



The Second Dolomite Conference on the Global Governance of Climate Change



5<sup>th</sup> - 8<sup>th</sup> October 2023  
Trento - Bolzano

**CONFIDENTIAL AND DRAFT CONCEPT PAPER (AUGUST 2023)**

## INTRODUCTION: A NEW HOPE FOR CLIMATE – ACTION BEYOND WORDS

**“At a time when we should be accelerating action, there is backtracking. At a time when we should be filling gaps, those gaps are growing. We are hurtling towards disaster, eyes wide open – with far too many willing to bet it all on wishful thinking”**. The UN Secretary General, Antonio Gutierrez recently warned<sup>1</sup> that we risk a sort of dangerous acquiescence. The battle for mitigating (or adapting to) climate change, seems to have lost political steam.

The starting point of the second edition of the DOLOMITE CONFERENCE on GLOBAL GOVERNANCE of CLIMATE CHANGE is the world seems walking towards its iceberg eyes wide open. And yet, “we” (as part of the community of institutions, scientists, companies, media advocating for the transformation of the world towards a new paradigm) also need to quickly acknowledge that we may have made some big mistakes.

We have not engaged with enough passion with an enough wide portion of the citizens. We have, indeed, lost too much time in “wishful thinking” and rhetoric appeals with very little results. We have not tried hard enough to change the institutional infrastructures that were conceived to govern a much more stable world. Some companies may have mistaken a fight for (their own) survival into a marketing effort. And not enough of thinking was allocated to creatively and pragmatically reflect on the trade-offs that the war to climate change opens up.

Monday, July 3<sup>rd</sup> was **the hottest day** (for the first time it was above 17 Celsius degrees<sup>2</sup>) since human beings started measuring temperatures. The record was beaten three more times in the rest of the month and even the **Oceans** overcame a threshold (20 Celsius degrees) that appeared to be like a Maginot line beyond which we risk losing the most powerful thermostat that prevents global heating to spiral out of control.

On June 27<sup>th</sup> the sea ice around **ANTARTICA** was thinner than ever: it is like the frozen continent has lost 2.5 million squares of ice area vis-à-vis average of the last thirty years and 1 million squares as opposed to its former worst year (2022)<sup>3</sup>.

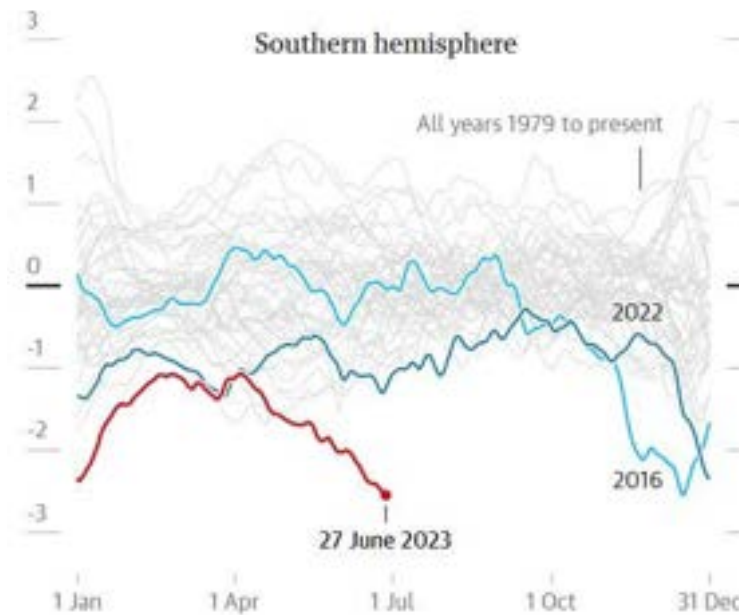
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<sup>1</sup> Press conference on climate on the 15<sup>th</sup> of June 2023, New York, UN Headquarters

<sup>2</sup> 17.18 surpassing the previous record of 16.92 in August 2016. Source: US National Center for Environmental Protection (NCEP)

<sup>3</sup> Sea Ice Index, National Snow and Ice Data Centre

**FIGURE 1: SEA ICE AROUND ANTARCTICA DECREASING OVER TIME, FROM THE 1981-2010 AVERAGE\*, IN MILLION SQ KM.**



Source: Vision on Sea Ice Index, National Snow and Ice Data Centre data and The ECONOMIST graphics  
 Note: \* 5-day trailing average anomaly

Two and half million squares is about losing a country seven times the size of Italy, 15% of the total surface of the frozen continent holding 70% of freshwater of the world: its melting would raise sea levels of 60 meters. The melt of the glaciers is one of the most worrying of a few tipping points that scientists fear. According to some of the IPCC<sup>4</sup>, we may be close to trigger one of the few processes which may end up into climate spiraling out of control.

And yet, we cannot even say that we are not “waking up” because climate change is far from “our own eyes” (and thus hearts). It is indeed entering into our lives with the insistence of those weather forecasts that have been for decades the most popular TV daily shows.

In July, in hyper-conservative and climate change skeptical **Texas**, the thermometer repeatedly crossed the threshold beyond elderly are suggested not to go out of home for most of the day. China is equipping itself to save from rising sea levels **Shanghai** and Beijing was hit by unprecedented typhoons at the end of July. Africa’s most populous city, **Lagos** is experiencing ever more devastating floods;<sup>5</sup> this year pilgrims of the August visit to **Mecca** (Hajj) will face temperature that may overcome 50 Celsius and Saudi Arabia is rationing access<sup>6</sup>. In 1980, **Marmolada**, the most iconic glacier of the Dolomite, has lost 85% of its ice and this is the trigger of avalanches like the one that claimed 11 lives last year<sup>7</sup>.

We may be losing the battle that was supposed to give a purpose to an entire generation. And climate change seems a case of a wider, more worrying trend where **we are losing the very trust into our intelligence** (and science) as the force that may still “change the world”. The “homo sapiens” (especially in the West) sometimes appears like **paralyzed by a complexity** that overwhelms the

<sup>4</sup> Inter-Governmental Panel on Climate Change  
<sup>5</sup> CNN, August 1<sup>st</sup> 2021  
<sup>6</sup> The Muslim News, 2<sup>nd</sup> July 2023  
<sup>7</sup> WIRED, 6<sup>th</sup> July 2022.

intellectual tools we employed for making sense of a more stable world. Incapable to make sense of multiple crises, to conceive solutions, to move into actions beyond words.

And yet younger generations, many in the “global south” and whoever is still nurturing expectations in the future, are not willing to surrender. Most of the people is not ready to “go gently in that good night” (as for the *Interstellar* movie refrain echoing Dylan Thomas’ words). It’s time to wake up and step up. And yet it is also time for “**a new hope**” as for the title of the conference that Vision is convening with its partners<sup>8</sup>. A hope framed differently so to involve everybody in a common fight: all main economic powers (or at least China, India, and USA); all political movements (including the ones that are more skeptical); intellectual and scientists coming from different domains; the media that need to get a less short-term approach so to engage new audiences.

It is true, indeed, that many countries and large parts of the public opinions are backtracking. Doubts are mounting on the threat green transition may pose to entire industries (car making, for instance); on the distribution of its costs that may create new inequalities; on new dependencies that may make some countries to rely on technologies or raw materials (from solar panels to rare-earth components in wind turbines) that they do not control. The scientific community is right to forcefully remind that further delay may spell catastrophe, and yet we need to also reconsider the arguments and the language we have used so far. It is a collective endeavor the one we need to undertake; however, **the name of the game cannot be any longer “us against them”. We need to find a way to understand why politics and consensus around climate change is changing and we need to do it quickly.**

However, the fight against climate change and the need to preserve the environment has already yielded an interesting result: **climate change is the most powerful force towards more effective global governance.** We urgently need to govern a rapidly unfolding globalization in technological, financial, and natural senses (as the COVID-19 pandemic has dramatically demonstrated). Once again, climate change exposes the inadequacy of diplomatic machinery—the UN, the World Bank, and even the COP—that was conceived at the end of World War II and shaped around a different, more stable world order. The existing global governance instruments had great merits in the latter part of the twentieth century, despite several crises. However, they need significant overhauls to respond to the complexities defining the new century.

International public opinion, especially among younger generations, is finally perceiving climate change as an emergency, urging governments to find solutions.

There is an urgent need for a new Green Generation of global citizens with more knowledge and awareness of climate change. To achieve real change and transformation, people need to be informed and aware, and teachers need to be prepared to discuss climate change, while decision-makers require green competences.

Vision and its partners are convening a three-day meeting from the 5th to 7th of October 2023, where visionary intellectuals, policymakers, entrepreneurs, managers, journalists, and political and natural scientists, totaling fifty to sixty individuals, will gather to initiate a discussion on how to win a battle we cannot afford to lose and how to reform global governance instruments to adapt to the 21st century.

## THE CONTEXT ...

The North-eastern part of Italy hosts some of the most famous (and stunningly beautiful) symbols of the fight to climate change in Europe: The Dolomites and Venice. They are highly vulnerable respectively to the melting of glaciers and to rising sea levels. And yet they are also interesting cases of how hard human beings can fight back when the challenge becomes existential.

Venice was built to be sustainable by its earlier inhabitants and it’s the only city which is and has

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<sup>8</sup> A new hope is also the title of one of the first and most famous episodes of the Star Wars saga.

always been free from cars. More recently a cyclopic human made construction (the MOSE) is working as a formidable barrier that others may imitate. The Trentino Alto Adige Region is one of the communities with the greatest traditions of adapting to climate change through both leading-edge technologies and social innovation of its local communities.

Therefore, Vision and its partners decided to convene in the Dolomite area the yearly Conference on Global Governance of Climate Change. This year will also host a section dedicated how this part of Italy can become a case of resilience.

## **... AND THE OBJECTIVES**

As for the title "**A New Hope for Climate**", we need a different approach and a radical change in the mechanisms and of the intellectual instruments we use to govern global problems (most of them conceived in a different century).

The conference objective is thus to act as a catalyst of new ideas (both in terms of governance and projects to pursue) and as a promoter of a different method to govern globalization (which can be applied to other global issues).

Vision initiative is a proper problem-solving space where a very pluri-disciplinary group of participants will create a lab where radical and yet pragmatic ideas may emerge.

The entire work follows a methodology that Vision is successfully applying to the cycle of Vision Conferences on the future of Europe (the 4<sup>th</sup> edition took place in Siena in June 8<sup>th</sup>-10<sup>th</sup> 2023).

The output, the Dolomite Manifesto, will feed directly into the United Nations Conference on Climate Change (COP) which is going to take place in the United Arab Emirates from November 30<sup>th</sup> to December 21<sup>st</sup>, 2023.

## **FIND SOLUTIONS TO COMPLEX QUESTIONS: THE CONFERENCE AS A PROBLEM-SOLVING PLATFORM**

When we consider the "complex problems" which are the defining feature of the 21<sup>st</sup> century, we end up into trade-offs that appear unsolvable and that are, instead, sometimes not even real. Some of them are relevant for the problem-solving exercise that Vision's Dolomite Conference on Global Governance of Climate Change proposes and will give the title to the so called Problem Solving Groups that the Conference will host in the first day:

**1. BEYOND ESG: MEASURE LESS AND MEASURE BETTER? WHICH ARE THE MECHANISMS FOR STEERING PRIVATE INVESTMENTS TOWARDS SUSTAINABILITY?**

**2. THE IDEA OF A GLOBAL ACCOUNTABILITY: IS THERE A WAY TO CONSTRUCT MECHANISMS OF GLOBAL REPRESENTATION? SHOULD THEY PROVIDE FOR A REPRESENTATION SKEWED TOWARDS YOUNG GENERATIONS?**

**3. NEUTRAL CITIES? FINE TUNE THE EXPERIMENTATIONS TO ACHIEVE ZERO EMISSION/ ZERO WASTE IN THE LAST MILE DELIVERY OF FOOD.**

**4. ENERGY TRANSITION AS A LEVER OF SOCIAL JUSTICE: HOW CAN WE MAKE THE CLIMATE CHANGE/ ENERGY TRANSITION AN AGENDA FOR ALL?**

These are, indeed, some of the questions around which the second edition of the Dolomite Conference will ask to eighty talented people coming from different backgrounds and countries to work together so to find some concrete new ideas.

At the very basis of this endeavour, there is, however, the basic intellectual intuition that the trade-offs are not unbreakable. We are convinced that a major part of the problem we need to solve is about cognitive biases that prevent us from thinking outside a black box made of prejudices. The

paradox is that these prejudices have been developing in a world which had just overcome the ideologies that broke in two parts the old-world order and yet they allow people to feel part of competing tribes into an artificially polarized arena. The bottom line is that newspapers, think tanks and universities are – with some remarkable exceptions – full of analysts and yet they miss problem solvers (and problem setters who are good enough to better say the nature of a question before trying to propose solutions).

