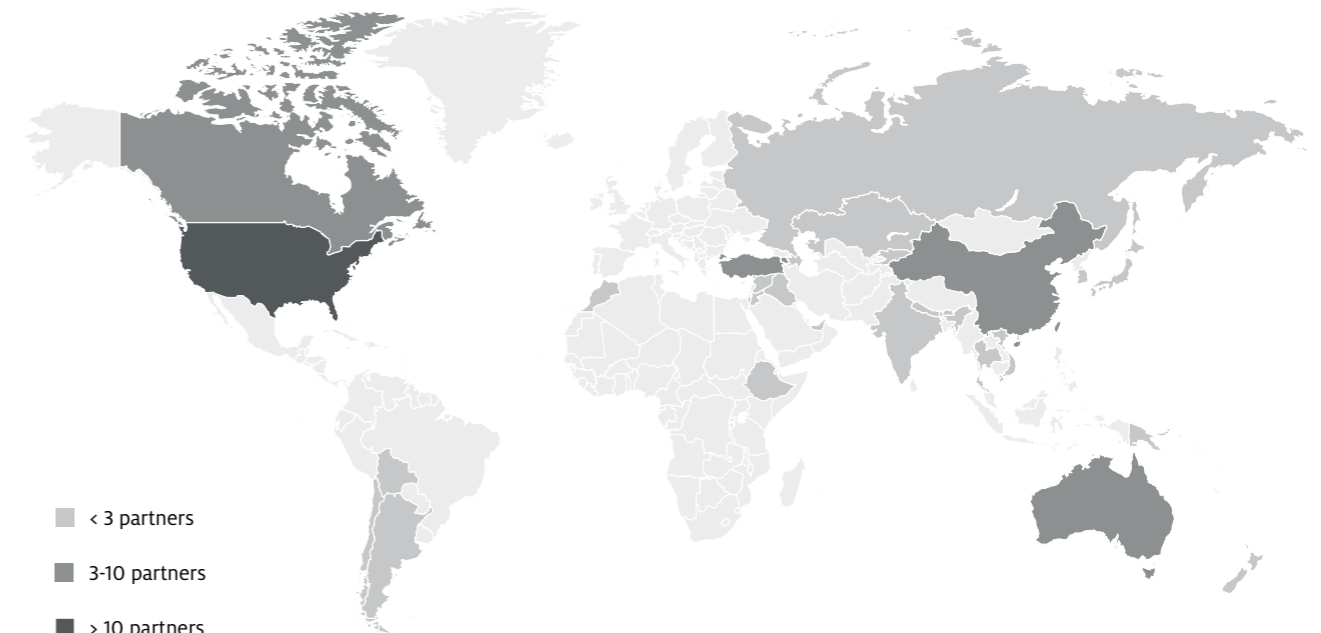


national



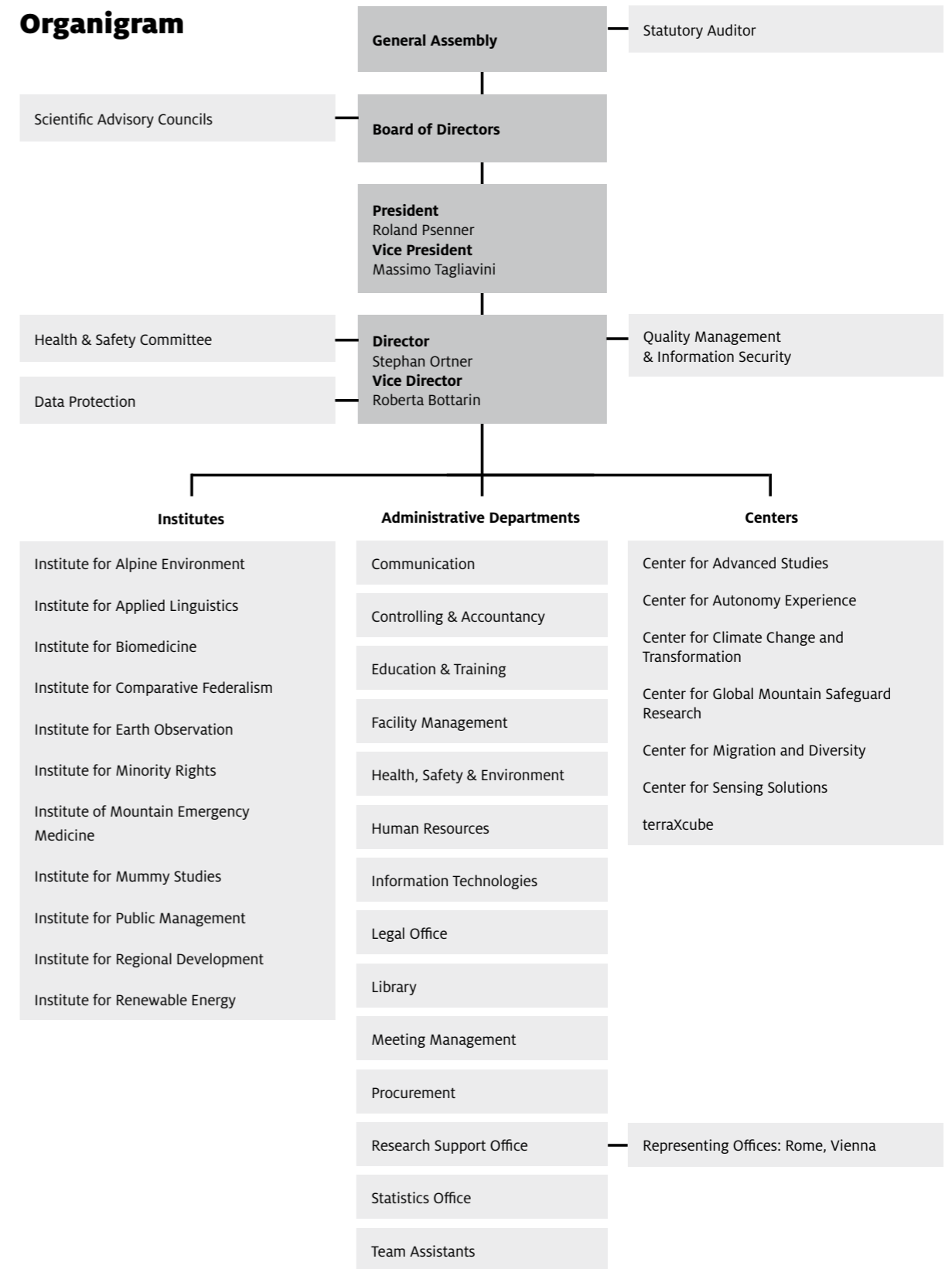
local

Data as of 31.12.2023 (exported 31.01.2024). Source: internal databases.



- < 3 partners
- 3-10 partners
- > 10 partners

Organigram



This is us

Organigram,
People,
Institutes and centers

People: our best resource

There were 99 new hires in 2023, and taking into account those who left us to continue their careers elsewhere, we grew by 45 staff members. 20% of the new hires came from European countries other than Italy and 15% from non-EU ones. Altogether our staff is made up of more than 40 different nationalities who speak more than 30 different languages

COLLABORATORS

654 people work with us

236 have a PhD

52 are carrying out their PhD studies (21 are employees and 31 have joined us on a scholarship)

Eight new habilitations were acquired by our staff, bringing the total number to 24.



Francesco Babich*
Technical physics and nuclear engineering



Leiza Brumat*
Political science



Lukas Egarter Vigl*
Ecology



Martin Lang*
Molecular biology



Frank Maixner**
Microbiology



Marco Mina*
Tree and forest systems science and technology



Simon Rauch**
Anaesthesiology and intensive medicine



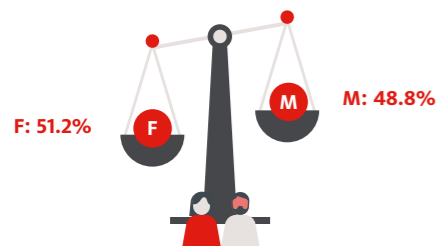
Giovanni Vinetti*
Physiology; Exercise and sport sciences

