



20-21 October 2023



**Forum Biella
Creative Cities
2023**

Values and culture of water
and environment



With the support of:



ASSOCIAZIONE
BIELLA
CITTÀ CREATIVA



CAMERA DI COMMERCIO
MONTE ROSA LAGHI
ALTO PIEMONTE



In collaboration with:

Ministero dell'istruzione e del merito
USR Piemonte - Ufficio X Ambito
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Organized by Biella, UNESCO Creative City since 2019 for crafts and popular art (Crafts and Folk Art), the Forum "Value and Culture of Water and the Environment" is an opportunity to delve deeper into the themes of the cycle of water. In particular, those linked to environmental fragility, hydro-geological risk, climate change, soil impoverishment, urban management, post-flood reconstruction, induced process phases such as energy, integrated water services and water management.

Italian and international experts will discuss these topics together with representatives of organizations, institutions and companies involved in the development of strategies and actions aimed at sustainability.

The representatives of the UNESCO Creative Cities will discuss these issues by explaining the actions implemented with the awareness of the recognition of creativity as a strategic factor of its sustainable development from an economic, social, cultural and environmental point of view.





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Welcome



CLAUDIO CORRADINO
Mayor of the City of Biella



CRISTIANO GATTI
Vice President of Organo di indirizzo Fondazione CRB and Città Studi



ALESSANDRO CICCIONI
Vice President of C.C.I.A.A. Monte Rosa Laghi Alto Piemonte



CLAUDIO CORRADINO – Mayor of Biella

CLAUDIO CORRADINO

Greetings to all our valued speakers and to the children from the schools of Biella who have joined us at our second Creative Cities Forum and are eager to listen.

Water, the main theme of our meeting, and Biella constitute an enduring combination that has profoundly characterised the economy of the area; our textile culture was born here because we have water that is particularly useful and suitable for washing wool.

In fact, the water of this area has a pH close to neutral and, thanks to this, historically a very high quality product has been obtained – one that launched the Biella area into the world. Even today, we are world leaders with some of the most beautiful fabrics.

The Biella 2023 Forum “Value and culture of water and the environment” brings us back to the fundamental role that water has had and, at the same time, to climate change – to the progressive rise in global temperatures with all the consequences that reverberate on the water cycle including the rise in sea level. The relationship between land, climate and environmental sustainability is therefore important.

Addressing the issue of sustainability in environmental, economic and ethical terms requires maximum collaboration between all protagonists. Working with the aim of cultural change that is capable of impacting citizens’ consumption and way of life. Aligning ourselves with the European and global vision of water as a resource increasingly needing to be protected and valued.

Therefore, the two days of the Forum have the objective of building new relationships and studying the best practices to deal with climate change so that the Biella community can equip itself with control tools so as not to be caught unprepared.

So I wish everyone a productive conference and thank you for being in Biella.

CRISTIANO GATTI

Thanks and good morning everyone.

I bring greetings from the President of the Cassa di Risparmio di Biella Foundation, Dr. Michele Colombo and from the new President of Città Studi, the engineer Ermanno Rondi.

The Fondazione Cassa di Risparmio di Biella played a fundamental role in Biella’s candidacy project as a UNESCO Creative City.

The drive to obtain fundamental recognition is combined with the objective of planning sustainable development strategies. Commencing from a path of awareness of our heritage, of our know-how and involving entities of differing nature as well as our citizens.

The candidacy process, which was started and developed within the Foundation, thanks to the intuition of the previous president Franco Ferraris, was a great process of territorial sharing. A widespread communication campaign involved the Biella area for a year, creating even more networks that remain active today.

By focusing on initiatives co-planned by numerous local authorities,

which then became part of the application dossier, creating a positioning strategy for the city and its territory centered on valuing, not only creativity and textile excellence, but also the history and uniqueness of our province.

Thanks to UNESCO recognition, we have seen the evolution of many positive developments.

Today, for example, we are in Città Studi and we should remember the twenty-year agreement with the University of Turin, signed and supported not only by the Foundation, but also by the City of Biella. It led to the creation of a master’s degree course, in English, dedicated to “Cultural Heritage and Creativity for tourism and territorial development”, for which numerous students from all over the world are enrolling. Extraordinary added value that enhances all our potential.

This degree course was presented on the occasion of the previous Forum in 2021. It aims to respond to the need to train professionals with a highly interdisciplinary preparation in the cultural tourism sector, based on the valorization of cultural heritage and creativity as drivers of development of the territorial and tourism system. Also, with a view to sustainability and integration with environmental and natural heritage.

Still in the wake of Biella Città Creativa, the Foundation itself has placed the objectives of the United Nations 2030 Agenda at the centre of its planning, involving young people and school children with the project “Project manager for a day”, included in “Muse on the blackboard”. Through the building of a territorial observatory, it aims at planning and targeting growth that is sustainable from an environmental, social and economic point of view.

In short, UNESCO is a valuable asset for the entire territory that requires protection and reinforcement.

ALESSANDRO CICCIONI

I bring greetings from the Council of the Chamber of Commerce, of the Committee and in particular our president Fabio Ravanelli.

In the forthcoming days, we will address the theme of water from the point of view of sustainability, its use, its management and its conservation.

I thank the distinguished speakers who will take turns during this Forum bringing their authoritative contribution and I would like to thank in particular the trade associations, employers’ associations and companies present in the area that will take turns bringing their testimony to the discussion.

The Chamber of Commerce is the home of businesses and they are, in my opinion, those that set out all the requests and suggestions that come from the scientific and academic world.

I therefore wish everyone good luck in their work within a climate of open-mindedness – free from ideologies and populism.



BARBARA GREGGIO - UNESCO and Tourism Councillor, City of Biella



[Introduction]

BARBARA GREGGIO

Our Forum is part of the international Creative Cities programme, in collaboration with the National Commission for UNESCO, aimed at making creativity and the cultural industry the centre of development plans at a local level. Creative Cities are committed to development, the exchange of good practices and encouraging citizens to participate in cultural life, integrating culture with sustainable development policies.

Today we are addressing the important issue of water, connected to the more general issue of the environment.

We are here to adopt a cultural change. We want to impact consumption patterns and lifestyles. We want water to be a resource that is increasingly valued; it is no coincidence that the UN celebrates World Water Day every year on March 22nd.

We must also rethink investment in the water sector in terms of resilience, tariffs and environmental impact. Experts and representatives from the world of water, academics, and important representatives of entrepreneurs will discuss what we as administrators face every day through Green Public Procurement.

In Biella we focus strongly on sustainability, on maintaining our textile and training traditions, paying great attention to technological innovation and research. We are applying the new UN Greening Education project which features a type of education that enhances the issues of the climate emergency.

Within the spaces of the Forum, we have dedicated a photographic exhibition to Namibia as evidence of the cooperation between the two countries and for the development of the municipality of Keetmanshoop which Biella supports in training and mentorship for its future registration in the UNESCO Creative Cities Network.

This African state, with 2.6 million inhabitants, is considered among the driest in the world. From 2013 to today, a national emergency has been declared four times due to water scarcity; 83% of rainwater evaporates and only one percent remains available for groundwater recharge.

This Forum is an opportunity to delve deeper into issues related to environmental fragility, also in preparation for the tenth 2024 World Water Forum to be held in Bali. It connects perfectly with

the programmes of the Alpine Convention that the City of Biella embraced in 2021, obtaining the title of Alpine City of the Year.

Biella is ready and we want to face this great challenge together because it can only be won with all the cities in the world. Today we are no longer alone.

MARCO MEROLA

Only 3% of the water on the planet is potentially drinkable. Of this, approximately 70% is used in agriculture, 20% is used in industry and only 10% serves our daily needs.

In the coming years, we must expect more and more droughts, and fewer and fewer people will have access to the planet's drinking water. On the other hand, we will suffer increasingly devastating atmospheric events due to rising temperatures and more general climate change.

The last 20 years have been the hottest years experienced by this planet since temperature measurements have been recorded. The glaciers are melting at great speed but they are our water reserve, the water bank for our future.

Daily behavior is important. We Italians have an average per capita water consumption of around 220 liters per day compared to the already very high European average of 165.

There are now more than 8 billion people on the planet, in 2050 we will probably reach 10: we must all eat and drink and there should be water for everyone. It is therefore time to start working towards changing our ways of living.

A strategy identified at an international level is Climate Change Adaptation which combines adaptation with mitigation. We must reduce gas emissions into the atmosphere as much as possible in hope of reaching the net zero emissions situation.

This is the challenge we can no longer escape and the Biella Creative Cities Forum 2023 is an important step forward.



BARBARA GREGGIO
UNESCO and Tourism
Councillor, City of Biella



MARCO MEROLA
Journalist and scientific
correspondent



GEORG KASER
Mountains in the Climate Change - The Physical Science Perspective

I shall focus on the cryosphere by referring to the work of the Intergovernmental Panel on Climate Change of which I have been a member since 2003.

Climate change is happening very fast because, in contrast to past epochs, we are no longer seeing fluctuations but rather peak increases in temperatures that are now occurring: we have changed the climate situation, reaching levels never seen in the last 2000 years.

The 1.5 degree increase is no longer a valid reference point because we have now reached 2 degrees, possibly more, and temperatures reflect the state of the system as a whole.

By changing the conditions of the atmosphere, we have increased the greenhouse effect and an enormous quantity of energy has been produced, 90% of which is in the oceans. A third of the rise in ocean levels is due to this.

The melting of glaciers and the detachment of the polar ice caps are caused by this phenomenon. From 2006 to 2015, the mass of glaciers decreased and this had repercussions on global sea levels.

In mountain regions with small glaciers, we are losing our daily water supply and in most areas snow cover is decreasing.

We have little time to counteract this: the temperature has increased and even if in the next twenty years we will not explicitly see large differences, from 2060 onwards the situation will worsen in a shocking way.

If we put all the world's glaciers together and stopped at the 1.2 degree rise level we still would lose 40% of all the world's glaciers as sea levels rise and this will get worse as the temperature rises further. Just 1 kg of CO₂ could reduce a glacier's mass by 20 kg and travelling 5 km with a car produces 1 kg of CO₂.

We are facing a significant rise in sea levels. Even if we stopped this climate crisis today, by 2100 the level would increase between 1.5 and 2 metres, and from 3 to 15 metres by 2300. We are naturally talking about a trend.

We will see a very evident change in mountainous areas: landslides, avalanches, increased floods and in the future a change in the communities' behavior and way of living.

At the same time we will have an increase in precipitation along with periods of drought. A lot of water in a very short time will cause catastrophic effects.

We have to do something to reduce greenhouse gases fast. We have to do it quickly; we have 5-10 years to make the change.

NATHALIE MORELLE
The Alpine Convention as a framework for sustainable water management

The Alpine Convention was established in 1991 and brings together all the border countries of the Alpine region.

This has allowed us to exchange much experience, best practices, and it is actually the collaboration between States that is the fulcrum of our Convention. It is a cooperative relationship with the Alpine City of the Year Association, in which Biella is very active.

The Convention was created around a reference framework and guiding principles, as well as protocols that deal with various Alpine issues but there is no real protocol on water.

The Alpine Convention has decided to touch on issues at a more transversal level, with specific respect to water, placing the tools available to governments at the centre.

Within this reference framework, the need to protect the environment as a whole is affirmed and, consequently, water management within the Alpine arc is also taken into account.

The Alpine Space project, for example, represents a very important observation point, especially for rivers and streams.

It can be seen that the situation in the Alpine arc is not the best, very different from that of previous decades.

Precipitation is a phenomenon that is undergoing significant change, in turn affecting the reference models to which we are accustomed.