The so-called “debate” is mostly about observing complexity, where very few are attempting what has defined the homo-sapiens for a few millennia: reducing complexity by breaking it into manageable issues. In this context, the work on solutions are entirely left to endless negotiations, to zero sum games diplomatic bargains that are neither efficient enough not capable to endure enough commitment when single countries go back to their domestic policy making.

We believe that the focus of Vision’s Dolomite Conference is about looking for ideas which can contribute to create concrete solutions to different climate change related issues.

Following the consolidated model of the previous conferences, the outputs of this conference will be conveyed in a general Dolomite manifesto, proposing a different method of integration and an action plan for each of the questions tackled by the four working groups and plenary sessions.

The outputs will be delivered at the Conference of Parties 28 in Dubai.

## THE KEY PEOPLE

Organizer of the conference is Vision, the think tank (whose director is Francesco Grillo who is a Fellow at the European University Institute<sup>9</sup>) with the scientific partnership of the Politecnico of Milan and Bocconi University. These two major institutions launched, in 2022, a joint degree on sustainability which promises to be a concrete case of a pluri-disciplinary teaching and research initiative which envisages the possibility to build new business models on the necessity to adapt/mitigate the effects of climate change.

Confirmed corporate partner will be AXA Italia and our local partner will be Autostrada del Brennero, both will accompany Vision once again after the successful first edition of the Dolomite Conference. The Conference will also be supported by the Province of Trento and by Trentino Marketing.

The chairs of the conference will be **Alexandra Borchardt** (Independent Media Researcher, Journalist and Consultant), **Enrico Giovannini** (former Italy’s Minister for sustainable infrastructures and mobility), **Rohinton P. Medhora** (Distinguished Fellow and former President, Centre for International Governance Innovation), **Cliff Prior** (CEO, Global Steering Group for Impact Investing), and **Barbara Kolm** (Vice President of the Austrian Central Bank and Director of the Austrian Economics Center).

We envisage to have **Sky News El Arabya: this will maximize the possibility to reach out both the North and the Global South**. As for previous Vision events we also expect the Italian Rai to broadcast from Trento. as media partners as well. In agenda we will have journalists from major global and Italian newspapers who will cover the event, such as The Economist, Financial Times, The Guardian, Al Jazeera, Corriere della Sera, Sole 24 Ore and many others.

The Conference will be opened by the land by an overview of the program by the two organizers together with the chairs which will frame the debate.

The program will continue with four working groups, introduced by each group’s rapporteur before the participants will meet into the four groups. Each group will be moderated by one chair who will develop the conclusions of the WG together with the presenter and one rapporteur.

The rapporteur, together with the Bocconi-Polimi joint master’s students, will present the outcomes of the working groups to the plenary during the final day.

The other public plenary sessions will take place on days 2 and 3.

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<sup>9</sup> The team at **Vision** have also included **Clara Donati**, **Margherita Curti**, **Francesco Paresce** and **Giorgia Caianiello**.

The debates of all plenaries and working groups will feed into the general Conference **Dolomite Manifesto**.

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## PLENARY SESSIONS

### **OPENING SESSION “THE TITANIC SYNDROME: ADVANCEMENT ON THE OUTCOME OF COP27, LATEST IPCC AND OUTLOOK FOR COP 28” – DAY 1 (Thursday 5<sup>th</sup> October)**

The "Titanic Syndrome" refers to this tendency that humans seem to have lately developed, to ignore warnings about impending disasters and continue a dangerous course of action until it is too late. This concept can be applied to climate change, as despite the numerous warnings and evidence of its devastating effects, the world has been slow to take meaningful action. COP28, or the 28th Conference of the Parties to the United Nations Framework Convention on Climate Change, is scheduled to take place in December 2023. The primary goal of COP is to continue the implementation of the Paris Agreement, which aims to limit global temperature rise to well below 2°C above pre-industrial levels and pursue efforts to limit it to 1.5°C. The latest update of the Intergovernmental Panel on Climate Change’s (IPCC) report signals that in only 10 years (2034) we



may end up being consistently trapped into a red alert area which is beyond the 1.5°C threshold: human activities are unequivocally causing the Earth's climate to change much faster than in any other period of the history of our planet<sup>10</sup>. This speed will reduce dramatically the possibility to adapt to the climate change and the consequences will be devastating for the humans<sup>11</sup>.

Looking ahead to COP28, it is evident that much work needs to be done to achieve the goals set out in the Paris Agreement. Governments, businesses, and individuals all have a role to play in reducing greenhouse gas emissions and transitioning to a more sustainable future. This may involve investing in renewable energy, reducing energy consumption, adopting sustainable agricultural practices, and implementing policies that promote sustainability.

Ultimately, it is crucial that the world takes action to address the threat of climate change and avoid the "Titanic Syndrome." The consequences of inaction are simply too dire to ignore.

The purpose of this session is to introduce the topics that will be discussed during the upcoming Conference. The objective is to develop proposals for each theme and reconsider solutions to prevent inaction.

How can we reframe our approach to climate change to involve the general public, businesses, governments, and international institutions in addressing more concretely this urgent situation? What could be the new perspective that offers hope and guides us in finding solutions to various aspects associated with climate change?

Addressing the possible Titanic Syndrome related to climate change requires a multifaceted approach and collective action on a global scale. Firstly, we need to acknowledge the urgency and severity of the situation, understanding that the consequences of inaction will be catastrophic. It is crucial to foster widespread awareness and education about the realities of climate change, ensuring that individuals, communities, businesses, and governments are fully informed and motivated to take action. Additionally, we must prioritize sustainable practices and embrace renewable energy sources while reducing reliance on fossil fuels. Implementing effective policies and regulations that encourage emission reductions and promote sustainable development is essential. Collaboration between nations, international institutions, and stakeholders is critical to fostering innovation, sharing best practices, and mobilizing resources. By adopting a proactive and comprehensive approach, we can overcome the Titanic Syndrome associated with climate change and steer humanity towards a sustainable and resilient future.

## **1. THE FUTURE OF ENERGY: STORAGE, GRIDS, RARE MATERIALS AND REGULATIONS TO REMOVE THE BOTTLENECK OF A RENEWABLES BASED WORLD - DAY 1 (Thursday 5th October)**

*What does it take to achieve the ambitious targets of global energy coming from renewables that most countries have imposed on themselves? What are the greatest technological bottlenecks? What are the solutions to scale up in terms of storage and transmission? Which incentives can encourage adoption among consumers and local communities?*

So many problems are surrounding *climate change* and, in the last decades, states and international organizations have drawn a common line to mitigate the actions that cause damages to the Earth. In the 21st United Nations Framework Convention on Climate Change, celebrated in December 2015 in Paris, it was agreed to keep the global average temperature increase well below 2 °C compared to pre-industrial levels.

As part of this process, a key aspect is to increase the use of renewable energy, thereby reducing

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<sup>10</sup> We here need to acknowledge that average temperatures of planet, as well as the concentration of CO<sub>2</sub> in the atmosphere have been much higher than now in some specific periods (for instance 100 million years ago when volcanoes dominated the landscape and dinosaurs were the dominating species).

<sup>11</sup> We also need to admit that the challenge posed by climate change to other species is of a different type: human civilization risks to be destroyed because it is much more sophisticated and, thus, vulnerable of that of animals. It is, thus, possible that we will end up in a situation where the first casualty of the natural disaster is the species that originated it.

the amount of greenhouse gases being spread, especially using non-renewable energy sources. In fact, the proliferation of the greenhouse effect is having serious effects on the average temperature we face on our planet, increasing it at an excessively high rate.

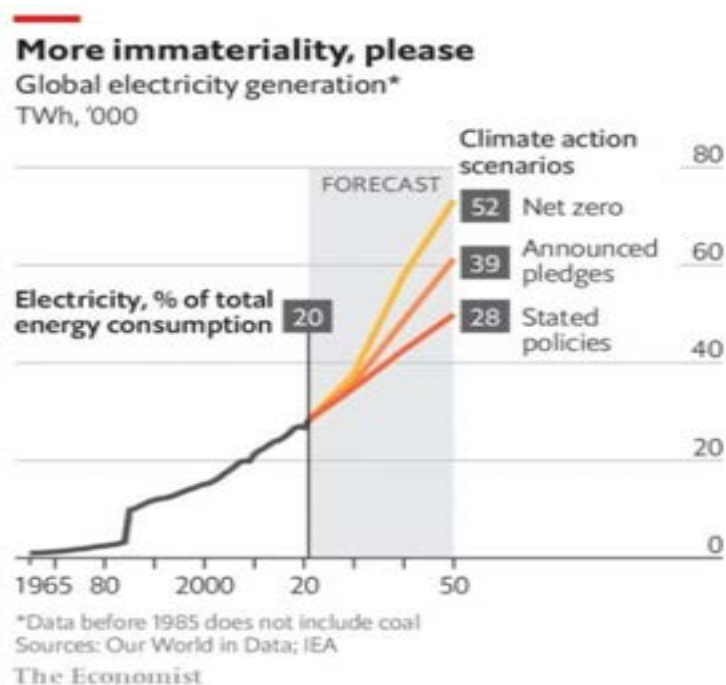
Much of the focus will be on the energy sector, which currently accounts for just under 75 per cent of greenhouse gas (GHG) emissions generated by the combustion of hydrocarbons in the electricity, industry, transport and heating sectors.

The main objective of the energy transition is to transform the world system from one based almost exclusively on the production and consumption of fossil fuels to one system in which the sources of energy are renewable energy sources, such as wind power, solar photovoltaics or electric vehicles.

This results into a double objective: a higher share of total energy consumed coming from electricity; as well as a higher share of electricity consumption coming from renewables (where, in fact, most of electricity is currently produced by using gas and other fossil sources).

It is also essential to say that the reasons for this transition are not only about climate change. Renewables (solar, wind and, indeed, even water and the technology to produce nuclear) are, indeed, much less concentrated than fossil: in theory not only every country of the world can – at a different extent – produce renewables-based energy; but also, every local community and citizen. This would make the entire system less unstable, less dependent on dictators (political scientists have long argued that natural resources endowed countries tend to be run by rentiers), more equal because the energy markets would, in theory, tend to perfect competition amongst a much larger number of sellers.

In fact, although electricity today constitutes only 20% of the world's energy consumption, in the future "it will be the spinal column of the entire energy system", as stated by Gerhard Salge, Chief Technology Officer at *Hitachi Energy*, a leading supplier of grid equipment. His company estimates that by 2050 the world will need four times more electricity than today, as for the graph below.



**Source: The Economist**

While the overall goal of the energy transition is clear, the pathways to efficient decarbonization are not obvious and may differ, depending on the context. The road to the renewable energy transition is not easy, as there are several 'bottlenecks' that could be brakes and obstacles to an efficient transition.

**Among the different elements that play a key role in this game, the debate led to identify five “gaps” (as for UN’ secretary general words). The first two are mainly about technologies and investments; the last two about the capabilities of (global and local) policy makers; the third is a combination of both:**

1) Mismatch between demand and supply due to weather conditions. Both the production of wind and solar are intrinsically not stable. This is true also for demand which again is driven by many factors, including again natural factors.

Paradoxically the summer risks to be the season with more supply of solar energy and the least demand for it (due to longer daylight and higher temperature<sup>12</sup>) and the opposite it may be true for winter. Storage of excess supply is one of the bottlenecks that is generating great business opportunities that the conference will try to explore.

2) Infrastructure for transmission. This is a double challenge because much higher share of electricity on total energy consumed, will require much more transmission power, but also because a grid that becomes – in theory – a “many to many” network<sup>13</sup> (where technically every consumer/ household/ local community can also be a producer/ seller of energy produced in excess) will imply a much higher sophistication. This “gap” is one of the most expensive investments needed to accomplish the transition. The Conference will explore how can we build a business case can be developed to show that the cost of the initial investment will be repaid by future savings, higher security of the grid and less inequalities.

3) Supply risks of some of the key materials that the transition will require.

One study identified thirteen elements that present a very high or high risk, including, copper, lithium, silver, tellurium. Tellurium, mainly required for producing photovoltaic solar cells, presents the highest risk.

Paradoxically the risk of the concentration of critical resources in some countries (as it happened with oil and gas) will also exist to realize the new model.

It will be a different kind of risk because whereas with oil, it was the raw supply itself to be concentrated, here we are talking about some much more specific minerals that are needed to manufacture some of the key “machines” required by the new model (turbines, solar cells, batteries, ... ). This is not a marginal difference because technologies are providing the alternative to their very vulnerability (as for the beyond lithium batteries).