NATIONALITY



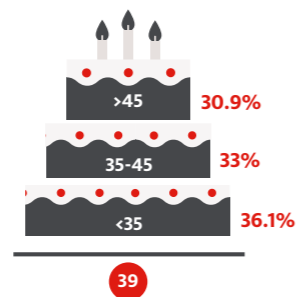
Italian* and Austrian** scientific qualification

GENDER DISTRIBUTION

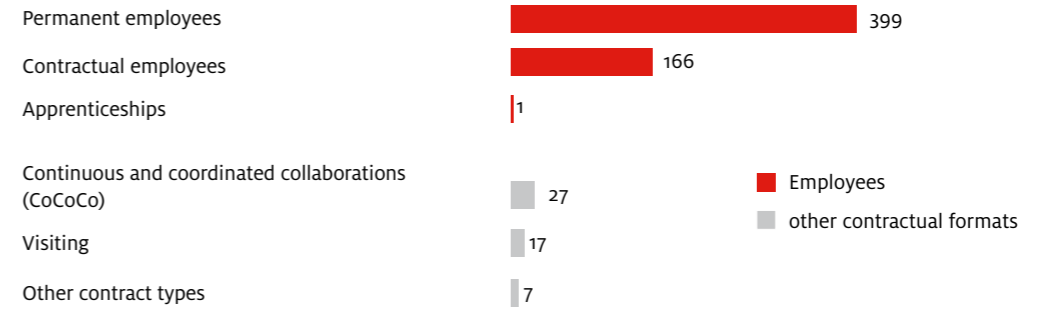


According to the information on ID at the start of employment

AGE GROUPS AND AVERAGE AGE



CONTRACTS



In addition, there are 31 scholarships and 6 research grants

WORK ORGANIZATION



Full time



Part-time

In addition, 86.9% of us have a smart working contract and 0.1% have a home working contract. (The figures refer to employees with paid contracts)



18 children joined the families of our employees. On average, that's a new addition every two to three months.

TRAINING AND LIFELONG LEARNING

Leadership and project management, methodological and research skills, communication skills development, health and wellbeing, and safety: the main topics our 71 internally organized course covered. The courses were held over a hundred training days at Eurac Research's two main sites. There were 664 enrollments, a result that exceeds the total number of our staff. In fact, more of us attended courses than those who didn't. Training on personal data processing and security is also provided for all staff, both through basic and refresher courses. In addition, our Career Center organizes individual counseling modules to accompany staff, including the staff that are leaving Eurac Research to further develop their careers. In 2023, 33 people benefited from this.

Data as of 31.12.2023 (exported 01.31.01.2024). Source: internal databases.

Awards and nominations

Numerous awards were given to our researchers in 2023: appointments to prestigious governing boards, international committees and accolades that testify to the excellence of their scientific achievements. Here are some examples.

Our mountain emergency medicine experts have joined the **Italian Society of Mountain Medicine (SiMEM)**: **Giacomo Strapazon** is the new president and is currently serving a three-year term, and **Giovanni Vinetti** is also one of the board members. Founded 25 years ago, SiMEM promotes studies and initiatives for the safety of those who engage in mountain activities.

Energy expert **Wolfram Sparber** is the new **President of EUREC**, the leading association of European research centers and universities working in the field of renewables.

Constitutionalists **Francesco Palermo**, **Karl Kössler**, and **Jens Woelk** have been confirmed - for Italy, Austria, and Germany, respectively - as **members of the Council of Europe's Group of Independent Experts on the European Charter on Local Self-Government**. The group provides legal advice to the Council of Europe as part of its policy function; the appointments represent a significant recognition of expertise in the field of local and regional democracy.



Our bioethics expert **Deborah Mascalzoni** is now a member of the **WHO's newly founded technical advisory group on Genomics**. She is the only Italian expert on the the 15-member committee. Another advisor on the same board is **Ciara Staunton**, a legal expert who provides expertise on principles for access to, and the sharing of, human genome data.



Linguist **Natascia Ralli** has become part of the technical **committee on language and terminology for the International Standards Organization (ISO)**. The organization is responsible for developing international standards for terminology, translation, interpreting and other activities in the field of multilingual information.