17% of the surface of the Alps is suitable for infrastructure and human life. When we talk about water, we are referring, for example, to energy and drinking water.

As regards, for example, hydroelectric energy, there are many projects within our network that focus on energy enhancement. Energy supply is a fundamental aspect, especially within our Convention. We need to increase the production of renewable energy but, obviously, we need to maintain a very delicate balance. We need to create small hydroelectric power plants that have a positive impact at local level.

There are some interesting activities connected to water management, and these are the 2050 objectives: safe water, water management, drinking water; all are channels that we are trying to activate not only with the work of experts but also with the collaboration of the cities that are part of the Association.

I would like to conclude by underlining the fact that the Alpine Convention is a very important and fundamental observatory for protecting and enhancing not only natural resources, including water, but also cultural resources.

FABRIZIO ERBETTA
Management of the water system

I would like to present some results that have emerged from the work of my research group and which concern above all the topic of public utilities, touching in particular on the topic of water. The drought issue is certainly serious and puts pressure on upstream water systems.

If we combine the effect of drought, i.e. the lack of water resources upstream, with the problems of network losses downstream, we can understand how very strong pressure is created on water systems. They lose resilience and so it becomes evident it is necessary to implement measures that can correct this path. It is also necessary to make significant investment to intervene on the reduction of water loss, representing on average 40% of the resources injected into the network.

The water sector is made up of three phases: a phase of extraction from the environment and purification, followed by the phase of collection through sewer systems and, finally, the treatment of waste water for its return to the environment.

What also needs to be done from a legislative point of view in Italy is to achieve an integration of these phases with managers who simultaneously deal with the three phases for the exploitation of the integration economies. We call these economies of scope but need to also exploit economies of scale.

The water must be managed carefully and should not be wasted in transit from the point of collection to the point of distribution to the taps and in the subsequent phase of the final treatment. Network losses, as I was saying, are an element that combines with the environmental problem of drought to create great pressure on water systems.

There is a sustainability discussion on the agenda of policy makers, especially regarding the water resource which, as has been said, is scarce and which should be administered according to principles of prudent management. However, the Blue Book, a publication which reports the data of the integrated water supply service, tells us that in 2020, on average 40% of the 24 billion cubic meters injected into the network are lost along the passage from collection to treatment.

The environmental objective of safeguarding water, including the reduction of network losses, is an objective that should be incorporated into regulatory policies: the measurement of service performance should take into account, in addition to management cost-effectiveness, the ability to safeguard this scarce resource.

Another aspect that is useful to highlight is that of economies of scale, that is, an element that serves to stimulate us to broaden the scope of a water network management company, through merger operations perhaps between small operators which could stimulate the recovery of latent inefficiencies both from the economic point of view, therefore of cost recovery which can be translated into a low tariff at user level, and from the environmental point of view through a better ability to develop and plan investments which help to contain network losses.



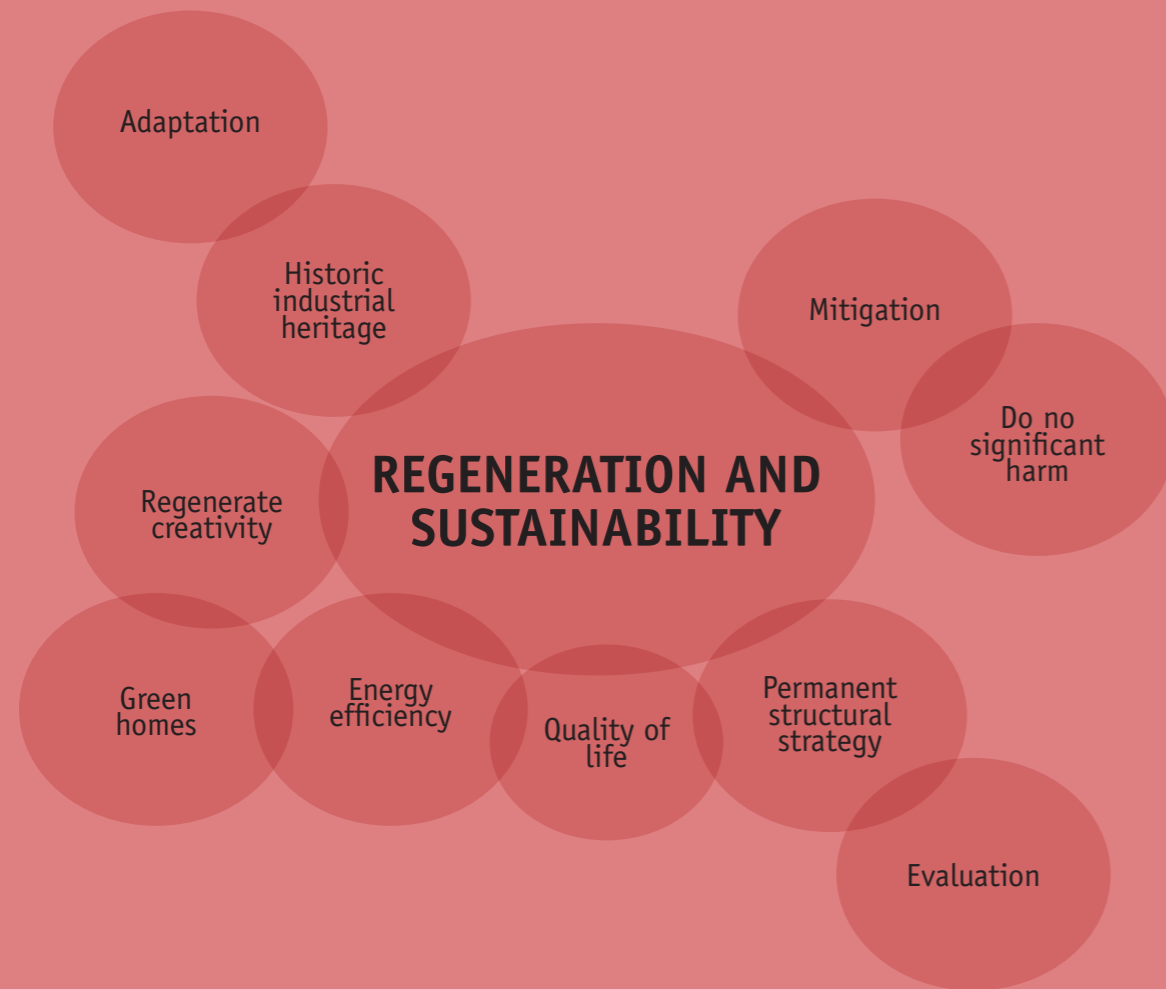
GEORG KASER
Professor of climate and cryosphere research
University of Innsbruck -
Member of the
Intergovernmental Panel
on Climate Change



NATHALIE MORELLE
Senior Executive
Officer - Permanent
Secretariat of the
Alpine Convention



FABRIZIO ERBETTA
Associate Professor
University of Piemonte
Orientale



The concept of sustainability applied to the transformation of cities and territories inevitably intertwines with the principles of regeneration in completing its purpose.

This entails a further assumption of responsibility which requires rethinking the way in which we design, build and intervene in the transformation of the city in adherence to the principles of sustainability, social inclusion and the protection of ecosystems.

Climate change imposes awareness of an ever-increasing responsibility. The new spirit that must characterize the role of architects in the field of this global challenge involves knowledge of the effects that will be produced on communal life through the transformation of land. It requires coherent actions that will have to herald a new structure of cities and a rational and sustainable use of resources.



CRISTINA NATOLI

The regeneration of historical industrial heritage must consider various aspects related to the general theme of what to do with the elements of the industrial archeology panorama.

Among these aspects, for example, there is that of reclamation costs.

Regeneration is of great importance when used in the challenge for sustainability. We need to stop building everything; regeneration and reuse must be our goal; we need to think about the spaces we already have available in terms of the challenges facing cities.

In this context it is necessary to refer to the PNRR in which measures are envisaged that finance the reuse of industrial heritage. A specific measure was developed by the General Directorate for Contemporary Creativity of the Ministry of Culture to encourage the regeneration of creativity within these spaces.

In June 2022, The AIPAI (Italian Association of Industrial Archaeological Heritage) carried out the second edition of the General States of industrial heritage. From this, it emerged that Italy is extremely fertile due to the regenerative versatility of the industrial heritage itself which, as discussed, maintains its value as a place of production.

GELSOMINA PASSADORE

Regenerating the building stock and improving its energy efficiency is an indispensable objective for the ecological transition. The EU "Green Homes" Directive aims to reduce harmful emissions by 55% by 2030 and reach zero emissions by 2050. It could have a strong impact on cities where there were almost 1.1 million residential buildings built between 1946 and 1989 that require urgent redevelopment and regeneration works.

The actions envisaged by the Directive must be part of a broader strategy that takes into account historical urban fabric. It intervenes on building heritage as part of urban regeneration policy, creating conditions for greater integration of activities, improving people's quality of life and maintaining firm the principles of environmental, economic and social sustainability.

The National Council has proposed to the Senate Environment

Commission the establishment of a Control Room with all institutional and government bodies to coordinate regeneration intervention, avoiding the duplication of decision-making centers.

Urban regeneration must be a structural and permanent strategy, with integrated and sustainable intervention. Citizen participation is essential to ensure the achievement of objectives and, for this reason, we are promoters of participation processes

Regeneration plans must also have the support of a reward system, fiscal incentives including the possibility of using a credit transfer system.

VITTORIO PORTA

The Itaca protocol (Istituto per la Trasparenza negli Appalti e la Compatibilità Ambientale) is a system for evaluating the energy and environmental sustainability of buildings which was initiated at the beginning of the 2000s, following an agreement between regions. It serves to effectively evaluate buildings based not only on energy efficiency but on a whole variety of parameters.

5 elements are evaluated: the quality of the site, the consumption of resources, the environmental loads, the quality of the indoor environment and the quality of the service.

This protocol, originally created for residential buildings, was later extended to commercial, tertiary, industrial buildings, schools and hospitals. This is not a mandatory protocol but it is important to understand how sustainable a building is or what must be done for it to become so.

There is another interesting question to analyse: the so-called DNSH (Do No Significant Harm). A principle of environmental conservation, divided into six evaluation criteria with a view to verifying that the intervention being carried out does not create environmental damage. It is a criterion, mandatory for those who intend to participate in PNRR tenders, made up of six indicators: climate change mitigation; adaptation to climate change; sustainable use for the protection of water and marine resources; circular economy including waste prevention and recycling; prevention and reduction of pollution and the protection and restoration of diversity and ecosystems.



CRISTINA NATOLI
Board Member of AIPAI



GELSOMINA PASSADORE
National Council of Architects
PPC



VITTORIO PORTA
Order of Architects PPC



REINHOLD MESSNER - Mountaineer, explorer, writer

REINHOLD MESSNER

I would like to talk about traditional mountaineering, or what the approach to the mountains means to me. My mountain. I was born in the Dolomites, in Val di Funes, and I spent my childhood there thinking that the world was as big as the valley in which I lived.

I was born during World War II; we were a large family with nine children. It was an incredible job for my mother to bring us up. I was the second child with an older brother - the elders took on responsibility for the youngsters, otherwise my mother would not have been able to look after all those children. Here, in this world in which I grew up, I experienced the mountains; when I was just 5 years old my father took me on my first 3,000 metre climb and there I began to understand what a mountain is. But the charm wasn't in reaching the top. The charm was in returning to the valley floor, from where we had started that morning.