4) Political gridlocks at global level.

Some countries (mainly oil and gas exporters) are expected to resist the transition and to even use the vetoes that they are holding in multilateral organizations. The same may be true for some oil companies that are lobbying for delaying the change.

However, the cases of the hosts of COP 28 demonstrate that it is possible to find a venue towards development without oil<sup>14</sup> (DUBAI) or beyond oil (as for ABU DHABI that is building some of the largest solar factories of the world leveraging on the location advantage of the desert).

Likewise, the example of all car makers shows that even fuel-based industries have sometimes accepted the challenge of the turnaround.

5) Political gridlocks at local level.

A new energy paradigm will require the redesign of cities. Not less important is to find mechanism for overcoming the NIMBY (“not in my back yards”) and bureaucracy factors that are making difficult

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<sup>12</sup> Although global heating is increasingly the demand for air conditioning. And most likely helped Europe to get rid of its dependency on imports of gas during the Ukraine war.

<sup>13</sup> It will be similar to the INTERNET

<sup>14</sup> On this, see the VISION paper (AUGUST 2023) on..

for Europe and the USA to equip themselves with the capacity for wind and solar energy.

The session on “THE FUTURE OF ENERGY” will convene the mix of companies and policy makers so to clarify the nature of one of the most important battle in the war to climate change and disentangle the gridlocks that are delaying the transition.

## **2. CLIMATE CHANGE AS A GENDER/AGE AGENDA – IS THERE A DIFFERENT WAY TO PERCEIVE NATURE AND FUTURE ACROSS GENDERS AND GENERATIONS? - DAY 1 (Thursday 5<sup>th</sup> October)**

Climate change affects people in different ways – depending on where they live, on their social status and apparently also on their gender and age. This panel will specifically focus on the different perceptions of the urgency and gravity of the crisis across gender and age.

From a gender perspective, the panel will address how climate change impacts women and men differently, on the basis of distinct vulnerabilities and opportunities. This perspective could shed light on how traditional gender roles and societal norms might influence climate-related decisions, actions, and responses. Do women tend to care more about nature? Are they more disproportionately affected by climate change due to existing gender inequalities? Do they express an approach that is different from the one we expect from men?

A large body of research shows that women are, on average, more likely than men to be concerned about the environment. Moreover, they tend to have stronger pro-climate opinions. Scholars have tried to explain such differences on the basis of gender socialization and value systems (e.g. women are raised with a stronger focus on compassion and altruism than men), perception of general risk and feminist orientations such as commitment to egalitarian values and social justice. Some other researches have underlined a link between gender differences in climate concern and a country's GDP per capita<sup>15</sup>. According to these studies, although both men and women tend to express less concern about climate change in wealthier countries than in poorer countries, the decline of concern is more significant among men.

Studies conducted in the US have shown that, although a similar proportion of men and women perceive global warming as a human-caused and real issue, women consistently attribute to the same problem a higher risk. A greater proportion of women, compared to men, also think that climate change will not only harm them personally, but it will also harm people, plants and animals in the US<sup>16</sup>.

At the same time, examining climate change through the lens of age reveal how the younger and older generations perceive nature and envision the future. Are young people, who are inheriting the consequences of current climate actions, more active and vocal advocates for urgent climate action? Do older generations hold distinct perspectives shaped by their experiences, wisdom, and concerns for future generations? How can intergenerational collaboration and dialogue contribute to finding sustainable solutions?

A 2018 Gallup analysis conducted in the US, for example, found a “global warming age gap” in some beliefs and risk perceptions: 70% of adults aged 18-34 said they worried about global warming, compared to 56% of people aged 55 or older<sup>17</sup>. Another study conducted across EU countries showed that people from younger generations tend to place responsibility of solving climate change on the business/industrial sectors and environmental groups more often than the

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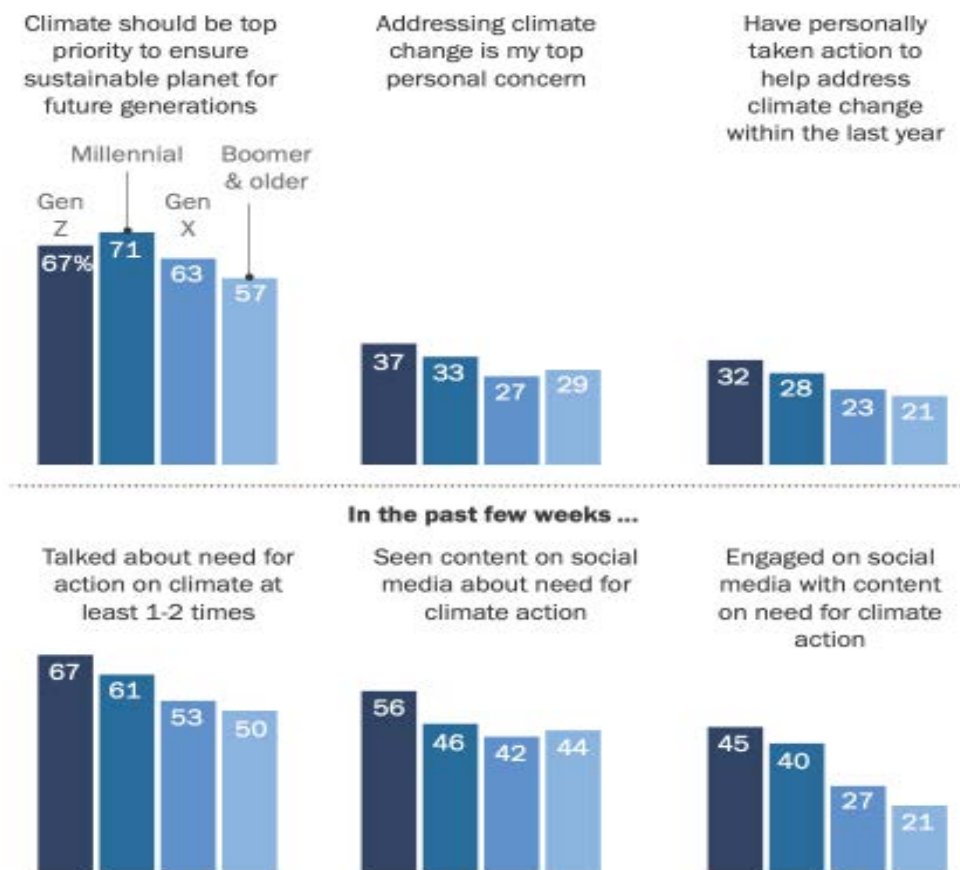
<sup>15</sup> “Facing Change: Gender and Climate Change Attitudes Worldwide”, S.S. Bush, A. Clayton, on American Political Science Review, 2023

<sup>16</sup> “Gender Differences in Public Understanding of Climate Change”, Ballew, M., Marlon, J., Leiserowitz, A., Maibach, E., Yale Program on Climate Change Communication, 2018,

<sup>17</sup> “Global warming age gap: younger Americans most worried”, Gallup, 2018

preceding generations do<sup>18</sup>. Moreover, younger generations seemed to assume personal responsibility for climate change more than older generations, using environmentally friendly alternatives to personal cars and considering carbon footprint before purchasing products.

**FIGURE 1. PERCENTAGE OF US ADULTS WHO SAY:**



**SOURCE: PEW RESEARCH CENTER, SURVEY FROM APRIL 2021.**

The multiple perspectives on climate change force us to think beyond the conventional approach and to consider the interconnectedness of gender and age in shaping our understanding of nature and the future. Climate change is not a one-size-fits-all issue; understanding the unique experiences, concerns, and aspirations of different genders and generations can enrich our efforts in crafting a more equitable and sustainable future for all. By acknowledging the diverse ways in which individuals perceive nature and the future, we can foster meaningful dialogues, collaboration, and policies that truly embrace the needs and aspirations of every member of society in our collective journey towards climate resilience.

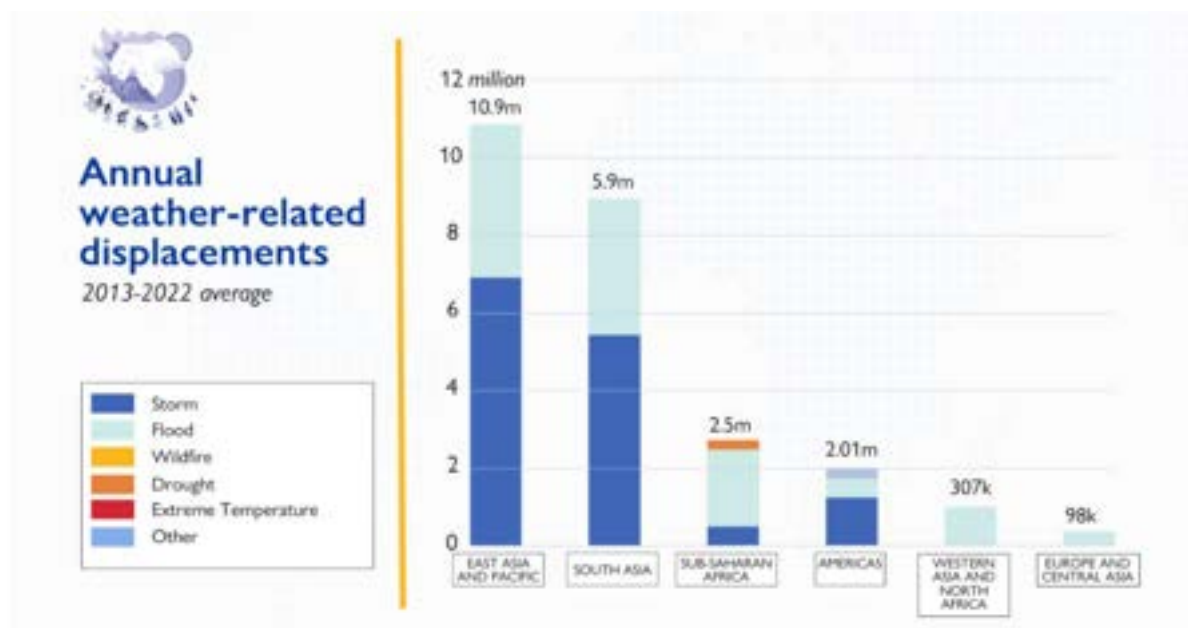
**3. BACK TO MARE NOSTRUM: CLIMATE CHANGE AND MIGRATION FLOWS TO EUROPE (IN PARTNERSHIP WITH EMERGENCY) DAY 2 (Friday 6<sup>th</sup> October)**

As climate change and its consequences are rapidly worsening, some parts of the earth are made uninhabitable by extreme weather events, such as floods, droughts, heat waves, wildfires and

<sup>18</sup> “The differences of climate change perception, responsibility and climate- friendly behavior among generations and the main determinants of youth's climate- friendly actions in the EU”, A. Skeiryte, R. Krikstolaitis, G. Liobikienė, on Journal of Environmental Management, Vol. 323, 1 December 2022.

slower-moving issues as rising seas. The UNHCR has described climate change as the “*defining crisis of our time*”, whilst the European Institute of the Mediterranean calls it a “*threat multiplier in the 21<sup>st</sup> Century*”<sup>19</sup>; the extreme consequences of climate change are forcing tens of millions of people to leave, making them “*climate migrants*”: this is happening mostly within country borders with internally displaced people, but cross-border migration caused by climate change is also on the rise<sup>20</sup>. In 2020, disasters led to over 3 times as much displacement –around 30.7 million people – as conflict and violence, which displaced 9.8 million people. 98% of disaster displacement in 2020 was due to weather and climate hazards<sup>21</sup>.

**FIGURE 1. WORLDWIDE ANNUAL WEATHER-RELATED DISPLACEMENTS IN MILLIONS (2013 – 2022, AVERAGE).**



**SOURCE: INTERNATIONAL ORGANIZATION FOR MIGRATION (IOM), 2023<sup>22</sup>**

East Asia/Pacific, South Asia and Sub-Saharan Africa<sup>23</sup> are among the most vulnerable regions to the consequences of climate change and will most likely witness large increases in both internal and cross-border migration<sup>24</sup>. This is particularly alarming as more than half of the developing world’s population lives in those three areas. Moreover, people already living in vulnerable conditions are most likely to face risk from the negative impact of climate change. These groups include indigenous population, peasants, women, people with disabilities, citizens of small-islands, individuals living in conditions of poor access to water, and exposed to desertification, land degradation and drought<sup>25</sup>. According to the World Bank’s projections, 216 million people from six

<sup>19</sup> “Climate Migration in the Eye of the Storm: A Future Challenge for the Mediterranean Region”, Matías Ibáñez Sales on European Institute of the Mediterranean (IEMed), 2022

<sup>20</sup> The IPCC report in 2022 stated that “*climate change and weather extremes are increasingly driving displacement in all regions around the world.*”

<sup>21</sup> “Displacement in a changing climate”, IFRC, 2021

<sup>22</sup> “Climate Change and Human Mobility: Quantitative evidence on global historical trends and future projections.”, IOM (Beyer, Robert; Milan, Andrea).

