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THE FIRST DOLOMITE CONFERENCE ON THE GLOBAL GOVERNANCE OF CLIMATE CHANGE

ON THE ROAD TO SHARM EL SHEIKH THE END OF THE ZERO-SUM GAMES



IDEAS AND SOLUTIONS TO WIN THE BATTLE OF THE 21ST CENTURY
20TH – 22ND OCTOBER 2022

CONCEPT PAPER (SEPTEMBER 2022)

All of a sudden we were seeing a problem that people had thought was going to be a hundred years away coming within the next generation” – Dr. Jill Jager, 1985 (at the Villach Meeting resulting in the decision to establish the IPCC)

The first Conference of the Parties (COP) – the supreme United Nations decision making body where the 196 countries of the world agreed on the conventions dealing with climate change – was held in Berlin in 1995. The city had just seen the collapse of the world’s most famous wall when history was wrongly said by some to have arrived to its end. At that time, China was still one of the poorest countries of the globe and the seven largest economies of the world were still the so called G7¹: they produced more than half of the world’s GDP and pollution.

The President of COP-1 was a relatively unknown, 41 years old German politician: Dr. Angela Merkel, who was then Federal Minister for Environment and indeed the only Minister of the government led by Helmut Kohl who had been born beyond the “wall”. She was used to living in between worlds, and at a certain stage of the conference, the two groups into which the world seemed to be newly divided – developing² and developed countries - were accommodated in two different rooms with Merkel moving between the two and engaging in Kissinger-style “shuttle diplomacy” in order to reach agreements. The first COP-1 was also interrupted by a group of protesting activists and took three days only to decide the city to host its permanent secretariat (in this case the fight was between Canada and Germany with Bonn to ultimately win): it eventually finished by everybody acknowledging that it was vital to contain CO₂ emissions to avoid further increase of global temperature which could bring the havoc that the UN backed Intergovernmental Panel Climate Change (IPCC) had envisaged since its first report in 1988.

After almost three decades of world summits and growing concerns, the latest report assessing progress towards the COP’s targets had to acknowledge failure.

Since 1995 the observed global temperature has risen from a level of 0,5 to almost 1,35 degrees above the mean values recorded in the period 1850 – 1900; emissions have further increased; the landmark objective, set in 2015 with the Paris Agreement, of keeping such increase within 1,5 degrees will not now be reached even in the most optimistic scenario in terms of reduction of CO₂ emissions³.

Over recent years, the consequences of climate change are no longer abstract. Many countries are suffering from catastrophes compounded by climate change such as tropical storms and monsoon rise. Not to mention the threats related to the sea-level rise caused by melting ice caps that risks to devastate small island states and entire cities in low-lying areas.

In fact, 2020 was the hottest year in history, notwithstanding the sharp deceleration of human activities due to the COVID19 restrictions; 2021 signposted a new record as far as emissions of CO₂; in 2022 an extremely hot summer and unprecedented drought in Europe and China has made climate change become part of the ordinary lives of hundreds of

¹ USA, Japan, Germany, France, UK, Italy and Canada accounted for more than half (55%) of the world GDP; today their share is just above 40% and at current trends only USA, Japan and Germany will still be amongst amongst the top 7 in ten years time.

² So called “G77 plus China”.

³ As a matter of fact, in the 2021 IPCC report there is a (rather unlikely and optimistic) scenario according to which temperature will stabilize at 1.5 increase.

millions of people and swept away all remaining doubts: something big is happening as was forecast by scientists 35 years ago.

In fact, all countries seem to be engaged in an increasingly radical transition: EU launched a green deal under which by 2030 the new, net emissions of CO₂ would have been cut by 55% (against the 1990 level) and brought to zero by 2050⁴; the UK is planning to stop the sale of all new petrol and diesel cars by 2030⁵. However, even these late plans appear now to face uncertainty: the Russian invasion of Ukraine, western sanctions and Russia's switching off of gas flows to Europe have produced an unprecedented energy crisis which is making the energy transformation more complicated.

Over the longer term, the fight against climate change and, more widely, the need to preserve the environment has worked as a powerful force towards increased and better global governance. The 2015 Paris Agreement was the first multilateral climate change agreement that so far places legal obligations on the signatories. More generally, we badly need to govern a globalization which is rapidly unfolding on a technological, financial, economic and even natural level (as for the pandemic and climate change). However, deep hostility and rivalry between the superpowers, especially China, the US, Russia and India, is hindering agreement on such global governance.