Lawyer **Martina Trettel** was appointed as an **expert to the Trentino Participation Authority**, which supports the municipalities and valleys of the province in the development of participatory processes and monitors their implementation.

140
 • positions on
 • scientific ad-
 • visory boards
 • or boards of
 • directors are
 • held by us. Most
 • of these are for
 • international re-
 • search consortia,
 • institutions and
 • organizations.



WE'RE A GREAT PLACE TO WORK

Eurac Research was awarded the Great Place to Work Italia certification again for 2024. The award identifies companies that offer a quality place to work. The certification which was based on a questionnaire administered to staff at Eurac Research and validated by international standards is an important part of our corporate culture. Our mission is to build a work environment where each person can be themselves.



Physicist **Claudia Notarnicola** and bioinformatician **Christian Fuchsberger** are among the **World's Top 2% of Scientists**, this means that they were in the top two percent of the most frequently cited researchers worldwide. The prestigious list is compiled by Stanford University after analyzing the scientific database Scopus, published by Elsevier. Notarnicola is represented in the "Geological and Geomatics Engineering" category for both her entire career and for the year, while Fuchsberger is represented in the "Genetics & Heredity" category for 2023.



For his research on forest ecosystems and climate change, forest ecologist **Marco Mina** won the **Jury's Special Mention award** in the biennial **Junior Research Award South Tyrol** competition which is organized by the Province of Bolzano/Bozen. This award is given to those who, although at the beginning of their careers, have already achieved important milestones in their scientific fields. (page 24)



Laura Battistel won second place in the **Euregio Young Researcher Awards 2023**. The doctoral student in neuroscience was recognized for her research on human heat perception, which she conducted in collaboration with the University of Trento at terraXcube. (page 12)

Institutes and centers

LEGEND



STAFF

-  Staff members
-  with a PhD degree
-  PhD students (employee contracts and scholarships)


SCIENTIFIC PUBLICATIONS

-  Books
-  Contributions in edited books
-  Journal publications
-  Contributions in conference proceedings



FURTHER SCIENTIFIC OUTPUT

-  Presentations at scientific conferences
-  Contributions to thematic blogs

LABORATORIES AND FACILITIES

-  Laboratories and facilities

ONGOING PROJECTS AND ASSIGNMENTS

-  Research projects
-  with international partners
-  Assignments (services and consultancies)
-  with international agencies

Source: internal databases. Personnel data as of 31.12.2023; other data refers to the period between 01.01.-31.12.2023 (exported 01.2024); All titles were correct at the time of print.

Note: some people work in more than one institute or center; some research outputs are also collaborative.

INSTITUTE FOR ALPINE ENVIRONMENT

Head of Institute
Ulrike Tappeiner

Vice Head of Institute
Roberta Bottarin

Staff



Projects and assignments



Laboratories and facilities*



Scientific Publications



Further Scientific Output



*Ecology Lab, Microscopy Room, Open Air Laboratory Matsch-Mazia

INSTITUTE FOR APPLIED LINGUISTICS

Head of Institute
Andrea Abel

Research Group Leaders
Jennifer-Carmen Frey, Natascia Ralli

Staff



Projects and assignments



Scientific Publications



Further Scientific Output



INSTITUTE FOR BIOMEDICINE

Head of Institute **Peter P. Pramstaller** Vice Head of Institute **Andrew A. Hicks** Coordinator **Vera Amon**