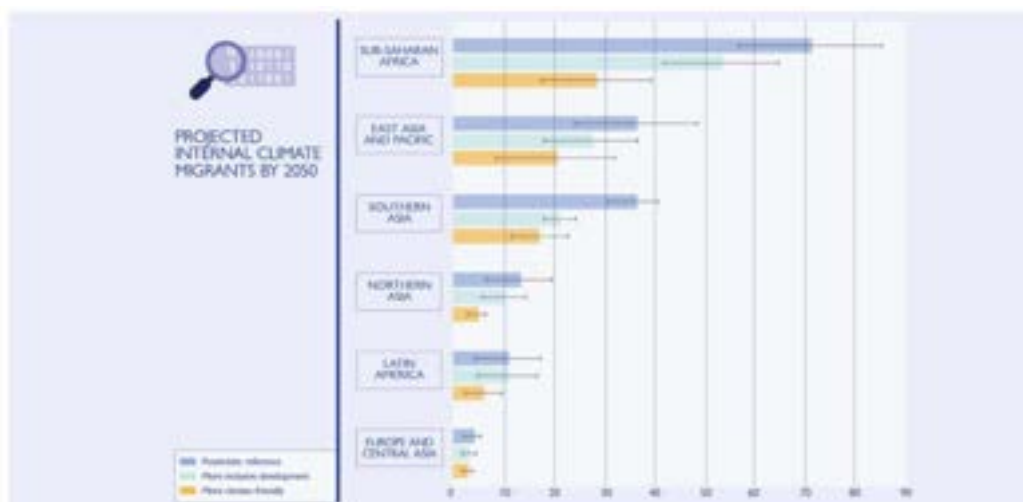
<sup>23</sup> “Climate Change Is Fueling Migration. Do Climate Migrants Have Legal Protections?”, M. Prange on Council on Foreign Relations, 19 December 2022.

<sup>24</sup> “The slow onset effects of climate change and human rights protection for cross-border migrants”, Office of the United Nations High Commissioner for Human Rights (OHCHR), in collaboration with the Platform on Disaster Displacement (PDD), 2018.

<sup>25</sup> “The impacts of climate change on the human rights of people in vulnerable situations”, Report of the UN Secretary General (A/HRC/50/57), 6 May 2022.

regions<sup>26</sup> could be forced to migrate within their countries by 2050. In particular, the Sub Saharan region will see the highest number of internal climate migrants (86 million by 2050)<sup>27</sup>. Today, the Mediterranean region is one of the world’s main climate change hotspots: the region is warming 20% faster than the global average, annual precipitation rates will decrease considerably in the upcoming years and sea-level rise may increase by between 20 and 110 cm by the end of the century, according to the First Mediterranean Assessment Report (MAR1) on Climate and Environmental Change prepared by the independent network of Mediterranean Experts on Climate and environmental Change (MedECC)<sup>28</sup>.

**FIGURE 2. ESTIMATED CLIMATE-CHANGE-INDUCED INTERNAL MIGRATION BY 2050 BY WORLD REGION. BARS: PROJECTIONS BASED ON CLIMATE MODEL ENSEMBLE AVERAGES; WHISKERS: UNCERTAINTIES ACROSS CLIMATE MODELS.**



SOURCE: IPCC ON DATA FROM CLEMENT ET AL. (2021).

Sharing with other countries a strategy of mitigation and adaptation to climate change is not only a moral obligation towards climate migrants and future generations but is also economically convenient - which is even more obvious when we talk about the nexus between climate change and the effects of uncontrolled migration towards Europe. Although migrants’ remittances have often had a positive impact on the countries of origin<sup>29</sup>, migration also has the negative consequence of depriving countries of the human capital that could eventually help them escaping the underdevelopment trap; it also has a political cost for Europe, where migration continues to be a highly controversial issue. As the UN High Commissioner for Refugees Filippo Grandi stated, “We need to invest now in preparedness to mitigate future protection needs and prevent further climate caused displacement. Waiting for disaster to strike is not an option”.

Climate migration drivers should also be considered in the EU development cooperation frameworks with the Southern and Eastern Neighborhood and with Sahelian countries, since the Sahel – North Africa – Europe axis is going to be directly hit by climate-induced migration in the following decades.

It is time that Europe goes back to Africa with a completely different mission vis-à-vis the colonial

<sup>26</sup> Sub-Saharan Africa, South Asia, Latin America, East Asia and the Pacific, North Africa, Eastern Europe and Central Asia

<sup>27</sup> Groundswell Report Part 2: Acting on Internal Climate Migration, World Bank, 13 September 2021

<sup>28</sup> Mediterranean Experts on Climate and environmental Change (MedECC). Climate and Environmental Change in the Mediterranean Basin: Current Situation and Risks for the Future. First Mediterranean Assessment Report, 2020.

<sup>29</sup> Migrants sent home \$800 billion remittances to these countries in 2022, World Economic Forum, February 2<sup>nd</sup> 2023, <https://www.weforum.org/agenda/2023/02/remittances-money-world-bank/>

decades: redesigning with Africans the continental infrastructures so we can all be better equipped to the incoming climate Tsunami.

#### 4. INTELLIGENT INFRASTRUCTURES AS A KEY TO MUCH MORE EFFICIENT MOBILITY - DAY 2 (Friday 6<sup>th</sup> October)

For years we have been debating about how quickly electric cars should replace petrol fueled ones amongst policy makers. And for at least two decades we have been talking about self-driving vehicles amongst companies. And yet the discussion is still missing an extremely important pre – condition to really allow the transition.

Just as it happened one century ago when American and European cities were totally redesigned to move from a mobility dominated by horses to one centered on cars, today we need new intelligent urban roads and sensors equipped highways to host more efficient, self-driving or even flying vehicles (and drones). This in turn will require governments and majors to have the vision and the intelligence to call for the financial and regulatory efforts so that a new transportation system is developed. The experiences of some countries and cities and entrepreneurs can be a case to inspire.

*CONCEPT NOTE TO BE FURTHER ELABORATED*

#### 5. THE FUTURE OF THE INTERNET: HOW CAN BIG DATA (AND AN AI-POWERED ANALYSIS OF THEM) CAN CHANGE THE SUSTAINABILITY GAME? - DAY 2 (Friday 6<sup>th</sup> October)

Data can challenge basic human rights, such as privacy and intellectual property, as well as institutions, posing threats that regulators are trying to cope with. However, it can also lead to a quantum leap in societies' capability to solve problems. Regarding climate change, the significantly increased information and advanced capabilities to analyze data can greatly enhance the accuracy of predictions and the identification of specific actions needed to mitigate and adapt to the impacts of climate change.

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*CONCEPT NOTE TO BE FURTHER ELABORATED*

#### 6. THE "POST GDP AND EBITDA" WORLD – HOW CAN WE BETTER MEASURE IMPACT SO THAT FIRMS AND GOVERNMENTS TAKE ON BOARD SUSTAINABILITY? (WITH OXFORD BLAVATNIK SCHOOL OF GOVERNMENT) – DAY 2 (Friday 6<sup>th</sup> October)

Many of the problems that people around the world face nowadays — such as **climate change, biodiversity loss, financial instability, inequalities of opportunity** — derive from a **deficiency in the moral foundations of capitalism**. They are collective action problems that are not addressed within the current framework of the market economy.

A central reason for this deficiency is that **the prosperity of nations and businesses is not measured appropriately**. National and business prosperity are measured primarily in terms of GDP and shareholder value, respectively. This deficiency is not inherent in the capitalist system. Rather, it is **a failure to measure success within the capitalist system in ways that promote the pursuit of human flourishing**.

GDP and shareholder value do not take proper account of environmental degradation and social fragmentation. For example, climate change and biodiversity loss clearly endanger the present and future of humanity, but these phenomena are often not counted as detriments to GDP and shareholder value. Capitalism is a system that enables people to mobilize resources, goods, and services in the pursuit of given goals. **If the goals are defined and measured inappropriately, then the market system will function inappropriately as well.**



On this account, a major challenge of our times is to rethink the measurement of prosperity, at both the national and business levels. By measuring prosperity in ways that are consistent with the achievement of meaningful human wellbeing — individually and collectively, now and in the future — by accounting and reporting on such measures, we come into a position of **conceiving how the capitalist system can be redirected to serve the genuine interest of humanity and the rest of the natural world.**

Though there are many existing measures of wellbeing, none thus far has been focused exclusively on the pursuit and achievement of moral values. The **SAGE Dashboard** is the first purely normative dashboard of wellbeing, being composed of 4 elements:

**i) Solidarity (S)**, measuring social cohesion and embeddedness); **ii) Agency (A)**, measuring empowerment; **iii) Gain (G)**, in the economic sense of GDP and profit; **iv) Environmental sustainability (E)**, measuring the ability of the natural world to sustain and regenerate itself. All these four elements (empowerment, solidarity, economic prosperity and environmental sustainability) are to be understood as a “dashboard”: just as the dashboard of an airplane measures magnitudes (altitude, speed, direction, fuel supply, etc.) that are **not substitutable for one another** (e.g., correct altitude is not substitutable for deficient fuel), so those four indices are meant to represent separate goals. **Only when a country makes progress with respect to all four goals** can there be some grounds for confidence that a **broad array of basic human needs and purposes is being progressively met.**<sup>30</sup>

This can be viewed as a first step towards a “moral capitalism,” in which businesses can compete for profits and consumers can fulfil their needs equitably and inclusively.

## **7. HOW THE MIDDLE EAST (AND NORTH AFRICA) TRANSIT FROM FOSSIL DOMINATED ECONOMY TO BE LEADERS OF RENEWABLE? - DAY 2 (Friday 6<sup>th</sup> October)**

The UN decision to have COP27 to be hosted by Egypt (in Sharm El Sheikh) in 2022 and COP28 by the United Arab Emirates (UAE) in 2023 is a strong confirmation that the Middle East and North Africa (MENA) region is a central player in global efforts to combat climate change. Ahead of the forthcoming conference, MENA has announced targets for renewable energy of 44% by 2050. Having relied on oil and gas as a formidable generator of wealth for decades, it is time for the region to embrace the move to net-zero carbon emissions.

The climate change challenge does, indeed, imply at least three major challenges for the Middle East: how to adapt to an economic outlook where fossil energy will progressively become less central; how to use natural and regulatory advantages that the region may have on renewables; how to tackle risks that climate change may exacerbate, starting from stress on drinkable water.

Ambitious 2050 initiatives such as the Dubai Clean Energy Strategy, aimed at transforming Dubai into a global clean energy center, show the resolve of the United Arab Emirates (UAE) to diversify its energy portfolio. More importantly, the “name of the game” is to embrace renewables not just to contribute to global commitments, but also as a huge business opportunity and lever for local development. The Middle East does, indeed, have a huge location advantage on photovoltaic energy – the desert has got tens of times the average solar exposure as other terrains -, but also the possibility to leverage on much less red tape when it comes to have permissions to build parks dedicated to generating energy from sun or wind.

But as of 2022, renewable energy contributes only 12% of the UAE’s GDP. Going further to reach net-zero targets will take an inclusive, participatory process built on an understanding of local conditions and stakeholders.

The transition of the Middle East will also be the stage for an important geopolitical game.

China’s huge demand for energy is a key contributor to the region's revenue stream, and the energy transition is creating new opportunities to transfer technology, develop infrastructure and strengthen

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<sup>30</sup> Extracts from the paper D. Snower, C. Mayer, “Measuring prosperity ethically”, 20 February 2023

economic ties between China and the Gulf. Europe, however, is much geographically closer and it can play a role in filling the gaps of a new renewables based system. This panel will look into some of the key tools and technologies that businesses and governments can use to help transform the energy sector.

Key discussion points include:

1. What can governments in the MENA region do to meet export demands and keep GDP growth stable while diversifying their economies?
2. How will solar and wind power lead the charge for renewable energy in the region?
3. Which technologies and innovative concepts will be most central to hitting ambitious net-zero targets?
4. As China's stake in the region grows, how will geopolitics affect the transition to renewables?
5. What kind of concrete cooperation can the European Union pursue?