Already, climate change had exposed the much wider inadequacy of a diplomatic machinery – the UN, the World Bank, the very COP – which was conceived at the end of the WW2 and shaped in succeeding decades. The existing global governance instruments had great merits in the second part of the twentieth century (although amid a number of crises). However, they need to be greatly overhauled to respond to the complexity and superpower rivalry which is defining the new century.

Vision and (its convening partners) are thus convening a three-day meeting on the 20th – 22nd October where fifty visionary intellectuals, policy makers, entrepreneurs, journalists and historians will gather to start a discussion on how to win a battle we cannot lose and how to reform global governance instruments so that they may adapt to 21st-century conditions. We are convinced that highly complex questions like “the global governance of climate change” pose an intellectual and political challenge that need the usage of different skills and professional backgrounds to share problem solving and find a common language.

THE CONFERENCE AS AN ICONIC PROBLEM-SOLVING FORUM: THE PLACE, THE METHOD AND THE KEY PEOPLE

“Are they stones or clouds? Are they real or part of a dream?” These are the words that Dino BUZZATI, one of greatest Italian novelists of the 20th century, uses to describe what is probably the most iconic mountain range of the world. Val Gardena, LAVAREDO, PORDOI, FALZAREGO, Cortina: the names of the passes and peaks of the DOLOMITES have been dear to generations of mountaineers, voyagers, writers, visionaries looking for inspiration.

On Sunday July the 2nd, while we were writing this paper, a huge mass of a glacier broke off from Marmolada, the highest mountain of the group, sending an avalanche of ice downhill

⁴ https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_it

⁵ <https://www.gov.uk/government/news/government-takes-historic-step-towards-net-zero-with-end-of-sale-of-new-petrol-and-diesel-cars-by-2030>

at 300 km/h killing at least seven people. The Marmolada glacier is considered by geologists as a sort of natural thermometer of how bad is climate change. The sober reality is that, at current rates, the glacier will disappear in fifteen years. In the meantime, pieces of the glacier may continue to slide down due to fractures that the melting is producing.

The Dolomites together with Venice are probably the chief European symbol of how much damage is humanity doing to itself: we are losing some of our most beautiful spots because they are more vulnerable to a havoc which it is getting too late to avert. However, the Dolomites (like Venice) are also interesting cases of how hard human beings can fight back when they really feel themselves in danger of extinction: Venice was built to be sustainable by its early inhabitants and it is the only city of the world which is (and has always been) free from cars (as we will discuss in the third plenary); the Trentino Alto Adige is one of the communities with the greatest traditions of adapting to climate change.

These territories are a combination of leading-edge know-hows and vulnerabilities; they are examples of why the mother of innovation is, indeed, necessity: therefore Vision and its partners decided to convene in the Dolomites their first conference on “global governance of climate change” and to have Ca Foscari/ Venice as a partner for the initiative. The conference will also exploit the “Milan ecosystem” as an important driver of scientific and entrepreneurial energy: POLITECNICO of Milan and Bocconi are launching a joint degree on sustainability which will promise 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.

The major distinctiveness of the conference will be that it intends to be a proper problem-solving place: the objective is, thus, to work – within the annual conference, but also via several brainstorming web sessions to be held between events – as a lab where radical and yet pragmatic ideas may emerge. We will convene a very pluri-disciplinary group of participants because we are convinced that the nature of the question requires us to go beyond the logic of purely relying on specialists. We will also make sure that the conference revolves around problems to be solved in working groups and plenary discussions whose conclusions will be reported by the chairs and introducers of the various sessions. The entire work will be coordinated by VISION and follow a methodology that VISION is successfully applying to the sister cycle of conferences titled “CONFERENCE ON THE FUTURE OF EUROPE” in Pontingano (Siena).

The output of the conferences will then feed, directly, into the COP 27 which will occur from November 7 through 18, 2022, in Sharm el-Sheikh, [Egypt](#). The DOLOMITE conference itself is meant to become a yearly event, whose second edition will be in the autumn of 2023.

Organizer of the conference is Vision, the think tank (whose director is Francesco Grillo who is a Fellow at the European University Institute⁶) which is partnering with POLIMI and BOCCONI of Milan.