The return was very strange. Looking up at where I had come from during the day, I marvelled at my achievement. Could I really have climbed so high and come down? Looking up, I experienced the joy of all the effort. For me, the Dolomites were the world in which I lived for twenty years, but my dreams got bigger and bigger. I didn't want to climb mountains on just the easiest routes.

My brother and I raised the difficulty - to much larger rock faces and we went with just the equipment we had at the time: hemp rope, a few nails made by the blacksmith and our jackets not made of Gore-tex but of very simple fabrics.

My first love was rock climbing, extreme rock climbing. To climb the rock well you need to have the ability to concentrate, also have the physical strength to hold on to very small holds and you need to be agile. However, the most important thing is concentration: you have to forget everything else; you have to concentrate so that your fingertips become rock themselves; it means that there is identification between the body, at least those parts that touch the rock, and the rock itself.

At 25, my brother and I were invited to an expedition to the Himalayas. We couldn't even dream of being part of an expedition or organising it ourselves because we didn't have the means. That expedition was very large, we were 18 climbers. Big budget. We went there with 9 tons of material and we were on the face for a total of 40 days, climbing, descending, climbing again. In total, we were away from home for three months. We were climbing the highest face in the world, the Rupal face of Nanga Parbat, 4,600 metres high.

The first 100 years of mountaineering, which started in 1800, were those of conquest: mountaineers went to conquer the peaks. In the '70s, after all the high peaks had been conquered, a new generation of mountaineers returned to climb the difficult routes and the big faces.

In 1978, 8 years after the Rupal face, I set off with just 60 kilograms to climb the same mountain. This time, along a new route without a companion. I set off with a small tent in which I had to live for ten days. Luckily, at the first bivouac, I tied my tent to an ice screw under the overhang, because the next morning while I was making tea, there was an earthquake. All the unstable ice and even the snow came down. I was still in my tent as the avalanches went over my head, but nothing happened to me. After that, the wall became



smooth and clean, there was no longer the risk of other falling material. In three days I went to the top. With this solo climb, which was the first 8,000 metre solo climb from the base to the top, mountaineering changed definitively, especially at high altitudes: now we no longer talked about conquering the summit, even the route difficulty was no longer the centre of our interest; what interested us was how you got up there.

How do we face the mountain? We go freely to places, where death is a possibility, and we try not to die. The art of great traditional mountaineering comes in avoiding death and it is only an art, because death is a real possibility.

It is clear that this activity, this activity of ours, is the conquest of the pointless. There's no point climbing a mountain or crossing Antarctica. So why is it done? Because we are capable of making sense of what we do. Something might appear to be pointless but it can be the most important thing for me. I had this ability to make sense of things that others rarely did. I placed meaning in them, meaning doesn't come out of thin air. We put meaning in our lives, in our projects. Those who have the ability to identify with their project, those who carry it to fruition, will achieve a certain joy in the end.

Art is not about dreaming, art is about having ideas. Projects are born from these ideas and then they are realised. Now it makes no sense at my age, 80 years old, to review everything I have done and draw the joy of life from there. No, it's too late. Today I seek new challenges, new possibilities, new ways to express myself and I will do so until the end of my life.

In 1978, after climbing Everest without an oxygen mask with Peter Habeler, I knew that all the eight-thousanders were theoretically possible. It must be taken into account that even modern medicine was of the opinion that Everest could not be climbed without oxygen.

But as we ascended we saw that, at least for us, it was barely possible to do so. It's so much more tiring without a mask. The mountain also changes; the mountain grows and the going becomes slower and slower. In the end we have to take a step and then a step to take a breath, and then another step. It becomes a mental debate: to arrive or not to arrive.

After Everest, I started studying the myths of the Himalayas. Even in the Alps there were myths and legends that later disappeared.

In the Himalayas, the local population thinks that the gods dance in the high mountains. And in this there is truth because the gods are nothing other than natural forces.

After a lot of climbing, I left for Antarctica not for lack of other challenges, but out of nostalgia for wanting to do so. For wanting to go where others had not yet gone. I set out to cross the poles: first I went to the South American side towards the South Pole and then to the other side, up to the New Zealand area. In 92 days, we crossed a world so incredibly large that we had the sensation of living on another planet.

Most of the Earth's ice is concentrated in Antarctica, 86% of the ice still remains there today. It is quite certain that it will not melt for thousands of years, if not then only a small part. However, elsewhere in the high mountains, the ice is being lost.

In a few decades, we will have such a lack of ice that it will change not only the appearance of the mountains but also the balance of the waters which are the basis of all life.

It is very important to understand that this is due to global warming which is a consequence of us raising temperatures over the last 200 years by using cheap energy to develop our industries.

Two years ago, with my wife Diane, we created a Foundation to help the mountain people of the world, especially in bringing schools to areas where the State cannot intervene. And we also founded a start-up called Messner Mountain Heritage to communicate and transmit the values of traditional mountaineering: I want to bring my heritage wherever there are mountaineers so that what mountaineering is to me, traditional mountaineering, is not forgotten. It would be a shame if we lost the opportunity to experience the great wilderness. Direct experiences between human nature, on the one hand, and the nature of the mountains, the poles, the deserts and 'the last wild places', as the Americans say, on the other.

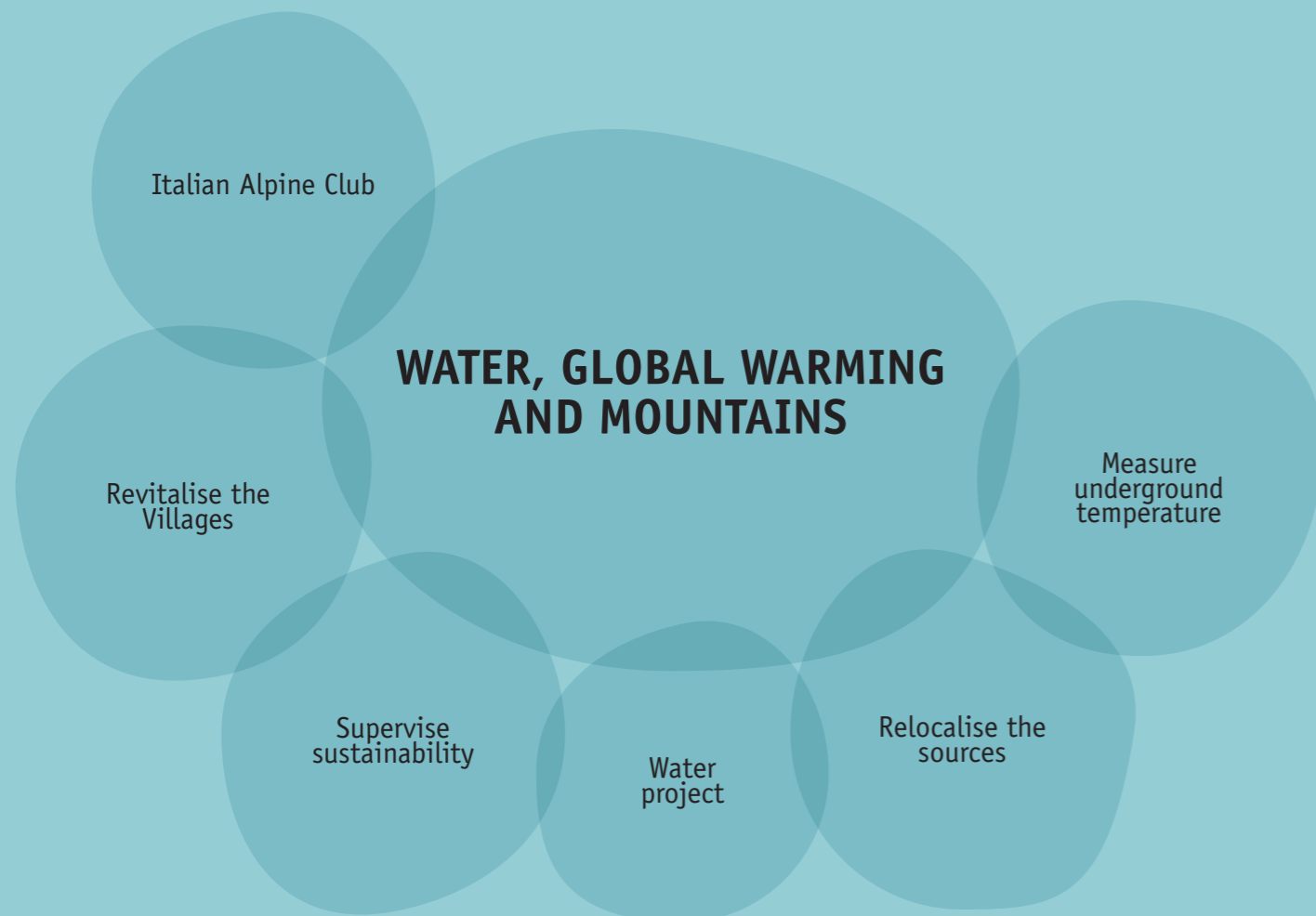
I then had the opportunity to develop a museum on the mountain with relics, texts and art; a large museum project that is not yet completely finished. I hope I have enough energy and I hope I can complete it next year.

With local people I have a relationship of great respect and desire to enhance their ways of life, and those of our communities. For this reason I wanted to create a unique museum, dedicated especially to the mountain peoples of the world, all with an equal attitude towards the mountains. I dedicated this museum project, made up of six structures located in six extraordinary locations in South Tyrol, to the mountains and their culture. The six museums of the Messner Mountain Museum circuit are places where we can meet the mountains, the mountain people and even discover ourselves.

It's been a difficult undertaking, fraught with obstacles, but they didn't put me in a cage. I remained what I was as a child, one who went to search for the truth behind the horizon, and I am still a walker who walks and goes to discover what lies ahead.

In the meantime, I know the horizons are infinite.





On 8 February 2022, Article 9 of our Constitution has been implemented so that the environment, biodiversity and ecosystems is now included among the assets of primary importance. Their protection was already ensured, and they include the “landscape” and “historical-cultural heritage”.

Protection capable of looking beyond today’s horizon, implemented “in the interests of future generations”.

Legislative changes of such great importance have a complex and detailed path behind them, made up of increased attention and evolving sensitivity



ANGELO SCHENA

The Italian Alpine Club was founded in 1863 initially with the aim of exploration conquest but also with that of scientific research and the production of literature relating to the alpine environment.

The approach must be done in a culturally sensitive way: you must first know the mountain because only through knowledge can you come to love it, protect it and defend it.

The activity is carried out by sections that hold annual courses in mountaineering, ski mountaineering, speleology and many others. Then there is a whole enormous cultural activity through film screenings, theatrical performances, meetings with mountaineers, meetings with writers and the production of books.

There are many people who approach the mountains unprepared, even on glaciers. You need to be careful, because zero risk does not exist – an accident can happen even in the mountains.

You go to the mountains not only to climb but also for trekking. I want to give an important example: that of the Sentiero Italia developed by Teresio Valsesia and Giancarlo Corbellini who wanted to unite the mountains of Italy through a single path. And this also served to revitalise villages that were disappearing.

These are the activities in which we are involved. I would also like to point out that we wanted to intervene at a table for the next Winter Olympics in Milan-Cortina, together with the environmental associations, the Milan Cortina Foundation and Simico, the company tasked with construction works for the Olympics, in order to monitor the level of sustainability. However, it didn’t go very well.

Our intention was to be able to speak with these bodies in order to be able to express our assessment of the environmental compatibility of the various works.

Unfortunately, things didn’t go very well. Most importantly, the necessary documentation to carry out our assessments was never made available to us. So some environmental protection associations decided that they would no longer participate. In truth, the CAI would like to try to keep the possibility of collation open.