## **8. CLIMATE CHANGE AS THE TRIGGER FOR A LONG-WAITED REFORM OF BRETTON WOODS INSTITUTIONS (WITH INET) – DAY 2 (Friday 6<sup>th</sup> October)**

Climate change is arguably the most powerful catalyst for rethinking the institutions we use to address global problems. The UN system includes some agencies, such as the World Bank (WB), International Monetary Fund (IMF), and International Bank for Reconstruction and Development (IBRD), which should play a pivotal role in co-financing - alongside private funders - the enormous energy transition required to mitigate climate change and make the necessary investments to adapt, particularly in less developed countries. However, these institutions, conceived after World War II to govern a vastly different context, must now confront the challenge of sharing costs and transforming economies. Are their mandates and decision-making procedures agile and effective enough to address this pressing challenge? How should the relationship between institutions and markets evolve?

Right before the Bretton Woods Conference in 1944, Henry Morgenthau, who was then serving as the US Treasury Secretary, asserted that the key to the triumph of the post-war global financial system was to expel *“the usurious money lenders from the temple of international finance”* and to ensure that capital was utilized for the betterment of *“the general welfare”*. As the world faces another critical juncture in global multilateralism amid the aftermath of the Covid-19 pandemic<sup>31</sup>, escalating climate change consequences, a deepening debt crisis, and mounting global economic and geopolitical instabilities, it seems that this visionary approach has been lost. The environment was not taken into account at the Bretton Woods conference. However, the CO2 atmospheric reading was 300 CO2 ppm in the 50s, while now it stands at 413 CO2 ppm. A new Bretton Woods conference might herald a global shift from an oil and gas driven monetary system to a nature-centric one, just as the Bretton Woods conference in 1944 heralded the power shift from the British Empire to the American one.

The civil society itself has been expressing the need to urgently redesign the Bretton Woods Institutions: in July 2023, 74 organizations and individuals endorsed a joint paper<sup>32</sup> in response to the World Bank's public consultation on the WB's "Evolution Roadmap". The joint paper underlined the limitations of the World Bank reform proposals, as they contained an *“incomplete analysis of the current crisis of development [...] which ignores the role of the highly inequitable global financial architecture in causing this crisis and the Bank's role within it”*. Among its recommendations, the paper suggested to “invert the cascade” approach, “putting the public at the core of the World Bank's efforts to support global public goods”, to “develop better metrics for measuring – and policies to tackle – inequality” and to “mainstream climate justice into the Bank's operations”.

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<sup>31</sup> UN Press Release, “With Multiple Crises Battering Developing Countries, Global Economic Governance Reform Key for Sustainable Development, Deputy Secretary-General Tells Bretton Woods Meeting”, 13 April 2023

<sup>32</sup> “Civil Society calls for rethink of World Bank's Evolution Roadmap as part of wider reforms to highly unequal global financial architecture”, the Bretton Woods Project [https://www.brettonwoodsproject.org/wp-content/uploads/2023/07/CSO-reaction-to-WBG-evolution-roadmap\\_FINAL-1.pdf](https://www.brettonwoodsproject.org/wp-content/uploads/2023/07/CSO-reaction-to-WBG-evolution-roadmap_FINAL-1.pdf)

Moreover, some of the Bretton Woods organizations have often been accused of being a “Western” club while aspiring to represent the whole world at the same time.

Since climate-induced challenges disproportionately affect vulnerable economies, they demand a proactive approach that provides tailored assistance and promotes equitable growth. By recognizing the interconnected nature of climate change, economic stability, and social progress, the reformed Bretton Woods Institutions can facilitate more effective and coordinated responses to global crises. The world surely needs a “Bretton Woods 2.0” to address challenges that are extremely different from the ones that led to the creation of these institutions after World War II. The IMF's primary objective should shift towards tackling worldwide financial instability and macroeconomic policies. The World Bank's central role should evolve into that of a financial establishment dedicated to fostering planetary sustainability and inclusive prosperity. The World Trade Organization (WTO) needs to be fortified to serve as the platform for fostering more open and equitable trade in commodities, services, and cross-border dealings.<sup>33</sup>

By implementing these changes, the Bretton Woods institutions would be equipped with the essential resources to effectively tackle the escalating worldwide challenges and developmental requirements of the 21<sup>st</sup> century. These changes would culminate in a more robust global economic and financial framework, more suited for the demands of this century.

#### **9. HOW TO SAVE THE OCEANS AND MARINE BIODIVERSITY (WITH UNIVERSITY OF TRENTO) – DAY 3 (Saturday 7<sup>th</sup> October)**

Oceans cover three-quarters of the Earth's surface, with two-thirds of their mass lying beyond the jurisdiction of any state. As a result, they are particularly vulnerable to abuses that no individual state can prevent, making them an essential example of the global governance that the Dolomite conference seeks to address. Moreover, the oceans are the battleground for one of the most critical fights in the war against climate change. Acting like a gigantic thermostat, they absorb a significant portion of the additional heat generated by CO<sub>2</sub> emissions.

Notably, oceans harbor the world's oldest species, and the contamination of plankton poses a threat not only to the production of the oxygen we breathe but also to one of the fundamental pillars of the planet's food chains. It is in the oceans that the existential threat of climate change becomes most evident, impacting not just humans but also the entire planet.

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*CONCEPT NOTE TO BE FURTHER ELABORATED*

#### **10. CLOSING SESSION - PRESENTATION TO MEDIA AND PARTICIPANTS OF THE DRAFT DOLOMITE MANIFESTO “HOW TO TURN THE PROBLEM OF THE 21<sup>ST</sup> CENTURY INTO THE OPPORTUNITY FOR A NEW WORLD ORDER”- DAY 3 (Saturday 7<sup>th</sup> October)**

This closing session aims to provide a general reflection on what has emerged from these three days of meetings, including the results from the three problem-solving groups and the topics discussed in the plenary sessions. The main focus is to gather the perceptions of all the speakers on how climate change can be transformed into an opportunity for companies, firms, institutions, and individuals.

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<sup>33</sup> A. Chhibber, “Modernizing the Bretton Woods Institutions for the Twenty First Century”, Atlantic Council Geoeconomics Center (Bretton Woods 2.0 Project), October 17, 2022

## **PROBLEM SOLVING GROUPS SESSIONS**

*Each problem-solving group will meet on the first day (Thursday 5<sup>th</sup> October) of the Conference after previous web meetings, organized by Vision, to prepare the discussion.*

*During the second day the PSG will meet up again to finalize their reports and on Saturday the chair and rapporteurs, together with the students, will present the group results (20 minutes for each presentation) to the plenary.*

### **1. MEASURE LESS AND MEASURE BETTER: BEYOND ESG. WHICH ARE THE MECHANISMS FOR STEERING PRIVATE INVESTMENTS TOWARDS SUSTAINABILITY?**

*Sustainable finance involves considering environmental, social, and governance (ESG) factors when making investment decisions<sup>34</sup>. This approach aims to promote long-term investments in sustainable economic activities and projects. Environmental considerations may include mitigating climate change and adapting to its effects, preserving biodiversity, and implementing circular economy practices to prevent pollution. Social considerations may encompass issues such as inequality, inclusivity, labor relations, investment in human capital and communities, and human rights. The governance of public and private institutions, including management structures, employee relations, and executive remuneration, is crucial in ensuring that ESG considerations are integrated into decision-making processes. Ultimately, sustainable finance seeks to align financial objectives with sustainable development goals to achieve a more sustainable economy and address pressing social and environmental challenges.*

*Nevertheless, there are several problems with ESG ratings that can make them difficult to interpret and use effectively<sup>35</sup>: lack of standardization, limited scope, data qualities, lack of transparency and difficulty to measure impact. ESG has become a popular approach for promoting sustainable investing, but it has faced criticism for its limitations as a measurement tool and risk management strategy. The criticism is that ESG may maximize compliance tasks (of what may be seen especially by smaller firms as an additional red tape) and not do enough for the gigantic task of making “capitalism more sustainable” (larger firms may use ESG as a tool for mere communication and even “greenwash” some of their core investments).*

*The concept of “measuring less and better refers” to turn around the ESG metrics. The questions that the PSG will address are thus: Which incentives can make firms to shift sustainability to the heart of their strategy (making, for instance, them to use their core technologies, know-hows to contribute to global sustainability goals)? Which are alternative ways to boost private investments toward sustainability without using indices? What about the provocation of dropping the “S” or the “G” of the ESG metrics so to focus on the “E”? How can we compare companies belonging to different industries? What if we move from an absolute measurement of the footprint to the change in time of it? Can be an idea to shift from the environment Can Green Bond, Certificate Schemes, Sustainability-Linked Loans, effectively foster investments in a sustainable way?*

## **PROBLEM SETTING – STUDENTS DEVELOPMENTS**

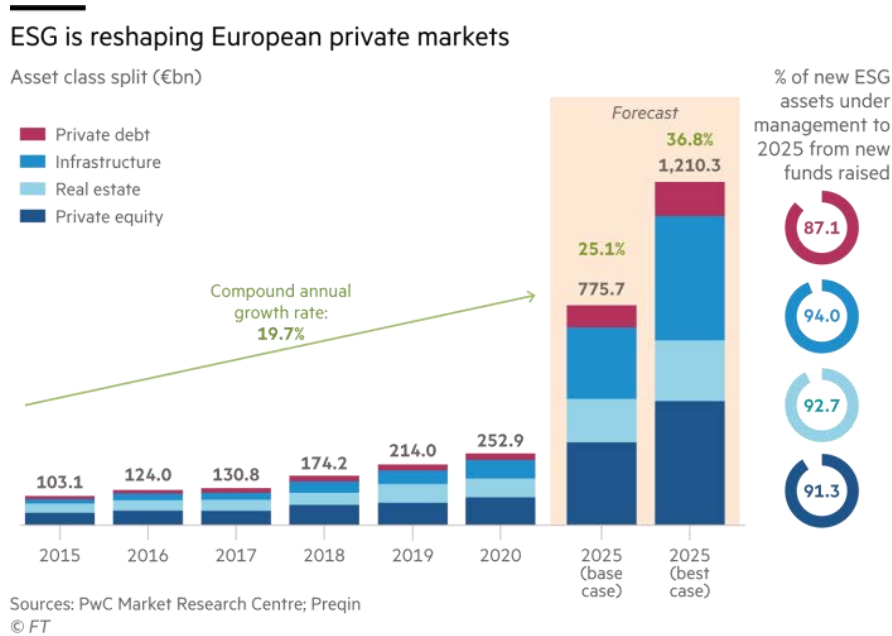
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<sup>34</sup> EUROPEAN COMMISSION: WHAT IS SUSTAINABLE FINANCE [https://finance.ec.europa.eu/sustainable-finance/overview-sustainable-finance\\_en](https://finance.ec.europa.eu/sustainable-finance/overview-sustainable-finance_en)

<sup>35</sup> Walter, Ingo, Sense and Nonsense in ESG Ratings (July 23, 2020). Journal of Law, Finance and Accounting, Available at SSRN: <https://ssrn.com/abstract=3568104> or <http://dx.doi.org/10.2139/ssrn.3568104>

## ESG INVESTING: THE CONTEXT

Private equity has become a major player in the global economy. In 2021 the industry had \$6.3 trillion in assets under, and those assets are projected to exceed \$11 trillion by 2026. On the one hand, society won't be able to tackle climate change without the active participation of private equity firms. On the other hand, the PE industry will fail to thrive if they don't address these challenges.



Although ESG has gained popularity as a technique to promote sustainable investing, mobilizing capital for green investments has been limited due to several challenges. Perhaps the biggest challenge faced by the sustainable finance market is the lack of standardization, transparency, and availability of ESG data.

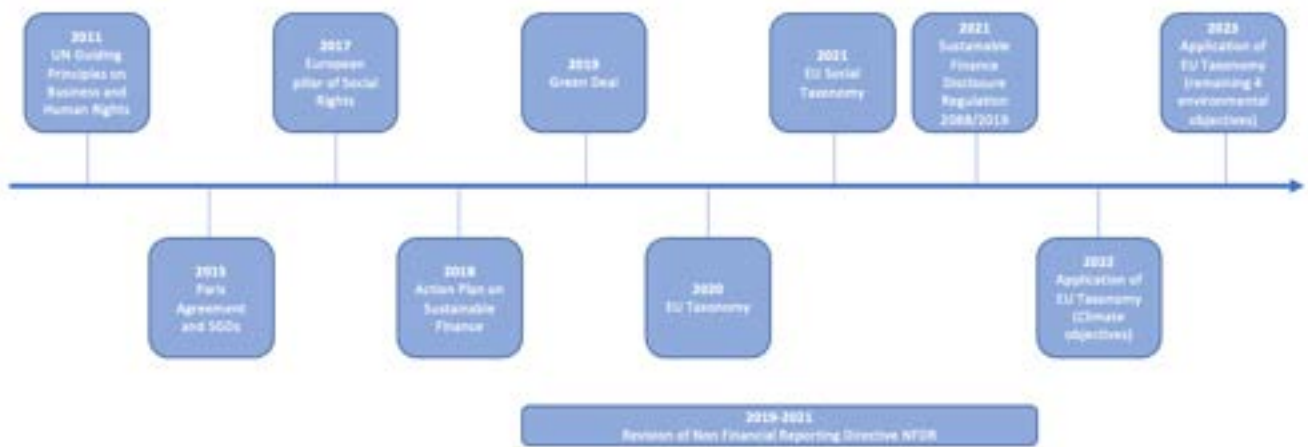
The worldwide use of multiple ESG frameworks (e.g., GRI, EU Taxonomy, SASB, TCFD) induces inconsistency. As no single global standard for ESG reporting exists, most companies end up adopting multiple ESG reporting frameworks.