Confirmed chairs of the Conference are Stefania Giannini (Assistant Director-General for Education at UNESCO in PARIS and former Italy’s Minister of Education, University and Research); Alexandra Borchardt (Director of the Journalism Innovators Program at Hamburg Media School, Senior Research Associate at the Reuters Institute at the University of Oxford, former managing editor of *Süddeutsche Zeitung*); Bill Emmott (chairman of the trustees and advisors of the International Institute of Strategic Studies in London and former

⁶ The team at VISION also includes researchers Clara Donati, Federica Fusco, Antonella Camerino.

editor-in-chief of *The Economist*), Enrico Giovannini (since February 2021 Italy's Minister of Infrastructure and Sustainable Mobility, former Chief Statistician at OECD and former Minister of Labor).

The conference sessions will be chaired by journalists coming from The Economist and all major international media (FT, The Guardian, Al Jazeera, New York Times). Alongside, it will be covered by main Italian newspapers and Italian TV broadcasters.

The Conference will be opened by the local hosts (Arno Kompachter, President of the Autonomous Province of Bolzano – Landenshaupmann SudTirols) and Maurizio Fugatti (President of the Autonomous province of Trento) and by an overlook of the program by the two organizers together with the chairs.

The program will start with a plenary session which will frame the debate. Then, four working groups will be presented by each working group's introducer before the participants break into the four groups. Each will be moderated by one chair who will develop the conclusions of the WG together with the introducer and one rapporteur. The rapporteur will then present the outcomes of the working groups to the plenary on day 2. The other six public plenary sessions (and two dialogues) will take place on days 2 and 3. The debates of all plenaries and working groups will feed into the general Conference manifesto.

The structure of the concept paper is the following:

PLENARY SESSIONS, DIALOGUES AND MOVIE SCREENINGS	6
PLENARY SESSION 1 – OCTOBER 20TH – ARE WE GOING INTO THE GENTLE NIGHT?.....	6
PLENARY SESSION 2 – OCTOBER 21ST - IMPACT FINANCE: GIVE FINANCIAL MUSCLE TO THE TRANSFORMATION AND MEASURE LESS AND BETTER TO DESING THE RIGHT INCENTIVES.....	8
PLENARY SESSION 3 – OCTOBER 21ST - THE END OF THE FOSSIL FUELED CARS AS CORNERSTONE OF INDUSTRIAL CIVILIZATION (WITH A FOCUS ON ELECTRICITY, HYDROGEN, SHARING AND SELF DRIVING).....	8
PLENARY SESSION 4 – OCTOBER 21ST - REINVENTING A ZERO EMISSION PRIMARY SECTOR/AGRIFOOD: SOIL AS A CO₂ RETAINER.....	9
PLENARY SESSION 5 – OCTOBER 21ST - CLIMATE JOURNALISM AS A LEVER TO MAKE THE WORLD TO BE AS ONE	12
MOVIE SCREENING – OCTOBER 21ST – WILD RECOVERY PROTECTING NATURE AND PREVENTING THE NEXT PANDEMIC WITH MALAIKA VAZ (NATIONAL GEOGRAPHIC EXPLORER AND TV PRESENTER).....	12
DIALOGUE – OCTOBER 22ND – GEOENGINEERING: THE PROMETEUS' DREAM OR A SCIENTIFIC NIGHTMARE? THE POSSIBILITIES AND THE ETHICAL IMPLICATIONS.....	13
PLENARY SESSION 6 – OCTOBER 22ND - THE HOLY GRAIL OF PLURIDISCIPLINARITY: THE NEW RESEARCH AND TEACHING BET.....	13

PLENARY SESSION 7 - OCTOBER 22nd - HOW TO END THE ZERO-SUM GAME BETWEEN DEVELOPING AND DEVELOPED WORLD – IDEAS FOR SHARM EL-SHEIKH..... 14

WORKING GROUPS..... 17

WG 1 - THE ECONOMIC / ENERGY DILEMMA - How can we make the world greener without reducing economic growth? Which are the merits and limits of different technologies / energies? 17

WG 2 - THE DEMOCRACY QUESTION How can we find a common agenda between different generations (and solve the problem of the embedded short termism of electoral cycle)? How can we avoid the gilets jaunes effects? 18

WG 3 - THE PROBLEM OF GLOBALIZATION How can we make policy making processes at global level both more to respond to the crises which are defining the 21st century? 19

WG 4 - CITIES AS PLACES FOR EXPERIMENTING THE FUTURE: why are different cities differently performing as far as efficiency of waste management, housing and mobility? 20

PLENARY SESSIONS, DIALOGUES AND MOVIE SCREENINGS

PLENARY SESSION 1 – OCTOBER 20TH – ARE WE GOING INTO THE GENTLE NIGHT?