GIUSEPPE PRIOLO

The CAI has an important water project. The idea started about a year ago, on the occasion of the Congress of speleologists and canyons, and is based on the changes that have occurred over the years and which have, so to speak, changed the course of the water. Consider that the course of the water is fundamental.

Together with Sosec, a CAI arm that deals with cartography and trails involving CAI members and hikers, we have decided to relocalise the known water sources and will make a fairly reliable measurement of the flow rate. As a result, we will know how much water a particular source introduces into a particular zone. We will measure temperature and conductivity, i.e. the ionic component of the water.

Speleologists will do the same work underground and, in this case, an application for smartphones is being created that allows you to measure the temperature. In the end, we will have collected a whole series of data and information on the environments analysed. The objective is to have a continuum of information that will populate the database that is made public and which is already interfacing with public administration databases.

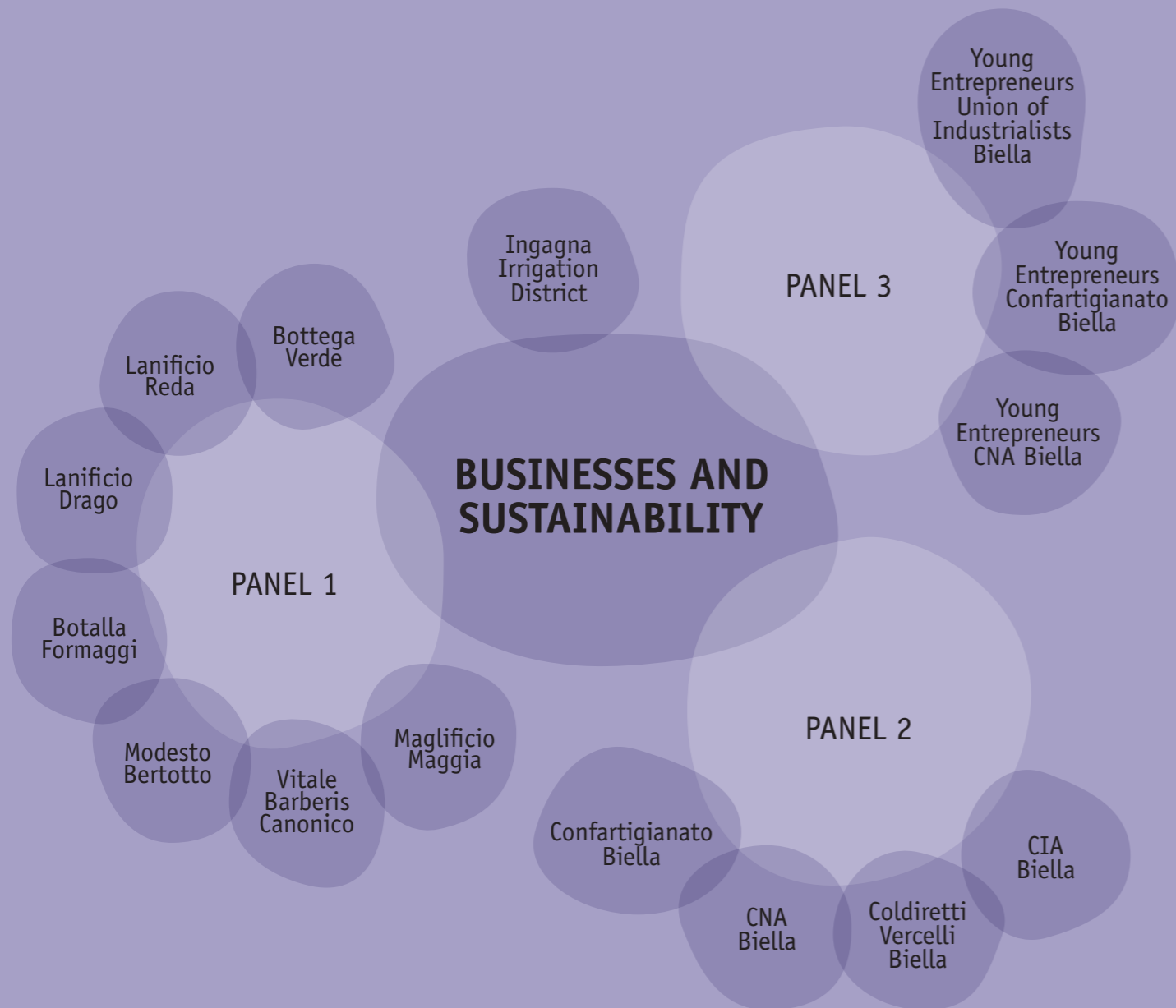
Every three months we will make a transition and we will have the seasonal definition of each source. In this way, all the information collected will give us the possibility of observing if a given source is active all year round, if it is only seasonal, if it is ephemeral or if it is no more which is a frequent occurrence. In the same way, we will find sources that were not known perhaps because they were born later.



ANGELO SCHENA
Board member
Club Alpino Italiano



GIUSEPPE PRIOLO
President of the Central
Speleology Commission
Club Alpino Italiano



In these scenarios of rapid change at an environmental level and above all of the great impact of climate crisis, it is necessary to reduce the environmental impact of production.

Is this transition following the right times and stages, or is there anything further and different that should be done to meet the needs of modernity?

We need to reduce waste, encourage the reuse of water and recover energy.

We must keep in mind the importance of SDG 17, i.e. the need to work in partnership to achieve sustainability objectives.



ERCOLE BOTTO POALA

We need to understand what is meant by impact at a European level. Rules are being introduced that start from specific assumptions. We are in an area famous for the production of wool. However, 80% of the impact is not in the hands of industry but is upstream of production, their emissions and the animals themselves.

Here lie companies that have invested heavily to reduce their impact. But the paradox is that they may not have invested in the right direction.

The fashion industry is currently considered to have the second most environmental impact after oil, making it the most polluting industry. Twenty years ago, choices were made that thought it was right for everyone to have access to available fashion and it was, therefore, decided that you could produce following certain rules in Europe that were not necessarily the same as that produced in China.

Sustainability costs money, but more thought was given to the consumer. It was thought important, it has been said, that the consumer should pay less for the product and so fast fashion was created. And so we have come to produce around 150 billion items every year for a population of 7 billion people. These surplus items then end up in landfills in Africa, Chile and South America.

MATTEO CERREIA VIOGLIO

Bottega Verde is a company that produces and markets cosmetic products, and its name clearly declares itself to be sustainable. We started our journey before sustainability was such a fashionable term, almost 15 years ago. The first topic we addressed was that of energy consumption and self-sufficiency from an energy perspective.

We have made a series of interventions to reduce our consumption and we are actively trying to eliminate the consumption of gas, especially for heating.

Then there is the issue of controlling production processes, for which we are equipped with environmental certification – directing us to monitor the impact of our production processes on the environment. There is the problem of surfactants for which, for example, showering has the potential to acidify water.

But water consumption is also part of sustainability. In cosmetics, water is an important raw material, so much so in fact that it is present in almost all cosmetic formulas.

A company can formulate concentrated products, anhydrous solid products. The consumption of water in the production phase and its reuse for other production phases is important but consumer education on the economical use of resources is also important.

ALESSANDRO BOTTA

We too, like Lanificio Drago, must comply with rules that are imposed on us and therefore assessments are carried out to proceed with the various investments, at a sustainability level.

With reference to our specific sector, it is certainly important to take



into account how much waste there is in the mass production of clothing.

So I must say that the best eco-sustainable supply chain is one that is regulated at the production level and then sends the fabrics produced which will be processed by tailors to create tailor-made clothes. These clothes will never die, they will not be thrown away; they will be adjusted, remodelled, repaired and so will be able to take on a new life. What better way to be sustainable?

ANDREA BONINO

Companies in the agri-food sector, at a multinational level, have certainly produced and marketed products less linked to the territory but more linked to simple business. I believe that the supply chain should operate within the territories. In our case, we work together with farmers, together with our supply chain and a good quantity of milk to be transformed into cheese.

Our goal is to create healthy productivity, within a panorama that respects what nature, with its changing climate that is imposed on us today.

From a production point of view, you can save from 20 to 50% thanks to Industry 4.0, taking advantage of the technology made available to be competitive create make healthy products.

It is clear that the effects of climate change also reverberate on the agricultural sector: without water the grass does not grow, if the grass does not grow there will be fodder and feeding problems; the animal, then, must drink to produce, in our case, milk which is made up of 85% water.

We transform this milk: the solid part becomes cheese while the liquid part, the whey, is transformed into ricotta. And the serum is also used for the cosmetic industry. All with a view to using as much as possible.

GIULIO ENOCH

We are a retail company and have points of sale where we market the garments that we partly produce.

Our environmental awareness is expressed through our best practice ethic. From transportation to the mountain of waste that is produced. Consider that, even if fabric manufacturers are careful to implement virtuous processes, the fabric is later transformed. The padding, linings and accessories used are far more polluting than the fabric itself. Plus there is all the packaging that accompanies the product and, when it arrives at the point of sale, it has generated a mountain of waste.

We must try to reduce the distance between production and marketing, making products with as little packaging as possible, even within the distribution system.

You can also work towards recycling by reusing natural fibers such as wool, silk and cashmere which are used in the interiors of new products as well as creating collections using recycled yarns or fabrics.

ROBERTO MERCANDINO

Climate change has a significant impact on the agricultural sector. First, allow me to say that I do not agree that our sector is perhaps one of the predominant causes of this climate change. We raise animals and work the land, we use diesel and we say that the impact is also generated by other causes that are much more present in the area such as, for example, fuels and everything that creates problems in terms of ozone and the environment.

However, everyone must do their part and we must do ours too. We must come to realise the situation and, unfortunately, today we have not yet seriously addressed the problem. The farmer preserves the land and does so in a concrete way.

Without agricultural activity, the care of the fields and drainage canals, land risks being abandoned to itself. In the Biella area, one of the problems concerns the use of water from the Cervo torrent. This water is used to irrigate the fields along the axis of the torrent itself.

For a few years now there has been more and more attention in preserving the Cervo, trying to reduce water withdrawal as much as possible to maintain both the flora and fauna of the torrent itself. This has determined the fact that, in the moment of greatest need for water by agriculture (the summer period), we are obliged to reduce water withdrawal. We need to find the right balance to avoid taking action that then creates greater damage.

We must reduce the impact but we must do it at the level of the complete supply chain, starting from the farmer or breeder down to the industrial level and distribution.

GIORGIO MACCHIERALDO

Agriculture is not static: the climate changes every year. Last year, 2022, was dry, with very little rain which did not allow the reservoirs to be filled. But where there are no reservoirs, the water is not wasted. Water completes its cycle, water flows.

The problem must always be seen in its entirety. If it rains during this period it creates a problem for agriculture because the rice, corn and soya harvest would have been completed, and autumn sowing would have been done. The unusual heat of this autumn was a benefit for the agricultural world because there has almost never been such a sunny autumn. An autumn of this kind with high temperatures and weather that, without rain for 25 days, allowed us to proceed with the harvests – less diesel was used in the dryers so less was spent and less pollution was caused.

What may seem simple may not always be appropriate or suitable.

In 2023, we found ourselves with a good growth of cereal crops, wheat and so on – mostly later lost or reduced due to the heavy rain in May. This created related problems with threshing and hay harvesting.

ALESSIO COCHIS

The artisan sector is really accentuating its attention towards sustainability issues.

Approximately 66% of our associated companies pay attention to respect for the environment. Within this percentage, approximately 300,000 are those that operate in the renewable energy supply chain and approximately 500,000 are those that operate in the construction and energy efficiency of buildings.