Moreover, conflicting regulations between markets might lead to tensions between countries, as evidenced by the EU new carbon tariff. The stricter environment in the EU may create regulatory arbitrage opportunities for some companies that are not fully integrated into the global economy or have limited exposure to the EU single market.

As investors increasingly integrate ESG considerations into the investment process, calls to regulate the ESG ratings sector have increased in recent years.

## EVOLVING ESG REGULATIONS

## TIMELINE OF REGULATORY FRAMEWORK



As of March 2021, the new Sustainable Finance Disclosure Regulation (SFDR) became effective, requiring financial market participants to disclose 18 mandatory and up to 46 optional indicators. The Non-Financial Reporting Directive (NFRD) also underwent an overhaul, leading to the New Corporate Sustainability Reporting Directive (CSRD) being launched in 2022.

The SFDR emphasizes disclosure and reporting for social and environmental compliance among asset managers and investment funds, requiring them to define their sustainability strategies. The objectives of these regulations are redirecting capital flows to a sustainable economy, integrating sustainability into risk management, and promoting transparency and long-term commitments. SFDR classifies products as 'Article 8' and 'Article 9', based on their sustainability characteristics.

The EU taxonomy (Regulation EU 2020/852) establishes a unified language for sustainability, harmonizing criteria for assessing economic activities' sustainability. This framework underpins the EU's comprehensive ESG regulatory framework with legally binding standards for businesses and financial actors. The SFDR and CSRD are integrated into the taxonomy, to be further expanded by the EU Commission through delegated acts to define sustainable economic activities.

This brand-new institutional setting can significantly impact the finance industry's operations. Although the rule outlines different duties in terms of what must be disclosed and reported, asset managers and investment funds still lack a clear application process for the new policy. One of its biggest weaknesses is that it barely links to the methods for measuring social impact that are now accessible.

### COMPLEX ESG DATA MANAGEMENT

To meet these new regulatory requirements, data management may be the biggest challenge companies will face. ESG reporting is already posing challenges to companies because sustainability is inherently hard to quantify. The connection between ESG results and financial performance isn't often well understood because businesses have no clear way to see how sustainable activities impacted the bottom line. Without a centralized source of financial and sustainability data, it's difficult to draw a line between ESG action and financial outcome.

### ISSUES THAT SHOULD BE ADDRESSED

The conference should address the following issues:

- Which incentives can encourage businesses to put sustainability at the forefront of their strategies (by, for example, encouraging them to leverage their core expertise and technologies to support global sustainability goals)?

- What other strategies exist to encourage private investments in sustainability without the use of indices?
- What about the provocative decision to ignore the letters "S" or "G" in the ESG metrics in favor of the letter "E"?
- How can businesses from various industries be compared? What if we switched from measuring the footprint's absolute size to its temporal variation?

## 2. THE IDEA OF A GLOBAL ACCOUNTABILITY: IS THERE A WAY TO CONSTRUCT MECHANISMS OF GLOBAL REPRESENTATION? SHOULD THEY PROVIDE FOR A REPRESENTATION SKEWED TOWARDS YOUNG GENERATIONS?

*Common wisdom maintains that there is a political trade – off between representativeness and governability is a tough challenge for States and is even tougher in a global perspective. Representativeness reflects the extent to which global actors – States, civil society and marginalized groups included – take part to the decision-making process. On the other hand, governability is the ability of decision makers to undertake effective decisions that can be implemented. Increasing representation means making the decision-making process more time consuming with a possible lack of coherence in global governance. On the other hand, prioritizing governability may lead to decisions perceived as less legitimate<sup>36</sup>.*

*And yet Vision argues that the trade-off is at least partially one of those cognitive bias that has recently prevented political systems to adapt to the 21<sup>st</sup> century. After all, when collective decision are shared, they also tend to be more quickly implemented because they can leverage on the energy of the people who feel some ownership of those decisions.*

*The United Nations and, more generally, global governance systems are a peculiar example of the relationship between democracy and efficiency: by democracy here it is meant the weight given to the voice of each of the 196 member states; by efficiency the speed by which decisions are taken. A confirmation of Vision's theory is that, for instance, UN manages to be both not representative enough (as for the decades old criticism of the security council or the shareholders' composition of the IMF) and, yet not quick enough (whereas institutions are often paralyzed by vetoes). The idea we would like to explore is to make global governance to become more directly capable to engage citizens, public opinions; to give a more formal role to the parties (cities, NGOs, business, ...) which currently do not express votes on the deliberations taken by the 196 parties (states) making the UN and the COPS.*

*Global accountability needs effective mechanisms of global representation able to provide platforms for dialogue and decision making that shall include the whole society. Representatives of all countries and regions, of all generations fairly represented, should discuss and develop policies on issues with a global impact, such as climate change, economic inequality and human rights violations. While it is true that young people will bear the brunt of many of the challenges facing our world, it is also important to recognize the expertise and experience of older generations.*

*During the 2022 Dolomite Conference, e-democracy, youth quotas, a future generation*

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<sup>36</sup> Electoral laws are indeed normally expected to strike a balance between the representativeness of government and its ability to govern effectively. Majoritarian systems can be seen as prioritizing governability over representativeness, while proportional systems do the opposite.

ombudsman were some of the solutions to the Working group which discussed about democracy and the attempt to find a common agenda for all generations.

*How should an effective global forum or assembly work? Can more innovative mechanisms better reflect the diversity of global perspective and interests? How can the trade - off between representativeness and governability be solved? Can the solutions found in 2022 fit for a democratic, effective and global assembly?*

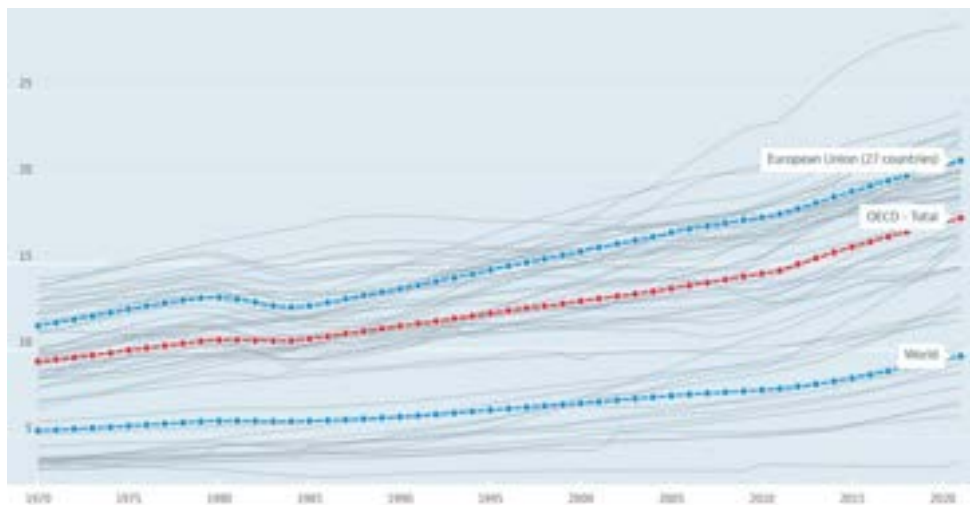
### **PROBLEM SETTING – STUDENTS DEVELOPMENTS**

The seriousness and the urgency of climate change should never represent an excuse for disregarding the principles of democratic systems. Nonetheless, the inalienability of democracy does not imply its lack of deficiencies, in particular in presence of complex and long-term challenges as the climate one. The present concept note provides insights on two inter-linked issues that potentially undermine the implementation of effective climate policies: the ageing population and the global scalability of democracy.

### **IS DEMOCRACY TOO OLD FOR FACING CLIMATE CHANGE?**

Democracy should be blind to demographic characteristics such as age: its very foundation is based on the 'one person, one vote' principle. However, this principle does not imply that democratic systems should ignore the implications of majority rule for minorities. Importantly, the process of ageing, spurred on by increasing life expectancy and sustained low fertility, and is being felt across the developed World, and more recently also in developing nation, (OECD Data, Elderly Population, 2023), is generating a new political minority: young people.

**FIGURE 1: ELDERLY AS % OF THE POPULATION FROM 1970 TO 2021**



**SOURCE: OECD DATA**

The political marginalization of young people, indeed, may undermine the 'unwritten rule' of democracy: due to the pyramid-shaped age distribution, the majority of voters has ever constituted by the ones most likely to be impacted by the outcomes of the democratic process in the long-term (Berry, 2014). Always until the demographic pyramid has gradually started to be tipped over.

It is important to point out that in so far political preferences are the same among the young and the old, the process of ageing, would not entail any democratic distortion. Even if there is not an academic consensus on this point, many studies confirmed that the generational gap has made the difference in several cases (Ahlfeldt G. M., Maennig W. and Mueller S. Q., 2022; Duffy B., 2021).

Due to the long-term implications of climate change, a possible democratic distortion due to an ageing population may assume high relevance. If a majority of older voters care less about climate change compared to the young, then the process of ageing will potentially impede action against climate change. Yet is rushed to argue that older people are less concerned with the challenges invoked by climate change. In fact, studies provide contradictory results on this point (Duffy B., 2021;



UNDP and University of Oxford, 2021): there might not be a simple linear relationship between age and climate concerns. Still, in face of radical climate policies, the principle of voters' utility maximization (Messner and Polborn, 2004) will prevail, suggesting that in presence of trade-offs between short- and long-term oriented policies, elderly and young voters will vote differently, not least because they differ in terms of their remaining lifetime.

### **IS DEMOCRACY SCALABLE AT GLOBAL LEVEL?**

The principle of international law grants each sovereign state political autonomy and supreme authority within its borders (Oxford Public International Law), resulting in global policies relying on mutual consensus rather than command-and-control enforcement (Field B. & M., 2021). Multilateral Environmental Agreements (MEAs) are the legally binding instruments that are normally employed in climate diplomacy. Among the others, the UNFCCC (United Nations Framework Convention on Climate Change) is the most impactful forum on the topic. The states involved in the convention meet annually in the Conference of Parties (COP), where decisions on climate commitment are taken after days of negotiations. Normally, formal vote is avoided and final decisions are taken through consensus.

MEAs are often unsatisfactory in achieving results. There are many barriers that countries face in climate negotiations: firsts are legal, since effective enforcement mechanisms are hard to gain when decisions are reached through consensus. Additionally, many political barriers applies countries might face internal political frictions in perusing climate actions if national interests diverge. Historically, there has been divergence on responsibilities between negotiation blocks, with developing countries claiming for historical responsibilities of western countries in climate change while becoming the top emitters amidst their industrialization processes. Dealing with climate change also implies financial and technological burden, which developing countries often are not able or willing to sustain. For this reason, UNFCCC has adopted the "common but differentiated responsibilities" principle, to state the role of developed countries in driving the ecological transition. Given the often-unsatisfactory outcomes of MEAs, its principles and voting mechanisms have been doubted. During formal votes the "one country, one vote" principle applies, to ensure that even the smallest country has a say in the decisions. However, population density factors are not taken into consideration, and this can create a distortion in the voting processes. Most advanced economies, such as US and China, often have the economic and soft power to drive their preferred outcomes in the decision making. Alternative voting mechanisms based on population factors could make the international agreements more democratic. In such scenario, developing countries - that are often characterized by younger population - could count more on decisions and MEAs would potentially be more adherent to new generation's needs. However, this system wouldn't come without controversial aspects: many emerging economies and highly populated countries' governments are not democratically elected, and giving higher voting power to autocracies can exasperate the divergence between population interests and MEAs outcomes.