In his most famous poem, the Welsh Poet Dylan Thomas encourages the dying father to “not go gentle into that good night” but rather to “rage against the dying of the light”. The poem written in Florence on Christmas eve of 1952, became what is a frequently cited appeal to mankind to never surrender to a decline which could “gently” overwhelm its instinct to survival and bring us to some self-inflicted Armageddon. In movies like “INTERSTELLAR”⁷ Thomas’s words become a refrain, a desperate call to wake up a species which seems to have forgotten the trust into its own capabilities and to have become complacent with its own demise.

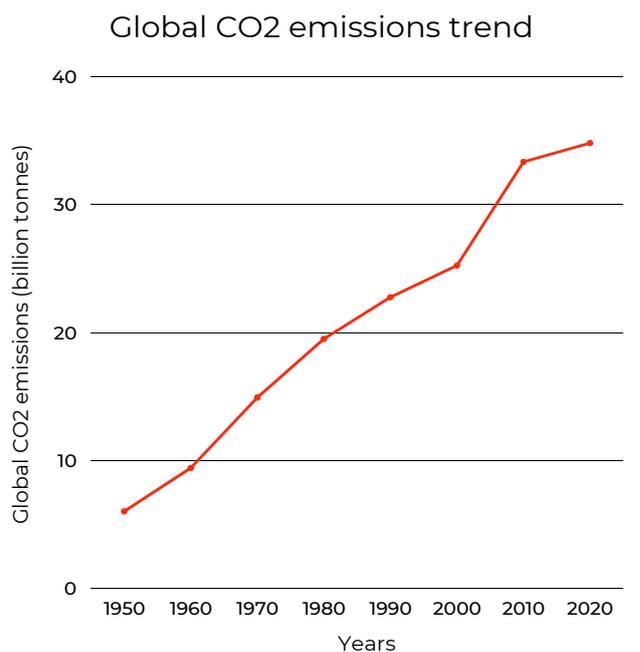
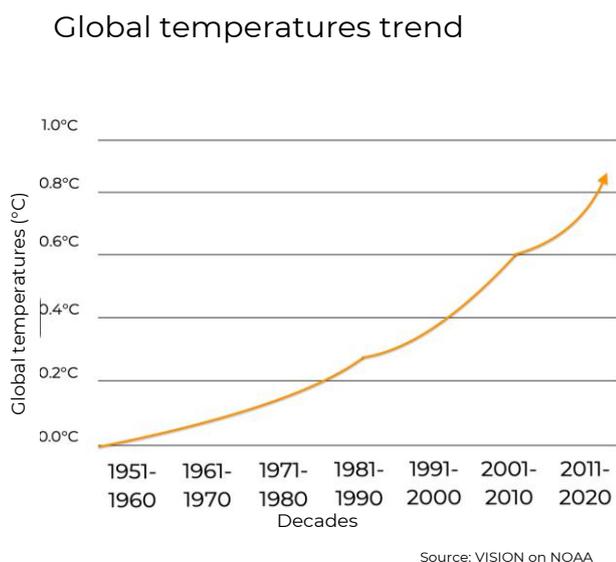
Where can we find the energy, that tipping point which normally makes humans react when everything seems lost (as it increasingly appears to be when we consider the trajectory of climate change)?

Like its predecessors, COP26 was very clear in terms of work to be done: in order to avoid to lose control of the climate, we would need to reduce global carbon dioxide emissions by 45% by 2030 relative to 2010 levels and to net zero around mid-century⁸. In order to appreciate the kind of change that this objective requires to the world, we should remind what happened so far. The chart below is the most synthetic representation of the scale of the problem we need to address. Notwithstanding many pledges and much work, we are still very much close to the all-time record in terms of CO₂ emissions (in 2021 33 GIGATONS of CO₂ were dispersed in the atmosphere which was very close to the 33.5 record of 2018).

⁷ Starring Michael Caine, Matthew McConaughey and Anne Hathaway.