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Scientific Publications



Further Scientific Output



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Scientific Publications



Further Scientific Output



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Projects and assignments



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Further Scientific Output



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Scientific Publications



Further Scientific Output



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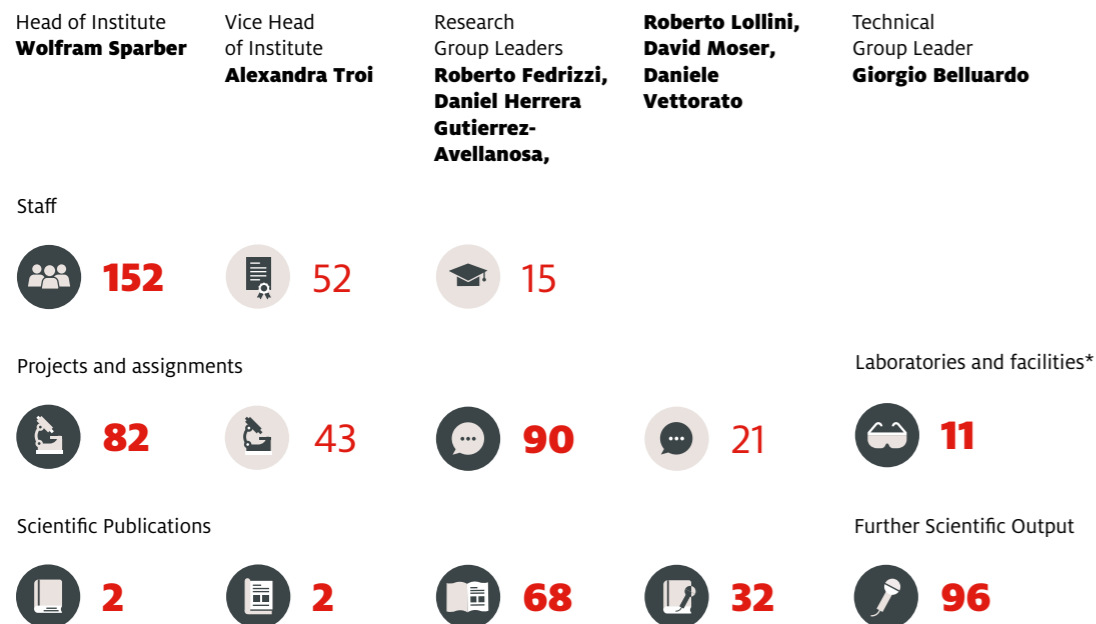
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Further Scientific Output