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### 3. NEUTRAL CITIES? FINE TUNE THE EXPERIMENTATIONS TO ACHIEVE ZERO EMISSION/ ZERO WASTE IN THE LAST MILE DELIVERY OF FOOD

*Cities currently<sup>37</sup> produce more than 70% of global CO2 emissions and consume over 65% of the world's energy. The global goal of staying below the 1.5°C threshold implies a massive decarbonization of cities, which will require specific programs to reduce urban sprawl, investments in low-carbon energy/transport systems, nature-based solutions to disaster risk management and urban cooling. Future projections make it even more urgent to implement a massive urban decarbonization: the world's population is expected to reach 8,5 billion by 2030 and 60% of it<sup>38</sup> will likely live in cities, according to the UN<sup>39</sup>. The growth of cities is, however, not to be considered unstoppable and, in fact, history teaches that many of the great capitals of the Past now only exist in the memories of students and archeologists<sup>40</sup>. As a matter of fact, the growth of cities appears to follow the same law that economic geographers (Krugman and Venables, 1995) envisaged: they first grow expand to the advantage of having talents to meet, compete, partner with each other; they then shrink when the congestion costs exceed the benefits of proximity. The growth of the urban population risks to have a significant environmental impact (in terms of energy consumption, CO2 emissions, increased waste etc.): among the other things, it will be translated into a growing demand for fast delivery services<sup>41</sup> and, therefore, into increased traffic congestion and higher emissions. The World Economic Forum forecasts<sup>42</sup> that demand for last mile delivery (the transportation of merchandise from the nearest distribution hub to the ultimate destination) could grow by 78% by 2030 and, consequently, emissions from delivery services will*

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<sup>37</sup> Dasgupta, S., Lall, S., Wheeler, D., Cutting global carbon emissions: where do cities stand?, World Bank Blogs, January 5, 2022

<sup>38</sup> It would be almost 5.1 billion people.

<sup>39</sup> United Nations, Department of Economic and Social Affairs, Policies on spatial distribution and urbanization have broad impacts on sustainable development, 2020(2), [https://www.un.org/development/desa/pd/sites/www.un.org.development.desa.pd/files/undes\\_pd\\_2020\\_popfacts\\_urbanization\\_policies.pdf](https://www.un.org/development/desa/pd/sites/www.un.org.development.desa.pd/files/undes_pd_2020_popfacts_urbanization_policies.pdf)

<sup>40</sup> The list of great capitals which are now lost ranges from BABYLON to Persepolis. Amongst more recent notable examples we have Detroit which has less than half of the population it used to have in the fifties when it was the capital of car-making; and Venice which has been for one thousand years the center of one of wealthiest dominion in history and lost two thirds of the population since WW2 (today it has got a little bit more than 50,000 inhabitants).

<sup>41</sup> The Covid-19 pandemic revolutionized the entire supply chain, forcing companies to rethink their last-mile delivery strategies and minimize contagion. Customers resorted much more on e-commerce and this pushed demand for last-mile delivery services. Such changes, however, are very likely to persist even after the pandemic. See: World Economic Forum in collaboration with McKinsey & Company, Pandemic, Parcels and Public Vaccination. Envisioning the Next Normal for the Last-Mile Ecosystem, Insight Report, April 2021

<sup>42</sup> World Economic Forum, The Future of the Last-Mile Ecosystem, January 2020, [https://www3.weforum.org/docs/WEF\\_Future\\_of\\_the\\_last\\_mile\\_ecosystem.pdf](https://www3.weforum.org/docs/WEF_Future_of_the_last_mile_ecosystem.pdf)

increase by 32% and traffic congestion by 21%.

*A large portion of delivery services is represented by food delivery services: the food delivery market grew exponentially in the past years – especially during the Covid-19 pandemic - becoming a global market worth more than \$150 billion<sup>43</sup>.*

*A bottom-up approach based on the experimentation of new last mile delivery solutions led by cities/specific regions seems to be the most effective, to test solutions tailored to the needs of a city that could then be replicated elsewhere, on a larger scale.*

*The public sector has already started to test some pilot solutions on a city basis, even though systemic change and regulatory frameworks would still be required to reduce the environmental impact of last mile delivery, given its growing demand worldwide. Cities have been steering last mile transitions, for instance with the creation of zero-emission delivery zones, testing the use of automated vehicles for goods delivery, adapting their infrastructures to allow the use of electric vehicles and much more.*

*Innovations and experimentations are flourishing in different directions and will hopefully be the solution to many issues of both present and future cities – where the population growth will put more pressure on the existing urban environments. Many studies and experimentations are focusing on solutions that will be able to reduce noise pollution, CO2 emissions and traffic congestion while optimizing delivery costs for stakeholders.*

*However, innovating the last mile delivery sector raises important questions too, as some innovations might also have notable negative impacts that need to be mitigated<sup>44</sup>. For instance, introducing autonomous vehicles for the delivery of goods might lead to more traffic congestion in the short term, if they operate alongside with human-driven vehicles, which move faster. Some solutions may be convenient for some stakeholders but not pleasing to others with different priorities<sup>45</sup> – e.g., cutting emissions and reducing traffic congestion/noise are priorities for cities, while businesses will prioritize interventions that reduce their delivery costs with minimal disruptions in their business models. The ideal transition roadmap for last mile delivery solutions puts together different priorities, finding balance and involving the various stakeholders.*

*Given the wide scope of the last mile delivery area in general, any strategy should start from narrowing down the focus.*

*The stakeholders involved should ask themselves: how long is the last mile they would like to focus on with their innovations? Does it cover business to business (B2B) deliveries, business to consumer (B2C), peer-to-peer deliveries (P2P), reverse-logistics (meaning, the return of the goods from the consumer to the business), same-day deliveries (especially for food delivery services, courier services, and retailers that offer this option), scheduled deliveries? Do the last mile delivery solutions have to cover the whole city area, just one/some neighborhoods or specific areas (e.g. from city to external logistic hub, from city to the countryside...)? What kind of goods does the innovation plan to involve (e.g. food, consumer goods, medicines...)?*

*When it comes to the specific area of food delivery, stakeholders should also understand what trade-offs are involved (in terms of costs, sustainability and client satisfaction) and how they could be balanced; how can innovation involve different stakeholders (cities, logistics providers, local shops...), what are the preferences and needs of consumers and how will the results be measurable?*

## **PROBLEM SETTING – STUDENTS DEVELOPMENT**

The rise of e-commerce has seen remarkable growth worldwide, and Italy is no exception. In the US, the market share of online shopping has increased from about 3.7% in 2008 to 9.5% in 2018 and 13.5% in 2021 (Giuliano, 2023). In Italy, e-commerce in 2018 was at 6,5% of products sold, in 2022 it grew to 12% (Osservatorio eCommerce B2c, 2023).

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<sup>43</sup> Ahuja, K., Chandra, V., Lord, V., Peens, C., Ordering in: the rapid evolution of food delivery, McKinsey & Company, 22 September 2021

<sup>44</sup> Sharma, V.P.; Prakash, S.; Singh, R. What Prevents Sustainable Last-Mile Delivery in Industry 4.0? An Analysis and Decision Framework. Sustainability 2022, 14, 16423. <https://doi.org/10.3390/su142416423>

<sup>45</sup> Lauenstein, S.; Schank, C. Design of a Sustainable Last Mile in Urban Logistics—A Systematic Literature Review. Sustainability 2022, 14,5501. <https://doi.org/10.3390/su14095501>

This increased demand for e-commerce has given rise to a twofold challenge, presenting itself in different forms and spaces. On one hand, logistics and large-scale distribution have a great responsibility in terms of soil land-use outside the cities' borders. In the last three years, in Lombardy, logistics nodes occupied 140 hectares (Osservatorio eCommerce B2c, 2023).

On the other hand, the last-mile delivery is responsible for many environmental and social issues in the city centres as outlined in table 1 and table 2.

One can witness the presence of trends that pertain to city logistics. For instance, the number of last-mile deliveries is expected to rise significantly globally due to urbanization, a growing customer base and new categories of products shifting to digital distribution (World Economic Forum, 2020). Moreover, parcels are increasingly expected to be delivered faster with the growth of instant and same day deliveries (World Economic Forum, 2020). On the other hand, some trends such as decarbonization and zero-waste movement seek to tackle environmental issues and can seem to be in contradiction with the trends previously considered.

Addressing the challenges of last-mile delivery requires the implementation of effective solutions. Based on the current literature review, we have identified several possible strategies, ranked in order of maturity, to optimize last-mile delivery, particularly in the B2C context:

- **Parcel lockers:** Implementing secure and automated parcel lockers with QR code access can reduce failed deliveries and improve customer convenience (Wang et al., 2014; Giuffrida et al., 2012; Wen & Li, 2016; Chen et al., 2018).
- **Pickup points:** Utilizing existing stores or designated locations as pickup points can streamline deliveries (Wang et al., 2014).
- **Crowdsourcing logistics:** Involving common people that would have to drive anyway to a certain location to bring some parcels with them, under compensation (Carbone et al., 2017; Wang et al., 2016; Devari et al., 2017).
- **Drones:** Leveraging drone technology can overcome obstacles in dense urban areas and enable faster and more efficient deliveries (Murray & Chu, 2015).
- **Dynamic pricing:** Introducing dynamic pricing models that incentivize greener and slower deliveries, optimizing delivery routes to reduce emissions and costs (Asdemir et al., 2009; Klein et al., 2017; Yang et al., 2014).
- **Mapping customer behavior:** Using electricity data to understand customer availability at home can reduce failed delivery attempts (Pan et al., 2017).
- **Robotization of delivery:** Introducing automated delivery systems can improve delivery efficiency and reduce labor-related challenges (Slabinac, 2015; Boysen et al., 2015).
- **Underground deliveries:** A futuristic concept involving dedicated underground channels for efficient delivery operations (Slabinac, 2015).

To realize the above, it seems evident that there is a strong need for an integrated delivery ecosystem moving forward, which will yield many benefits, but which also needs a concerted, multi-stakeholder effort to be achieved. Indeed, reducing emissions and traffic congestion are top priorities for municipalities, whereas interventions that decrease delivery costs and minimize disruptions in current business models are more appealing to logistics players. Additionally, customers play a pivotal role in shaping the demand for specific delivery options and technologies. Factors such as technology acceptance, delivery locations and delivery timeframes significantly influence customer preferences. Thus, a compromise must be reached among all parties involved, namely policymakers, delivery companies, retailers and consumers (Accenture, 2021; BCG, 2021).

We have identified the following questions, that require discussion among stakeholders to create a **sustainable, efficient, and customer-centric last-mile delivery ecosystem**:

- How to decouple the increasing number of deliveries and the resulting carbon emissions?
- How to manage the different trade-offs (cost, environmental and social impact, customer convenience and preference)?
- How to organise the different stakeholders to support the development and implementation of solutions?

**TABLE 1. MAIN ENVIRONMENTAL ISSUES RELATED TO LAST-MILE DELIVERY**

<i>Environmental Issue</i>	<i>Description</i>	<i>Main references</i>
Climate change	Climate change can be described as long-term alterations in temperatures and weather patterns driven by human activities generating greenhouse gases. Transport means still heavily rely on fossil fuels and thus generate a big share of global greenhouse gases. Indeed, transport transformation was described as a critical element to address climate change by the UN.	(United Nations, n.d.; Yinuo, 2021)
Air pollution	Air pollution represents a significant contributor to environmental degradation and harms both human health and ecosystems. It is a major issue for cities. Transport, including urban freight transport, is the main source of air pollution in a city.	(OECD 2023; Mesjasz-Lech, 2016)
Waste generation	Around 2 billion tonnes of municipal solid waste are generated every year and at least one third of this amount is not handled in a proper and environmentally safe way. The increasing share of online retail is expected to worsen the situation as a study found that e-commerce generated about 4.8 times more packaging waste than physical stores.	(The World Bank, n.d.; Chun et al., 2022)

**TABLE 2. MAIN SOCIAL ISSUES RELATED TO LAST-MILE DELIVERY**

<i>Social issue</i>	<i>Description</i>	<i>Main references</i>
Poor working conditions	The work environment of employees along the last-mile delivery supply chain is far from optimal. Indeed, the sector is characterized by low wages, lack of transparency, and high rate of worker turnover. More importantly, these working conditions have a direct impact on employees' physical safety due to high-risk exposure and on their mental health due to work-induced stress. Furthermore, the situation is aggravated by managerial silencing of worker voice which is amplified by the online apps and algorithms typically used by food delivery companies.	(Verheyen et al., 2022; Shapiro, 2017; Chen, 2022; Kougiannou, 2021)
Food waste paradox	This paradox denotes the fact that huge quantities of food are wasted every day while many individuals are experiencing food insecurity. Indeed, about 30% of food produced in the world is wasted every year while almost 10% of the global population was affected by hunger in 2021. Online food delivery is aggravating the issue of food waste.	(UNEP, n.d.; WHO, 2022; Zhang et al., 2022)

#### 4. ENERGY TRANSITION AS A LEVER OF SOCIAL JUSTICE: HOW CAN WE MAKE THE CLIMATE CHANGE/ ENERGY TRANSITION AN AGENDA FOR ALL?