⁸ Glasgow Climate Pact, 2021: https://unfccc.int/sites/default/files/resource/cop26_auv_2f_cover_decision.pdf

CHART 1 - YEARLY GLOBAL EMISSIONS OF CO₂ (WORLD, GT) AND GLOBAL TEMPERATURES TREND (WORLD, RISE, IN DEGREE CELSIUS)



SOURCE: VISION ON DATA FROM NOAA AND UNIVERSITY OF OXFORD

And yet, there are some signs that are worth to be considered as starting point of a strategy:

- The emissions per capita has gone down by 34% vis-à-vis 1990, a period during which GDP per capita increased by 50%⁹: economic growth and pollution are being decoupled;
- The European Union even managed to make total emissions to go down by one-third (from 4 billion TONS in 1978 to 2.6 in 2020);
- China which is, by far, producing more CO₂ than anybody else (they produced twice CO₂ as much as the USA) are also the country which is increasing its use of renewable generation (by as much as the rest of the world in 2020);
- In the meantime, the cost of production of electricity out of solar and wind is approaching parity with other most polluting forms of energy which could still take advantage of economies of scale.

These are some of the good news upon which we can still construct a strategy to win the most difficult of the war that will define the 21st century.

This session will provide a frame for the rest of the conference and the starting point is going to be the concept paper that Vision is drafting with its partners.

⁹ In the meantime, population increased of half (from 5,3 to 7,9 billion)

PLENARY SESSION 2 – OCTOBER 21st - IMPACT FINANCE: GIVE FINANCIAL MUSCLE TO THE TRANSFORMATION AND MEASURE LESS AND BETTER TO DESIGN THE RIGHT INCENTIVES.

Having been governor of two different central banks¹⁰ (Canada and UK), Mark Carney is a man to be taken seriously. He has that there is a potential and a need for so-called impact investments of up to 130 billion USD to make the world greener and more just.

The rationale of impact investing is twofold:

- a) The scale of the up-front money to be spent for the transition necessary to radically change our production and consumption patterns cannot only come from highly indebted national governments¹¹;
- b) Bureaucracies are not normally paid according to the results achieved or for taking the risks that innovation implies, and therefore we need the energy and skills that private investors can provide.

But how? In order to guide investors towards more responsible assets, Environmental, Social, and Corporate Governance (ESG) indicators were developed. The importance of green finance was recognized for the first time in 2016 during the G20 at the 2016 Hangzhou Summit and in 2017 the G20 Green Finance Study Group focused on developing options to enhance the ability of the financial system to mobilise private capital for this purpose. In several OECD jurisdictions, ESG have become a form of mainstream finance (OECD, 2021¹²).

However, their implementation poses a series of challenges. The biggest is that they risk being more about appearances than about reality. They also run the risk to be too complex to be implemented and, yet, not enough pragmatic to avoid greenwashing¹³. This is a challenge for the investors – like the ones which are gathered by the Global Sustainable Investment Alliance – and for regulators: the idea would be – as Henry Tricks concludes in a recent report for The ECONOMIST - to measure less, but better¹⁴.

This working group will reflect upon these and other challenges, in order to identify ideas to make the green transition an opportunity for banks and firms.

PLENARY SESSION 3 – OCTOBER 21st - THE END OF THE FOSSIL FUELED CARS AS CORNERSTONE OF INDUSTRIAL CIVILIZATION (WITH A FOCUS ON ELECTRICITY, HYDROGEN, SHARING AND SELF DRIVING)

¹⁰ Mario Draghi and Jean-Claude Trichet also managed the same achievement although some may argue that the ECB serves not a State but a peculiar form of supranational organization

¹¹ In order to have an idea of the scale of the initial investments, it is interesting to remind that The UN Environment Program estimates that developing countries only need \$70 billion per year for adaptation, and this figure is expected to double by 2030. COP26 increased the so-called adaptation fund by less than \$500 millions

¹² OECD, 2021: <https://www.oecd.org/finance/ESG-investing-and-climate-transition-market-practices-issues-and-policy-considerations.pdf>

¹³ See for instance: Raghunandan, Aneesh, and Shiva Rajgopal. "Do the socially responsible walk the talk." *SSRN Electronic Journal* (2020).