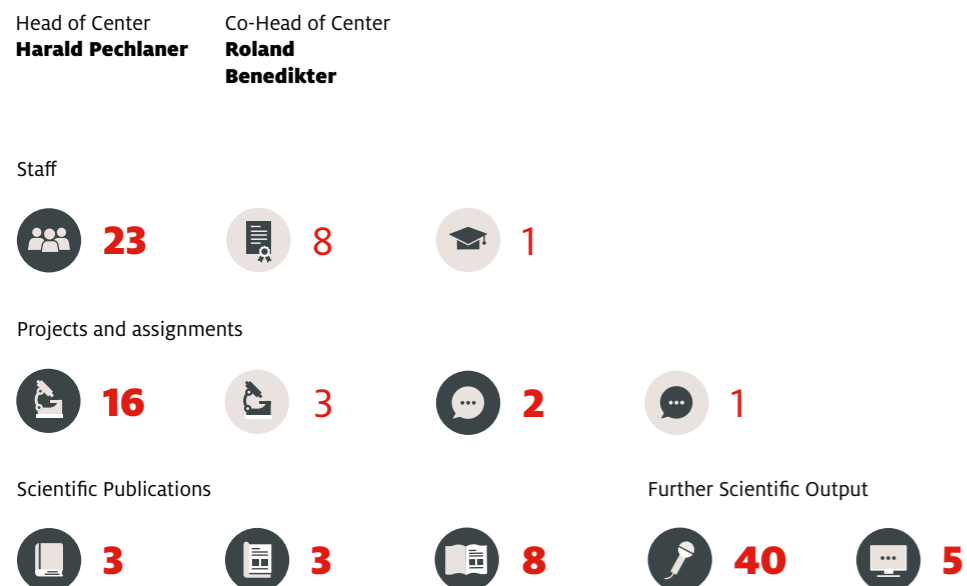


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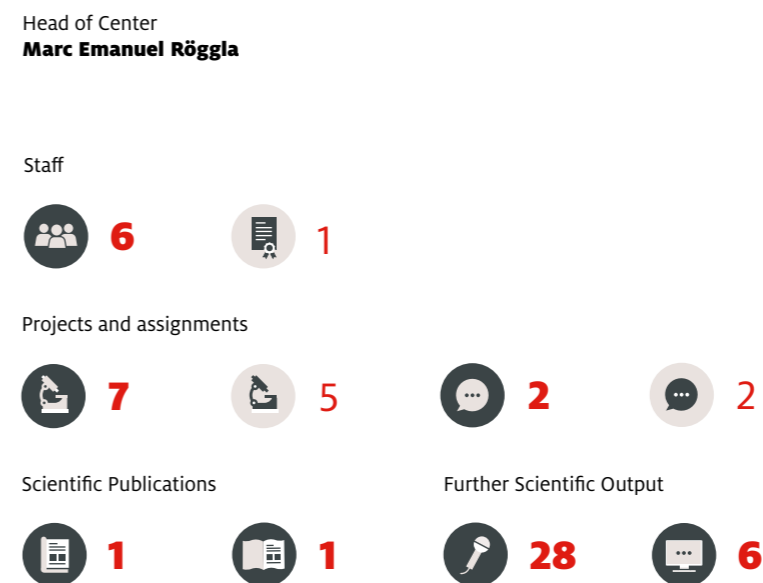


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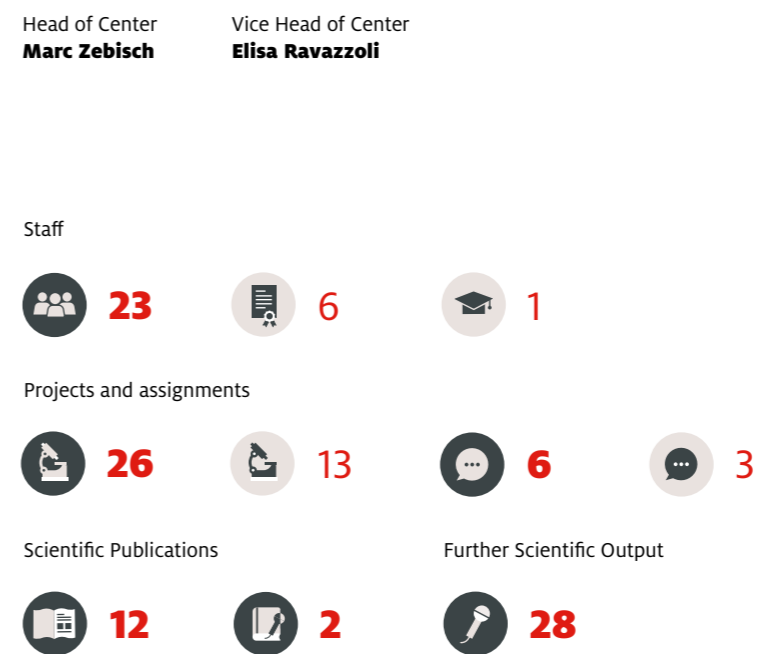
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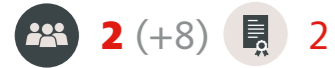
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Global Mountain Safeguard Research (GLOMOS) is a collaborative programme and scientific alliance, which was initiated in July 2019, between Eurac Research and the United Nations University Institute for Environment and Human Security (UNU-EHS) based in Bonn.

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Projects and assignments



Scientific Publications



Further Scientific Output



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Projects and assignments



Laboratories and facilities*



Scientific Publications



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*Extreme Environmental Simulator terraXcube (1785L, accredited according to ISO 17025:2018 by Accredia)

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Scientific Publications



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Finance

Basic financing

from the Autonomous Province
of Bolzano/Bozen

45%

28,098,800 €

Third party funding

55%

33,692,536 €

| | |
|--|--------------|
| Partner funding | 933,483 € |
| Project partner funding (Budget administrated by Eurac Research)* | 31,602,090 € |
| Courses | 461,416 € |
| Meeting management | 298,775 € |
| Sponsorships | 75,000 € |
| Other revenues | 321,772 € |

Total

100%

61,791,336 €

*

Of the budget administered in the financial year 2022 by Eurac Research (31.6 million euros) 24.1 million euros comes from EU funding. Eurac Research manages 17.2 million euros of these EU funds on behalf of EU project partners. The total budget also includes 3.4 million, which Eurac Research acquired primarily within the framework of the "Research Offensive" of the Autonomous Province of Bolzano/Bozen.

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Activity Report 2023-24

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