Sustainability in the artisanal world means economic, ethical and environmental sustainability. We are talking about finished, beautiful, easily identifiable, well-defined products; products that take care of the impact on the environment and, in this field, artisan businesses can best express their abilities.

We are talking about artisan businesses rooted in our areas, where they create not only commercial relationships but also human relationships. Finally, let's talk about environmental sustainability, that is, responsibility, seriousness, ethics, legality and respect for principles that today we tend to put aside to follow other paths.

GIONATA PIRALI

It is clear that we have many businesses that are inextricably linked to water. In our area the water has qualities that make it very, very good quality. Thanks to this we have breweries that have been winning international competitions for years, as well as artisanal textile dyers that use the water to obtain high quality products. Water is an asset that must be protected and companies are doing so. Today we are looking at a consensus of responsibility for future generations who are already approaching the issues we are discussing in a completely different way. The responsibility of companies is to convey the value and above all the idea of working actively for sustainability starting with everyday life.

80.23% of young entrepreneurs in our association believe that a company, in the next 5 years, will no longer be competitive if it has not adopted policies and action to respect the environment in which it works.

AUGUSTO BORSETTI

As the irrigation district of Ingagna we cannot fail to refer to the only dam in Biella, built forty years ago, which came into being with quite a few difficulties. It took a long time for the dam to become fully operational because our areas were characteristically very rainy. Therefore, let's think how the climate has changed in forty years, especially in recent times. That dam, which was perceived as almost useless, is now a precious asset and must be preserved and protected because the Ingagna is the only district that guarantees the water for the land, guarantees quality and quantity harvests as well as serving several municipalities with drinking water.

The dam, created to serve 300 hectares, now serves 1600 and this is very complex situation. Accordingly, we have equipped ourselves with technological instrumentation that allows us to measure soil humidity, saving water, activating shifts and avoiding waste and dispersion.

STEFANO SANNA

Answering the question of the impact of the climate crisis on production also means keeping in mind what has happened in the last three years, between the pandemic and wars. Events that would normally follow one another over a longer period of time. On the sustainability front, we must take into account that a company has a long term view which, on average, ranges from thirty to forty years. If we want to take the challenges we have set ourselves seriously, which today we call transition, we must have a grasp of each of their dimensions in full.

To date, Europe has adopted a tight approach, having imposed limits and objectives, without taking certain differences into account, particularly with regard to manufacturing. It is not clear who will put up the money to implement these transitions, because these impositions risk putting the products of an area where the cost of labour is already very high off the market.

The ecological transition is certainly both desirable and unavoidable. How it is achieved is important because, if we then realise that we have caused industrial desertification, we will again be faced with what happened during globalization – and this we cannot afford.

LUCA ROSA

We need to take a pragmatic approach to sustainability issues. I think that it is often the case that a more ideological than pragmatic approach is adopted. As a company that produces drinks, for example, we are implementing a project to reduce the ratio of water consumed per litre of drink produced.

Now, this efficiency drive should not only be valid environmentally but must also serve to clarify how much the company can save. The digitalisation and automation process, with Industry 4.0 tax credit, also helps companies to innovate and implement more sustainable systems as well as making the entire production phase more efficient.

However, the fact remains that, to avoid losing competitiveness, it is necessary to concentrate not only on reduction but also on the

treatment of emissions and waste because we are talking about a global issue. If we operate in a certain way but on the other side of the world things are done differently, we won't solve the problem of climate change. Indeed, we'll also lose our competitiveness.

ERIK ALESSANDRO MARTINEZ

I would like to focus on the meaning of sustainability and on the fact that it implies environmental, social and economic well-being, preferably growing and with the prospect of leaving future generations with a quality of life no lower than the current one.

To raise awareness on the topic, we tried to create a project, linked to the Creative City, which started as an artistic project entitled "Making stories". It was created with Cittadellarte Fondazione Pistoletto and presented in 2022.

The works were first conceived by the artists, then with the involvement of high schools, and finally all schools helped to implement the installations which touch on environmental themes.

The project will conclude in 2024 with the creation of four works which will be developed in collaboration with artificial intelligence. These works will then be delivered to schools and further support will be created that is designed to last over time. The message we want to send is that we need to work together, to compare and to learn so as not to be left behind.

ALESSANDRO BARBERIS CANONICO

Vitale Barberis Canonico produces everything within Italy and has its own sustainability strategy that acts under three profiles: measuring all factors, having objective data and long-term objectives to improve and obtaining certification by third parties. Our sustainability has three references: human, environmental and product elements. Water is very important because we sustain ourselves with it and its quality allows us to create quality products.

Sustainability is a path that started for us in 1982. It encompasses production, the biological treatment of water, the use of water for heat recovery, the reduction of emissions, the use of electricity from renewable sources, the low environmental impact of dyeing, the reuse of water, certification and the creation of a sustainability report that goes to all customers.

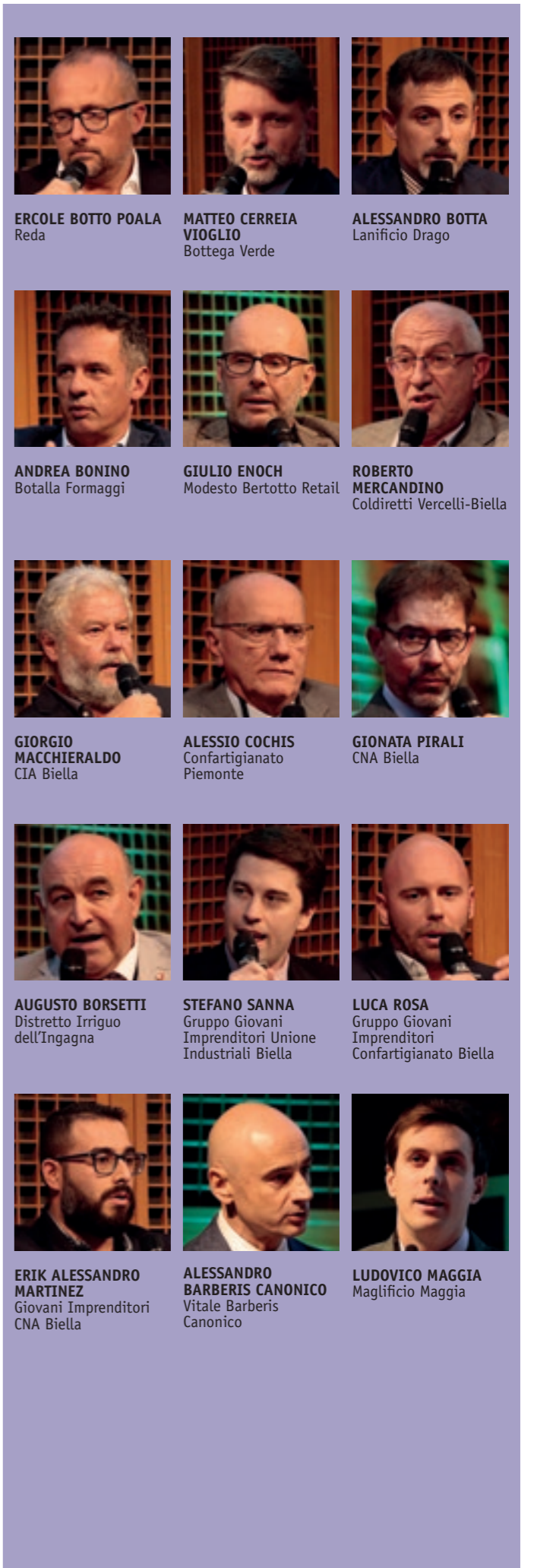
Sustainability also affects the human component. The product we create is itself sustainable because it has a long life cycle and can be highly reused. We are also working on the traceability of origin and impact.

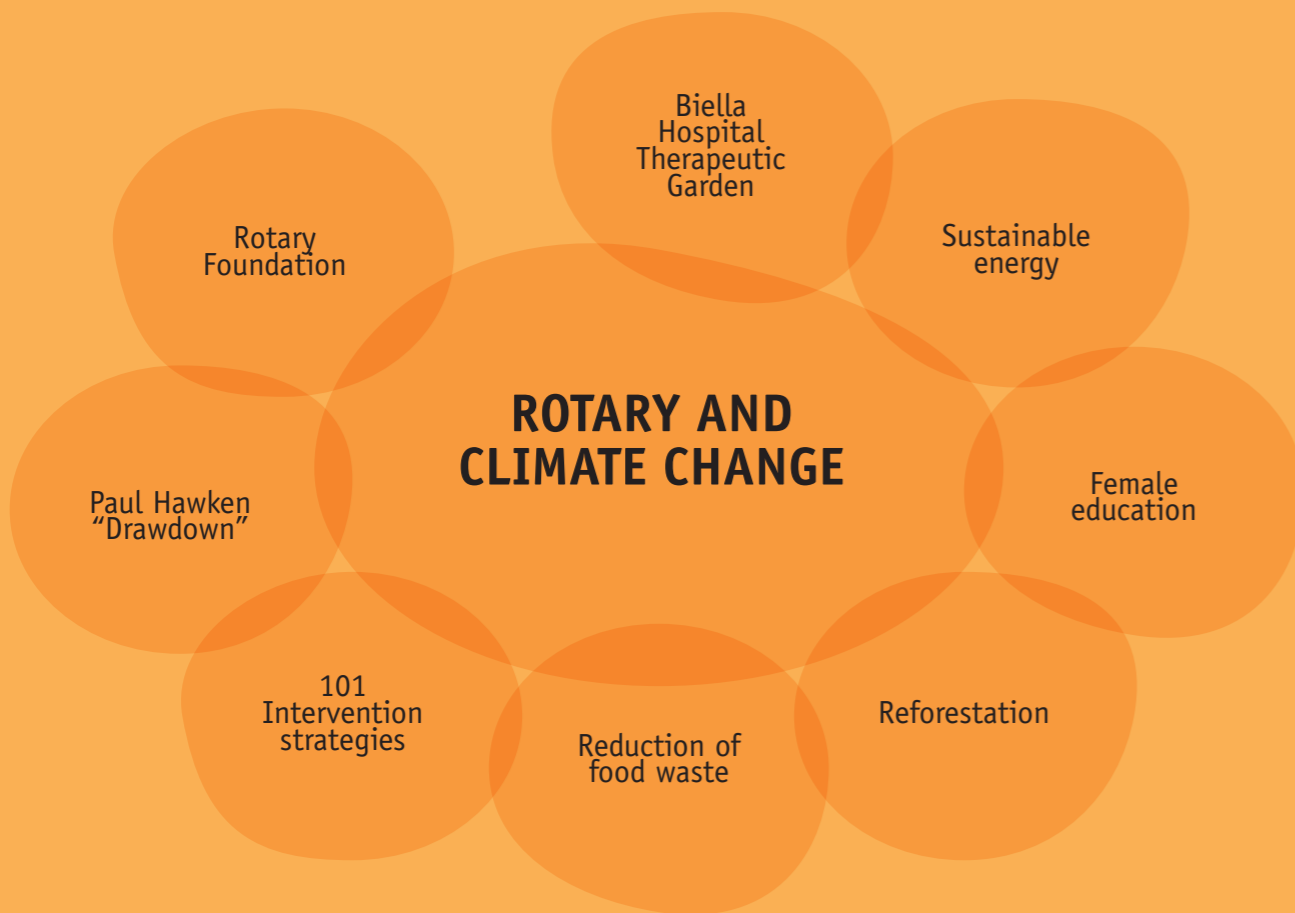
However, rules need to be put in place to prevent products from being imported into Italy that do not comply with sustainability requirements or which, by not respecting them, are subjected to taxes by way of compensating for the lack of sustainability.