*The past years have been marked by extreme weather events: 2022 recorded unprecedented droughts, forest fires, heat waves and a drastic lowering of the level of the Antarctic Sea ice; in 2022, Europe was hit by a drought that might be the worst in 500 years. The World Health Organization<sup>46</sup> estimated that in 2021 climate events resulted in hundreds of fatalities and affected almost half a million people. The war in Ukraine and the energy crisis that followed raised even more awareness on how human/national security, sustainable energy sources and climate change are closely intertwined issues.*

*Climate change is affecting more and more people and the urgency of the issue is becoming increasingly clear<sup>47</sup>. Nevertheless, studies and worldwide surveys prove that climate change and the energy transition are still not on top of the agenda, either for politicians or the world's public opinion. A survey conducted by Ipsos in 2021<sup>48</sup>, actually, shows that the issue is certainly not neglected by the global public opinion – but it is not a priority either: it was ranked fifth in the list of issues that respondents saw as priorities, after the cost of living, coronavirus, poverty and inequality and the healthcare system.*

*50% of respondents thought that priority should be given to the environment, even though it might cause job losses or slow down the economic growth, while 35% of them claimed that economic growth and jobs should have the priority even though it might be harmful for the environment. The missing piece of the puzzle is: how can social justice and energy transition be put together<sup>49</sup>? Does it have to be a zero-sum game, or can we eliminate the trade-off between sustainable growth and social justice?*

*Climate change and social justice are strongly interconnected issues and the global debate on the energy transition should be focusing on that equation. Some specific groups of the world's population are more vulnerable than others to the impact of climate change – older people, low-income groups, tenants, among the others<sup>50</sup>. Lower-income groups within countries suffer higher losses than the wealthier groups: the income losses caused by climate change of the bottom 40% are almost 70% larger than the average in low- and middle-income countries.*

*Usually, climate change policies are developed and implemented separately to policies that tackle*

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<sup>46</sup> Climate change is already killing us, but strong action now can prevent more deaths, Statement by WHO Regional Director for Europe Dr Hans Henri P. Kluge, 7 November 2022, [www.who.int](http://www.who.int)

<sup>47</sup> IPCC, The evidence is clear: the time for action is now. We can halve emissions by 2030., April 4, 2022

<sup>48</sup> Ipsos & EDF, Mobilization, concern or indifference: how do the citizens of 30 countries view climate change?, December 2021

<sup>49</sup> Agyeman, J., & Schlosberg, D. (2014). Toward an intersectional environmental justice framework. In D. Schlosberg, J. Carruthers, & A. Cole (Eds.), *The Routledge handbook of environmental justice* (pp. 66-78). Routledge.

<sup>50</sup> Climate Change and social justice: an evidence review, Joseph Rowntree Foundation, 2014

*social inequality, poverty and disadvantage*<sup>51</sup>. How can social justice be integrated within the energy transition and climate change action? Climate justice issues must be more aligned with government agendas, with cross-sectoral policies based on a broader definition of “vulnerability”. Moreover, the short-sighted, emergency approach needs to be abandoned in favor of a long-term approach that aims at building the infrastructure and institutions needed to enhance climate resilience among all social groups<sup>52</sup>. The green transition should be seen as an opportunity to go beyond the trade-off between climate action and economic growth, creating new job opportunities in fields such as renewable energy, energy efficiency, and sustainable transportation. Governments and businesses can prioritize training and hiring workers from marginalized communities to ensure that these jobs are accessible to everyone<sup>53</sup>. Moreover, in order to involve everyone in the green transition, energy democracy (meaning that everyone should have a say in how their energy is produced and used) should be promoted. This can be achieved through community-owned renewable energy projects, energy cooperatives, and other democratic energy models that give people more control over their energy choices.

*Climate injustice*<sup>54</sup> is reflected not only in the different exposure of different social groups to the impact of climate change within the same country but also in the different contribution and exposure of entire countries to these disastrous effects.

*Countries that are only recently experiencing economic growth or that have always been considered economically “less developed” are more exposed to the impact of climate disasters and have had a weaker cumulative impact on environmental pollution, compared to today’s richer countries. Even though the international decision to establish a Loss and Damage Fund – made at Sharm El-Sheikh’s COP 27 in 2022 – is good news, it still leaves much unsolved and raises many doubts (e.g., who benefits? Who pays?).*

*How can the energy transition take these inequalities into account, making the green transition a true occasion to tackle social justice?*

## **PROBLEM SETTING – STUDENTS DEVELOPMENT**

According to Williams et al. (2019)<sup>55</sup>, energy justice is defined as **“the distribution of benefits and burdens of energy systems and their impacts across different social groups, and the recognition of the need for democratic participation in energy decision-making”**. The idea of energy justice is rooted in the recognition that **access to energy is a fundamental human right**, and that energy systems should be designed and managed in a fair and equitable way for all (Huhta, 2023)<sup>56</sup>. In this context, justice is understood as the fair distribution of benefits and burdens across different social groups and generations. Therefore, the end goal of energy justice is to improve social, economic, and health burdens on individuals historically impacted by the energy system, commonly referred to as “frontline communities” (Williams et al., 2019). The concept of is closely related to the idea of a just energy transition, which refers to the move from a fossil fuel-based energy system to one based on renewable energy that is equitable and benefits all members of society so to lessen to lessen climate change and cut greenhouse gas emissions.

The notion of energy justice is intricate and multifaceted, demanding a comprehensive, multidisciplinary approach. This is due to the strong correlation between the energy transition and social justice, which will be elaborated upon through the following crucial points:

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<sup>51</sup> Newell, P., Srivastava, S., Naess, L.O., Torres Contreras, G.A., Price, R., Roz Price, Toward transformative climate justice: An emerging research agenda, August 2021, <https://doi.org/10.1002/wcc.733>

<sup>52</sup> Chancel, L., Bothe, P., Voituriez, T., Climate Inequality Report 2023, World Inequality Lab, January 30, 2023, <https://wid.world/wp-content/uploads/2023/01/CBV2023-ClimateInequalityReport-3.pdf>

<sup>53</sup> Joint Research Center, Caramizaru, A., Uihlein, A., Energy communities: an overview of energy and social innovation, 2020

<sup>54</sup> Simmons, D., What is ‘climate justice’? Yale Climate Connections, July 29, 2020

<sup>55</sup> Williams, S. et al. (2019). Justice in energy transitions. Environmental Innovation and Societal Transitions. Volume 31, 144-153. <https://doi.org/10.1016/j.eist.2018.12.001>

<sup>56</sup> Huhta, K. (2023). Conceptualizing energy justice in the context of human rights law. Nordic Journal of Human Rights. <https://doi.org/10.1080/18918131.2023.2210443>

Firstly, it is crucial to recognize that the **consequences of climate change are not evenly distributed across the globe**. Instead, they disproportionately affect marginalized communities and vulnerable populations in various regions around the world. For instance, countries like Bangladesh, Nigeria, and Yemen are grappling with the severe impacts of climate change, including water shortages, extreme weather events, and rising sea levels, which significantly disrupt the lives and livelihoods of their inhabitants.

Secondly, one of the main solutions today to reduce climate change is through the usage of clean energy sources. However, a key challenge lies in the affordability of these clean energy options, particularly for some communities that may already be economically disadvantaged. The initial costs associated with installing renewable energy infrastructure and implementing new technologies can be substantial, making it difficult for certain communities to access and benefit from these solutions.

Finally, prominently featured in government initiatives around the world, particularly those focusing on 'green recovery' and 'building back better,' the topic of job creation/destruction is crucial to distributive justice. Issues such as reductions in poverty, empowerment of vulnerable groups, skills diversification, and the provision of high-quality jobs become relevant in the just distribution of the costs and benefits of energy infrastructure among the whole population. As Sovacool et al. (2022)<sup>57</sup> argue, the extent of job creation or destruction can shape the social acceptance and desirability of different low-carbon pathways and lead to social mobilization to support or oppose future energy transitions.

- **How can we effectively address the climate change challenge and promote energy transition as a global agenda? Specifically, how do we navigate the dilemma between implementing radical improvements or changes that yield immediate positive effects but might have negative long-term consequences, versus pursuing incremental changes that guarantee only positive outcomes but require more time to be effective? How can we balance the urgency to act quickly with the need for sustainable, long-term solutions?**
- **How to mitigate the disparities of the burden of climate change that marginalized populations are already facing and will face more and more?**
- **How to enhance engagement and participation of frontline communities on a global scale?**
- **How to make decision making processes inclusive of underrepresented populations and indigenous communities?**
- **How can the issue of affordability of clean energy be addressed?**
- **How to make the energy transition pro-poor and just in the job creation?**

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<sup>57</sup> Sovacool et al. (2022). Conflicted transitions: Exploring the actors, tactics, and outcomes of social opposition against energy infrastructure. *Global Environmental Change*, 73, 102473. <https://doi.org/10.1016/j.gloenvcha.2022.102473>



## **BOLZANO - GLOBAL GOVERNANCE OF CLIMATE CHANGE: THE DOLOMITES AS CASE STUDY**

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### **SESSION 1 – CLIMATE CHANGE AND TOURISM. HOW A MOUNTAIN REGION TRIES TO TACKLE A CRUCIAL CHALLENGE FOR ITS FUTURE. (Saturday 7<sup>th</sup>, 16.00-17.00)**

With a presentation of NEVERMORE – Horizon Europe Project of the Autonomous Province of Trento with Bruno Kessler Foundation and other partners.

**NEVERMORE** (New Enabling Visions and tools for End-useRs and stakeholders thanks to a common MOdeling appRoach towards a climatE neutral and resilient society) is a European research project funded by the European Union's Horizon Europe program. The project, officially started last June 1st, 2022 with a duration of four years, is coordinated by the Bruno Kessler Foundation (FBK). It involves 16 partners from 8 European countries, including several of the most active institutes in Europe on climate change issues. The project aims to develop integrated models and tools for the simulation and assessment of climate change impacts and risks, as well as to implement new interactive digital tools for citizens and policy makers. Objective: to make scientific knowledge on climate change more usable for decision making, to deploy relevant actions, shared among policy makers, citizens and other stakeholders, and to create resilient societies that are capable of both co-existing with and facing the challenges raised by climate change. NEVERMORE consists of 5 case studies, supporting the validation of the tools and models developed in the research project, investigating geographic areas sensitive to climate change and with totally different characteristics: an island, a wetland, a boreal region, a Mediterranean area, and a mountain region. These areas are representative of different socio-ecological contexts in the EU and hotspots of climate change.



Trentino represents the case study related to the mountain area and has the specific task of investigating issues related to two key sectors for the area: tourism and energy. The Tourism and Sport Service (Servizio turismo e sport) of the Autonomous Province of Trento is coordinating the Trentino case study which involves in a Local Council the main local stakeholders related to the examined topics, including, for example, the APTs (local tourism agencies), ski lifts, mountain professionals, hoteliers, companies producing, distributing and selling electricity, and local associations. By integrating the different skills and knowledge in the territory, the Local Council fosters a participatory and interdisciplinary approach.

### **CONTENTS OF THE PRESENTATION**

#### **Part 1 - Brief outline on:**

- importance of tourism for mountain communities - Alps as a climate change hotspot

**Part 2 - What the territory is doing:**

- Developing a strategy for climate change mitigation and adaptation  
- as far as the tourism sector is concerned, the development of the adaptation strategy is supported by the contribution of the European research project Nevermore: brief mention of project goals and activities.

**Part 3 - Discussion with 2-3 speakers.**

Addressing the challenge posed by climate change, in a transversal sector such as tourism, affects, more broadly, local development models and mountain lifestyles.

In fact, the changes are interrelated and influencing each other. They must be addressed through the continuous search for a dynamic and multidisciplinary balance.

**The areas to work on are, at least, the following:** science - technology and data – community - territory governance.

**SESSION 2 – CLIMATE JOURNALISM (Saturday 7<sup>th</sup>)**

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CONCEPT NOTE TO BE ELABORATED.

**SESSION 3 – REINVENTING A ZERO EMISSION PRIMARY SECTOR/ AGRIFOOD (ORGANIZED BY BOLZANO UNIVERSITY) (Saturday 7<sup>th</sup>)**

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CONCEPT NOTE TO BE ELABORATED

**SESSION 4 – THE WARS FOR WATER (WITH UNIVERSITY OF TRENTO) (Saturday 7<sup>th</sup>)**

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CONCEPT NOTE TO BE ELABORATED.