LUDOVICO MAGGIA

It is important to underline the role that companies have on the path to sustainability, the constant dialogue that should exist between them and institutions. We are a company that has been present in the area since 1780 and sustainability has always been a basic concept. So much so in fact, that production has never moved away from the province of Biella.

Maglificio Maggia has embraced the Magnolab project together with other companies in the Biella area; it offers an example of how we want to collaborate and trace an exemplary path so that, for example, young people can remain in our area. It is a textile research and development center that aims to create projects linked to the circular economy, sustainability, innovation and the identification of production methodologies that can continue to reduce environmental impact. Companies have a central role in charting paths that are consistent with the United Nations SDGs but also achievable. Everyone must pull in the same direction with concrete strategies that allow a progressive move towards the realization of the aforementioned objectives.





Rotary International is interested in the world. It wants to make the world a better place in the broadest sense.

If countries are being lost to changing sea levels, if storms are stronger and disrupt water supplies or destroy resources that people live on, it means there will be more people at a disadvantage.

So caring about the environment also means moving towards the ultimate goal of Rotary.



MARCO MARCOLONGO

The writer, entrepreneur and environmentalist Paul Hawken has developed a mathematical model to analyse the climatic economic impact of 101 intervention strategies and reverse global warming. The book that Hawken wrote is called Drawdown.

In third place among these strategies is the reduction of food waste: one third of all food intended for human consumption ages in warehouses, is forgotten in refrigerators and then ends up in landfills, generating methane. Some Rotary clubs in California have set up a training center where surplus fruit and vegetables are used for safety training in food preparation, with the aim of reducing food waste to 15%.

In fifth place in the Drawdown ranking, we have tropical forests which once covered 12% of the Earth's surface, but today only 5%. Deforestation contributes to 19% of greenhouse gas emissions globally. The Rotary clubs of Turin Mole Antonelliana and Annecy-Tournette sponsored a project which led to the reforestation of approximately 50 hectares of tropical forest in eastern Madagascar.

In sixth place in this ranking we have female education. A woman without any school education has on average 4-5 more children than a woman who has attended a secondary school. Investing in female education can have a great impact on demographics.

In Bosnia Herzegovina, 90% of Roma women are illiterate and less than 15% of their children go to school. This condition makes them particularly vulnerable to criminal activity such as human trafficking. The Rotary Club of Mostar, Bosnia Herzegovina, has developed a project, subsidised by the Rotary Foundation, to follow 80 families with children at risk, obtaining a significant increase in their school enrolments.

Less than 2% of the world's electricity is generated by photovoltaic panels. The Rotary Clubs of Leogane (Haiti) and Parker (Colorado) have installed a hybrid solar-electricity system at a school in Haiti, saving over 4,000 dollars a year on the purchase of coal with a consequent reduction in pollution.

Regarding regenerative agriculture, intervention is aimed at protecting the soil through the abolition of mechanical means, crop rotation and the ban on the use of pesticides and synthetic fertilisers. Thanks to regenerative agriculture, the organic matter of the soil could increase by 4-7% within 10 years and absorb 50-100 tons of carbon dioxide for each hectare of land. In a village in Taiwan, 40 farmers learned these techniques thanks to the Rotary project of Taipei Laugane, Taiwan and Pathumwan, Thailand.

In the poorest countries, over 200 million women do not have access to contraceptives, helping to create 74 million unwanted pregnancies. Guaranteeing health care for women would also have positive repercussions for the planet, reducing overpopulation.

The Rotary Clubs of Finot (Ethiopia) and Darmstadt (Germany) have developed a project aimed at training their midwives, and those in Addis Ababa to provide information on family planning. The Biella Rotary Club is creating a therapeutic garden for the Biella hospital. These places are great developments; many Italian and European hospitals have equipped themselves with outdoor green spaces with beneficial effects for those patients who can leave their hospital room - reducing stress in the patients themselves, their families and healthcare personnel. Thanks to these spaces, patients' autonomy can be accelerated, mood and quality of life improved, recovery times are speeded up with a corresponding reduction in costs and treatments, socialisation is facilitated and the immune system is improved.

EMANUELA BAIETTO

Among the intentions that are pursued daily by UNESCO, there is certainly support for creativity as a strategic element to achieve sustainable urban development.

The synergies that have become possible for the Creative Cities network through the particular identities that these cities have, can be fully appreciated - especially in passing on their identity to future generations.

There are 13 Creative Cities in Italy while there are several Rotary Clubs. Each city has one or more Rotary Clubs, constituting a very widespread network throughout the country.

The Creative Cities have received attention from Rotary with the mission of Rotary in mind, which has as its primary objective of building peace and friendship between peoples.

In this context, the initiative of the Rotary Clubs was started to create a network that supports the Administrations and can also be an aid for greater dissemination of the initiatives being undertaken or even in seeking common synergies.

What is currently being carried out by the Rotary network of Creative Cities are the "bread stops". Bread is a common good for everyone; it is a tradition throughout Italy in which there are different types of bread and ancient flours.

This project pursues the objective of going to all Italian cities and to every city that has a particular capillarity of mills and bakeries, to make known what uses are made of flour and therefore of bread, establishing synergies between cities to let everyone know about our traditions. This is a form of creativity. These breads are an Italian creativity and therefore the project fits perfectly with the ideals carried out by the Creative Cities.



MARCO MARCOLONGO
President of the
Rotary Club of Biella



EMANUELA BAIETTO,
Secretary of the
Rotary Club of Biella



GILBERTO PICHETTO - Minister of the Environment and Energy Security



GILBERTO PICHETTO

The Government's first action was to attempt to unify the various skills of the sector, of the various Ministries, and various departments. This led us to identify a commissioner for the water network and so an overall discussion commenced about the enormous knowledge that our national system has and yet which is currently not integrated.

These are the competences at territorial levels, on the part of consortiums, municipalities, various types of management, utilities organised in the territories, the basin authorities and the work of the various Ministries divided between them which do not exchange data.

It's about putting together this wealth of knowledge to be able to summarise and arrive at the decisions to be made.

This goes alongside a series of other actions we are doing: for example the integrated water system.

I would like to remind you that in Italy we have 2,391 water companies, some very large, some very small.

It is clear that we cannot think of making large investments both in extraordinary maintenance of the current aqueduct management system and in renewal with such a myriad of entities.

All this must go together with the reasoning on the reorganisation of the area, in connection with the greater management plans.

The challenge we have before us is to create a complete plan for the area and as of now the provision of the basin authority is to identify large areas of lamination, large areas of flooding with the appropriate reimbursement system for those farmers who, in this event, would lose their harvest.

I have filed the climate change adaptation plan in which 361 actions are envisaged, which concern various themes such as water, air and energy. These are all topics that COP28 will be dealing with. But in talking about mitigation, human action and so the reduction of CO₂, the issue of emissions comes strongly into play. Our challenge is to respect the targets we have set for 2050.

ALESSANDRO PANZA

With the Mountain Bill we wanted to somehow strengthen what had already been foreseen by the previous Government, putting those who live in the mountains at the centre – those who experience the mountains.

In fact, we must not forget that these people, the families that live in the mountains and the companies operating there have been somewhat overshadowed in the past. With this bill, we wanted to give strong new impetus to a mountain area that is experiencing problems that affect many areas of our country.

To combat the phenomenon of depopulation, for example, we must be mindful of pillars such as the provision of services, the possibility of maintaining work activities and the possibility for young couples to be able to return and settle down after, perhaps, having had experiences away from mountain areas.

We must work so that, for example, there is total and complete ultra-broadband coverage to allow those who work remotely to be able to do so in our valleys too.

Furthermore, on the issue of the minimum number of students that guarantee the presence of a school, we have planned to be able to operate in derogation, at least temporarily, while waiting for the depopulation trend to reverse.

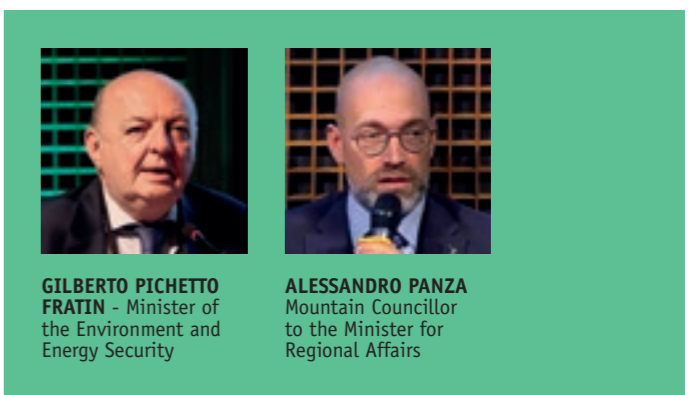
We plan to enhance local production and protect agro-forestry-pastoral activities.

This is an ambitious law which alone will not solve all the mountain's problems, but it is an important first step, also because, let us never forget, our Constitution in article 44, second paragraph, provides that the State makes policies in favor of mountain areas. Those who live in the mountains enjoy a provision of services that is not the same as those who live in the more urbanized areas of our country. It deserves a compensation which can simply be a more favorable tax rate.

We must also keep in mind that the winter tourism sector in Italy has 150,000 direct and indirect employees, impacting communities that do not have great economic alternatives.

We have tried to make a law as broad as possible also because, on certain matters, it is the Regions that specifically define what needs to be done for their areas.

The purpose of the law is to be a sort of framework within which the Regions will have the task of intervening also with finance that will be provided by the mountain development fund.



GILBERTO PICHETTO FRATIN - Minister of the Environment and Energy Security

ALESSANDRO PANZA Mountain Councillor to the Minister for Regional Affairs



GIOVANNI SOLDINI - Ocean Navigator

Intergovernmental Oceanographic Commission



GIOVANNI SOLDINI

On board the trimaran, with which we race around the world, and with which we have been touring the world for the last year, we have embraced the IOC-UNESCO cause as part of the Decade of Marine Sciences for the Sustainable Development of United Nations (2021-2030). For a year and a half now, we have been using a control unit, the OCEAN PACK (SubCtech), which analyses sea water; it is a machine that pumps sea water into a circuit, filters it through a membrane and extracts CO₂.

The carbon dioxide is then measured by the system which, through various sensors, also allows the temperature, salinity and conductivity of the water to be analysed. Once this data is collected, it is stored on an SD card and sent to the central on-board computer as the water is released back into the sea.

This data is then made available to the scientific community, to ENEA which helps us to process and to calibrate – we have developed a very fruitful collaboration, and to the Ifremer oceanographic institute with whom we started this activity.

Since September, we have decided to decommission the internal combustion engine of the trimaran and, therefore, we have already done half a trip around the world with a boat that is completely free from the use of hydrocarbons. It produces its own energy with a solar panel system and is therefore able to navigate with zero impact.

More than anything else, this is clearly an interesting exercise to understand the type of cultural change that awaits us and that we must somehow embrace. It focuses attention on consumption and to limiting our emissions as much as possible.

We have seen in the last three years how drought is a very hot topic for Italy and for all the countries bordering the Mediterranean. However, at the same time, there is another very hot topic: that of too much water, with particularly violent and almost equatorial floods that have been unleashed lately on our lands.

All of this is actually due to the state of health of the Mediterranean, principally to its temperature which unfortunately has reached stratospheric levels.

The Mediterranean has a fever; it is a sea which, being very small and closed, with a particularly high population density, warms considerably and which has a quantity of CO₂ at its surface that is completely out of proportion to the norm. This imparts energy to all these particularly violent meteorological events.

These are events to which we are not accustomed, and which are destined to hit our coasts and our country with increasing frequency. We must prepare ourselves and make serious investments in water management and in water basins to combat drought which is another scourge that we must expect more and more frequently.

Unfortunately, it is not easy to solve this problem. We can face it and try to solve it only when we all get together and stop thinking that Italy is ultimately responsible for only 1% of the world's CO₂ release.

We are in the same boat and, if we don't all get together to pull in the right direction, we certainly risk not only being unable to win this vital challenge for our children but also for us and for our quality of life.

It is not true that the necessary change will cause a loss of performance. An example is our Maserati trimaran which has been converted to operate with alternative energy. I assure you that it was not a simple exercise, yet we managed to win the transoceanic race in January, crossing the ocean in less than five days. The boat did not become less competitive once the engine was decommissioned.

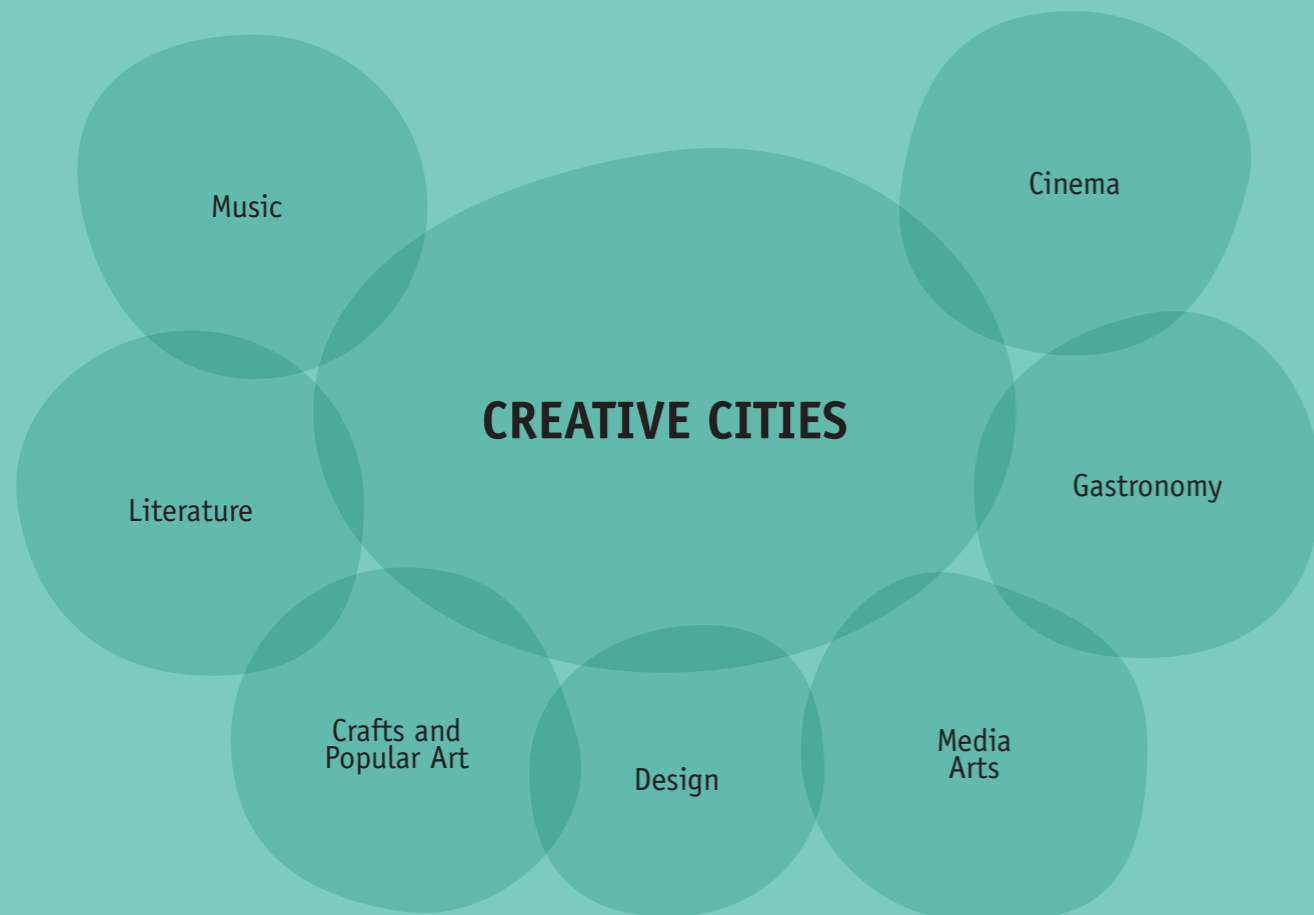
We need a major cultural change: we need competence, science and strength of will. I truly believe that science and technology are our only hope. We must listen and not deny them.

There is no need to be biased, pro or contra to certain solutions.

I think that many years have been lost due to the difficulty in doing things here, mainly due to bureaucratic issues; we must focus on change and on energy efficiency and independence.

It is serious that Italy is so far behind on wind energy, the most efficient renewable energy, the closest to our needs with high potential especially now that we are able to create wind farms at sea, even floating ones.

We must therefore invest in renewable energy, trying to emit less CO₂ and therefore have less energy sourced from fossil sources. This is the mother of all problems.



The UNESCO Creative Cities Network was created in 2004 to promote cooperation between cities. Creativity was identified as a strategic element for sustainable urban development, and is divided into seven areas corresponding to as many cultural sectors: Music, Literature, Crafts and Popular Art, Design, Media Arts, Gastronomy and Cinema.

All Creative Cities are committed to the development and exchange of innovative best practices to strengthen participation in cultural life and to integrate culture into sustainable urban development policies.

The Network also supports artistic exchanges and research partnerships both with the cities of the network and with the public and private sectors.

As such, Creative Cities contributes to achieving the Sustainable Development Goals of the United Nations 2030 Agenda.



VITTORIO SALMONI

The essential purpose of the Creative Cities network is to bring the members of the Network into contact with each other and to make all the cultural, administrative policies and produce that they develop available to local communities and the international community.

The events we organize serve to communicate the results of very in-depth research that each city carries out, and the Biella Forum 2023 presents the theme of sustainability seen through the eyes of the most diverse characters.

What has emerged and what emerges must be taken, channeled and exported outside, even outside Italy because we want to be an example to follow in terms of quality and sense of responsibility towards countries that look to us with interest because they need to identify development models.

The Venice Biennale Architettura, in which we recently participated, talks about Africa, about a continent that has long been marginalised, far from the centrality of development in the Western world.

Today, Africa asks not to go through all the mistakes we have made and development that has created disruption, dysfunction that we try to correct and climate change that we try to minimise. It wants follow a different path and asks for collaboration.

The creativity that comes from those countries, still marginalised, can enrich us, can help us and we in return can provide advanced and eco-sustainable development models.

FRANCO BERNABÈ

I thank the City of Biella for organising these two days of discussion on one of the most delicate issues of our time, that relating to water and global water resources.

Water has been at the centre of the debate over the past two years. The city and global warming, both sustainability issues, have had the theme of water as an important reference. And I am pleased that the reflection takes place in the context of the Creative Cities network which I consider to be UNESCO's most stimulating initiative.

This is demonstrated by the rapid success due to the intuition of linking the theme of creativity to that of cities, the places that have the greatest impact in terms of sustainability, also because they host 50% of the eight billion people who live on Earth.

Urban agglomerations occupy only 2% of the surface of our planet, but they consume 60% of global energy, release 75% of greenhouse gas emissions and produce 70% of global waste.

Biella is certainly a city that has deserved to be a protagonist of Creative Cities; for its cultural activism demonstrated by the various foundations active in the area, and for its highly successful entrepreneurial activity which is reflected in its brands of international renown. But it is also the ideal place to talk about water and its future.

Water is a precious resource but one that must be managed with awareness of the risks associated with placing value upon it.

Today, water is at the center of global concern. Many wars have been fought and are being fought to control water supplies.

The climate crisis and the environmental emergency are putting its availability at risk in many areas of the planet.

The 2030 Agenda on Sustainable Development deals with this extensively in Objective 6, which concerns the generalised supply of drinking water and sanitation facilities. But water also contributes to the achievement of other objectives of the Agenda, such as those relating to the fight against poverty and hunger by improving health.

In this framework, UNESCO plays a significant role through the Intergovernmental Oceanographic Commission which promotes international cooperation between the 150 member states and with the Water Assessment Programme, based in Perugia. It is financed by Italy, which produces an annual global report on the state, use and management of the world's water resources. UNESCO also contributes with biosphere reserves, geoparks and natural sites registered in the World Heritage List – all initiatives aimed at protecting the environment and its components.

MARIA FRANCESCA MERLONI

Water is one of the four elements, perhaps the most feminine, recognised as a life-generating force, as a spiritual and at the same time material element, as a place where the spirit hovers.

Here perhaps this should call us to a profound respect, to attention and also to an observation of the movement of the waters, of its silence, listening to the imperceptible sound.

I would like to express great appreciation for everything that the city of Biella and its citizens, its administration are doing, with compliments for the preservation of this world heritage site and now, more than ever, it is important to be UNESCO, to join together, to say our word and to reaffirm our deep bond.

I greet you with the words of a poet, José Angel Valente, who says:

*"You are sown with the sea.
The sea is inside you,
drinking it down
so that its waters will never end"*

GEA DAZZI

Carrara, like Biella, is a UNESCO Creative City for Art and Popular Crafts, linked in our case to the processing of natural stone, because marble characterizes our Apuan Alps. It is certainly one of the most characteristic of rocks, known as white gold, which characterized not only the mining activity, the production of Carrara, but also the art and craftsmanship.

I would like to focus more attention on what is the blue gold of the Apuan Alps, the water, because the Apuan Alps have also been



recognised for this reason since 2015 – with a UNESCO Geopark. This recognition makes us proud, but also more aware of the importance of this great ecosystem, which must be protected and which obviously the Administrations must take charge of.

The Apuan Alps are truly an enormous reserve of water, mostly drinking water, which develops through the phenomenon of Apuan karst.

It is an enormous and very precious reservoir, if you consider that in our country over 40% of drinking water resources come from karst springs and this percentage is destined, also according to FAO data, to be increased.

Naturally, the municipal administration has also taken responsibility for implementing regulations to protect the Geopark area and with it our extraction basin. The Extraction Basins Implementation Plan was therefore implemented, and it prepares a series of necessary environmental protection measures.

In the context of raising awareness, an important project is the ALDA project which involves the mapping of historic fountains which are, in reality, monuments that were commissioned by Prince Malaspina in 1500. They are the first form of urban regeneration and street furniture.

This mapping is enhanced by making a flask available to supply drinking water from these fountains and, thanks to a QR code, identifying them and making their history known.

ENRICO COLOMBO

In Como we are working on these two words: being and development. ‘Being’ to create that sense of belonging, of identity, aimed at rediscovering the excellence that has determined the training and the path of ‘development’ over the years and throughout history

In reality, this path of urban development formed the social fabric of individuals, in this case, of our reality.

Como is a silk city par excellence; we take our fabrics all over the world. In this, we are proud of being a silk city, of our popular craftsmanship and of our businesses.

For us, silk has been fundamental in the urban and social development of the city - bringing with it the intimate and indissoluble bond with water.

Mine is a city that is based on water, not only with the lake, but also all the waterways that feed the lake and that have fueled the silk industries of the area. There is consequently a link between fabric production and nature which has brought about very powerful urban changes within our context.

A relationship with water that is also in conflict: water has led to the flourishing of the silk industry but, at the same time, to flooding.

Water in the historic center meant closing commercial activities, stopping production activities and locking down our citizens.

MAURIZIO MOSCATELLI

With the Lake Como Industrial Aqueduct project we refer to Goal number 6 of the 2030 Agenda and, specifically, we intend to improve the water by reducing pollution, eliminating waste, minimising the release of chemical substances and hazardous materials, halving the percentage of untreated wastewater and increasing recycling and safe reuse.

These are words that we have also heard from entrepreneurial intervention, in which we recognise ourselves.

One of the objectives of the project is actually to reduce pollution load, as well as to optimize water management.

In this, we are dealing with companies that produce not only very high level products but also emissions into the atmosphere, waste water and sludge. This project involves the Lake Como Industrial Aqueduct and Lariana, Depur together with the public partner Como Acqua.

The project involves around fifteen subjects, in order to take into account the competences of each.

MAURA NATALONI

Fabriano and water have a unique relationship because Fabriano developed beside a river and the name Faber Janus recalls a blacksmith who, on a bridge, strikes an anvil on the Giano River.

Paper production on the river started in the thirteenth century, and is the element that distinguishes Fabriano. Paper and water constitute an inseparable relationship.

Paper is the most sustainable element of all, which has the least environmental impact – especially when paper is made by hand.

Nowadays, when paper production is industrialised, it is produced through machinery that has practically zero environmental impact because it operates aiming at the most complete decarbonisation, reducing the consumption of water and also energy.

Fabriano also continues to produce handmade paper, fine paper, quality paper and watercolour paper which is particularly valued.

But Fabriano is not just about paper. Fabriano also has mechanical industry, which developed from the nineteenth century onwards. Industry that has evolved and is now working to achieve minimal environmental impact.

Therefore, water and sustainability are issues that are felt deeply by our city and are actually covered in the strategic development plan.

A particularly ambitious project, which we are trying to pursue with all our energy, is the creation of an international paper museum. Within it, precious historical documents will also be housed, encouraging the development of archives but always with an eye to sustainability.



DANIELE VIMINI

Creative Cities, first and foremost a city as a system, was described very well by Giovanni Soldini and his boat. Viewing the boat as a small city, but also the city as a large boat; incorporating sentiments not only of sharing, of anxieties, of perspectives and hopes as in a journey, but also as a system that is both open and closed – in which every action has its own corresponding action. Responsibility passes between the administrator to the citizen and to individuals.

What should we do in our cities, especially to combat global warming?

In the case of Pesaro we have long since started the project that we call “bicipolitana” which we have shared with other cities; a truly functioning network of cycle paths which, through the intuition of colour, lines and above all the real points of interest that connect the city. It has greatly reduced the use of the car, so much so that we are within the top rankings for real, daily use of bicycles.

In the Pinqua project we included a fairly innovative element, at least for a historic center of Roman structure: we experimented with the carbon free Decumano project by building a system which, using the principle of condensation and the nearby river, exploiting the temperature differentials between the warmer surface water and colder underground aquifers, brings cooling and heating to public buildings in a completely sustainable way.

There is also the issue of phenomena that we have had to deal with. It is a good thing that the Caretta Caretta turtles have come to nest on the beach of Pesaro, and now also in Jesolo, but it confirms how the sea temperature is rising. The same thing goes for the self-regenerating storms that we have experienced with quantities of precipitation difficult to predict.

All this to say that we are including these themes in our actions and that dialogue between cities, the city network, is important.

MARY HAMMOND

The water that flows in the rivers of our city Paducah is truly fundamental, because the city is located right in the center of the country, between Chicago, Memphis and New Orleans. Paducah sits at the confluence of the Ohio and Tennessee rivers and serves to connect these cities.

All goods travel and flow along these rivers to the Gulf of Mexico.

These rivers have dams created for navigation and to power hydroelectric plants. Between two lakes there is an area that UNESCO has recognised as an area to be protected.

This area has also been the subject of studies and analysis at an educational level. It is also important for the transport of fresh water – fundamental for supporting life in this area.

Furthermore, the people around this area have also developed businesses and activities that continue to thrive and support the area itself.

Even from the point of view of migratory flow, the people who arrived here began to bring their own culture, their own cultural baggage and we saw a very rich exchange of good practices and culture.

This area, therefore, brings together many cultures and many ways of living. And it also conveys the stories of the people who are no longer here or who live here, developing artifacts and products that are fundamental and that truly represent the society and culture of the area.

We open our doors to the UNESCO Creative Cities network because water is fundamental for businesses, institutions and the community.

So we advocate, educate and carry out educational activities at an international level; the sharing of best practices between the various cities is also fundamental for us.

I am convinced that objective 17 of the UN Agenda 2030, and therefore creating partnerships, is exactly the objective that we are following within our network and within our organisations. Through the development of their own projects, they are working to create partnerships and shared plans.

This network has many functions and I would also like to underline the coordination role that our city has within the cluster.

In the network of our Creative Cities and within our cluster we are working hard and we are also doing the same at the local public administration level.

So the objective is really to review the activities advocated and programmes dedicated to high schools, through the work of two staff who have implemented tutoring programmes for our students.

A priority therefore, at a governmental level, is to bring these issues to the table of the Public Administration, but above all to involve sectors such as education and the health sector.

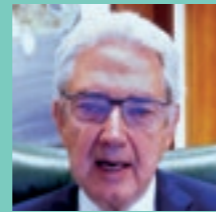
Collaboration with the UNESCO Creative Cities is essential in the continuance of pursuing this scenario, this direction and to support others.

This advocacy activity on which we focus a lot really has the power to reach everyone and the companies that are part of our network.

The UNESCO Creative Cities network is not just a fundamental partner on the path to economic prosperity.



VITTORIO SALMONI
UNESCO Creative Cities
Coordinator



FRANCO BERNABÈ
President of the Italian
National UNESCO
Commission



FRANCESCA MERLONI
UNESCO Goodwill
Ambassador



GEA DAZZI
City Councillor of
Carrara, Creative City
for Crafts and Popular
Art



ENRICO COLOMBO
City Councillor of
Como, Creative City for
Crafts and Popular Art



MAURIZIO MOSCATELLI
President of the
Lake Como Industrial
Acqueduct



MAURA NATALONI City
Councillor of Fabriano,
Creative City for Crafts
and Popular Art



DANIELE VIMINI
City Councillor of
Pesaro, Creative City
for Music



MARY HAMMOND
City of Paducah (KY)
USA - Creative City for
Crafts and Folk Art -
International Cluster
Coordinator

ANDREA ROLANDO
Water, between nature and artifice in UNESCO landscapes

With the cycle tourism ring that unites 25 UNESCO sites and programmes, promoted by the Polytechnic of Milan with the support of VisitPiemonte, we wanted to propose a responsible tourism model that would allow all the places identified to be reached through the use of train, bicycle and public transport.

The characterising element of this project is the presence of rivers which facilitate its supporting structure. Behind this initiative there is an idea of a territorial project.

The UNESCO sites and programmes constitute the anchoring elements to promote the routes, but what is important is that those marginal areas that constitute the space between the sites are also valued.

This model has been applied to different parts of Italy: between Puglia and Basilicata, between the Adriatic and the Tyrrhenian Sea starting from Ravenna and ending in Cerveteri and Rome and in Sicily with particular reference to the Madonie. We are working on a similar project in Lombardy. This is a replicable model. A model that can use water as a reference: for example, in the Puglia-Basilicata route we used the Apulian aqueduct – an extraordinary work, more than 400 kilometers long, as the backbone.

The concept underlying our work is to put marginal areas at the centre. The intermediate space is, in fact, not an empty space but a space rich in meaning.

Cycle tourism has the advantage of allowing us to literally incorporate the landscape; that is, to make us absorb the values of the places we pass through and to activate a process that we call “situated knowledge”. This is a value that we try to promote and which is particularly suited to the development of local tourism, active tourism and, above all, knowledge tourism.

We are convinced, in fact, that the assigning value really starts from knowledge of the heritage of our landscapes. In this sense we believe that the territorial project, as we understand it, is a very powerful project. It lends itself, for example, to accompanying school children and to make the inhabitants of these areas more aware.

By connecting the network of UNESCO sites and programmes with water, we can see how many of these places are linked to the presence of this element and how this project of ours intersects other, let's say transversal, elements such as for example historical architecture, engineering works, literary landscapes, the industrial landscape and also contemporary art.

Connecting outdoor tourism and cultural tourism.

LAURA ZANOTTI E AGOSTINO GIAMPIETRO
Contest for High Schools

We were called to participate in the Forum not as mere listeners but as protagonists, just as the protagonists are above all the children of our schools.

We have therefore developed a synergy aimed at realizing that creativity that is talked about so much in this Forum and we believe that it represents a strategic factor for sustainable development.

The objective is to improve the quality of education because only through this improvement can we plan something together that is aimed at an effective ecological transition.

We would like to leave the message to our young people that, despite all the critical issues that must be faced, the young know that the future of young people is still to be written. We are convinced that all this can be done by them, personally.

Starting from these considerations, we wanted to set up a contest aimed at them.

The title is “Signals from the future”.

Second grade students will be invited to create a scenario of themselves talking to each other about the future in 50 years. They will exchange information and ideas about what the world will be like in 50 years.

We will leave ample freedom of action to creativity and imagination really because, as educational institutions, we want to provide a sort of substrate which we have in some way borrowed from reflections that come from the Joint Research Center. This is the research center for knowledge and scientific competence headed by the European Commission and which lists a whole series of very important transversal skills that do not immediately relate to the disciplinary objectives of the various subjects.

The orientation today is shifting towards the acquisition of these transversal skills. In particular, we were intrigued by a triad of skills: future literacy, adaptability and exploratory thinking.

So starting from this, students must somehow project themselves towards the future and try to describe it in the most varied form without any constraints.

There are three principal evaluation criteria: innovative capacity (to create a product that is original and innovative), the ability to make this product usable, especially in diffusion through social media and the web in particular and then above all the ability to establish critical reflection in the public who will read, observe, study and analyse these products.



ANDREA ROLANDO
Polytechnic of Milan
Dept. of Architecture
and Urban Studies



LAURA ZANOTTI
Territorial School Office
Biella



AGOSTINO GIAMPIETRO
Territorial School Office
Biella



VITTORIA POGGIO

The topic of climate change is a priority on the agendas of all Governments that reflects and reverberates on our lives, on the production system, on large, small and medium-sized enterprises and which confines us to the boundaries of increasingly stringent rules.

The theme of water, and naturally that of its conservation, has become central since we were forced to deal with the problem of drought which has complicated the lives of all of us. Hundreds of agricultural companies have had to face the problem, implement emergency measures to save their harvests and, consequently, to save the products that we put on our tables and the national and international markets.

All this is making us face the need to build new paradigms to safeguard not only everyone's health, but also the quality of our artisanal, industrial and tourist produce that forms the basis of economies and territories and which represent our culture and our identity. A virtuous example in this sense is the Alpine Convention, to which the City of Biella is a signatory. We hope that it can become a guide to achieving the objective of sustainable and practicable development in everyday life, free from ideological conditioning or fanaticism.

I would like to thank everyone for having given life to the UNESCO Creative Cities Forum which I hope is only a starting point and not a point of arrival to reach the goal of bringing us ever closer the horizon of a new perspective in harmony with the protection of our water, of our lands, our air and our countries.



VITTORIA POGGIO
Councillor for Culture,
Tourism and Commerce of
the Piedmont Region

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