¹⁴ The ECONOMIST, Special Report on ESG INVESTING, "In need for a clean-up", JULY 29th 2022

“The humans call themselves *homo sapiens* to highlight their superior intelligence. And yet when I observe the technology that they use to move themselves, I do wonder if they deserve that name”. That is what a visitor from Mars might well say.

“Basically for 90% of the kilometres that they travel – the extra-terrestrial would continue - they use a vehicle on four wheels that they call a car. They have something like 1.4 billion of these tools. Yet these vehicles are not used for 90% of their usable life (they, indeed, occupy space called parking lots), only a fraction of their potential power is deployed (they normally run at 40 KPH although they are designed to go four times faster) and they use an energy (petrol or diesel) which costs ten times more than the most efficient one (electricity)”.

Cars indeed had enormous merits. Invented one and half century ago by two German engineers turned into entrepreneurs (Daimler and Benz), they have been the cornerstone of the industrial society that made possible the most gigantic leap into wellbeing of history. It is not even true that cars were unavoidably fed by fossil energy. In 1902, the American inventor and entrepreneur Thomas Edison, famous for inventing and commercializing the lightbulb, opened in New Jersey a factory dedicated to the most promising technology¹⁵: a rechargeable electric battery that fuelled a kind of automobile that promised to replace the louder and more polluting internal combustion engine. That venture failed, with Edison’s electric cars being outnumbered by fossil fuelled ones and was gradually forgotten in an increasingly industrialized society.

Five forms of innovations are possible:

- a) a shift from private ownership to sharing so that the space occupied by idle vehicles is reduced;
- b) self-driving cars which would allow optimization of travels;
- c) cars whose dimensions and power are adaptable to needs;
- d) vehicles which could even distribute themselves into empty spaces (somebody even argues that flying cars/ small helicopters may become a convenient way to move people around in mega cities);
- e) and of course already there is the accelerating return to Edison’s vision, the electric car.

Not less fundamental, however, is the redesign of infrastructures (roads, squares, ..) and entire cities. After all, old cars could only become the cornerstone of industrial civilization thanks to the redesign of cities which were meant to host carts carried by horses (see WG 4 on cities).

PLENARY SESSION 4 – OCTOBER 21ST - REINVENTING A ZERO EMISSION PRIMARY SECTOR/AGRIFOOD: SOIL AS A CO₂ RETAINER.

The primary sector and rural areas do not normally catch the headlines and yet are central in some of the global phenomena which are defining the 21st century. Agriculture is, indeed, both a culprit and a victim of climate change: it is one of the main sources of CO₂ emissions and one the most hard-hit industries by the consequences of climate change such as drought. However, both the responsibilities and the damages are very unevenly split across

¹⁵ As matter of fact, the Scottish inventor Robert Anderson is credited to have invented the first crude electric carriage between 1832 and 1839. The carriage was powered by non -rechargeable [primary power cells](#).

different productions (the production of one kilogram of meat generates many times the greenhouses gases produced by one kilogram of fruit) and across different phases of the food value chain.

At global level¹⁶ the primary sector is responsible for 18-29%¹⁷ of emissions which becomes around a quarter of the total if we consider the entire value chain of food (refrigeration, packaging, processing, transport, distribution)¹⁸. Greenhouse gas (GHG) emissions due to agriculture are generated both within the farm gate by crop and livestock production activities, and through land use. It also noted the GHG emissions across the food supply chain after the raw materials leave the farm gate, which rise the share from 18-29% on total GHG emissions (agriculture and land use) to 21-37% (entire food system).

Since 1990, emissions on agricultural land have remained stable, totalling in 2019 10.7 billion tonnes of carbon dioxide equivalent (Gt CO₂eq); however, whereas emissions due to the production of food (which includes fertilizers) increased about 10 percent over the period 1990–2019 (from 6.6 to 7.2 Gt CO₂eq), those due to the conversion of forest to cropland and grassland (“land use” which also includes fires and production of biomass) decreased by 25 percent, from 4.7 to 3.5 Gt CO₂eq. As for overall emissions in atmosphere, per capita emissions decreased by nearly 35 percent, from 2.1 to 1.4 t CO₂ eq per capita, as a result of improvements in the efficiency of agricultural production processes and of reductions in land conversions, especially deforestation mostly attributable to stricter national regulations¹⁹.

CHART 2 - TOTAL AND PER CAPITA CO₂ EMISSIONS FROM PRIMARY SECTOR (WORLD; LAND USE AND FARM LAND; GT)

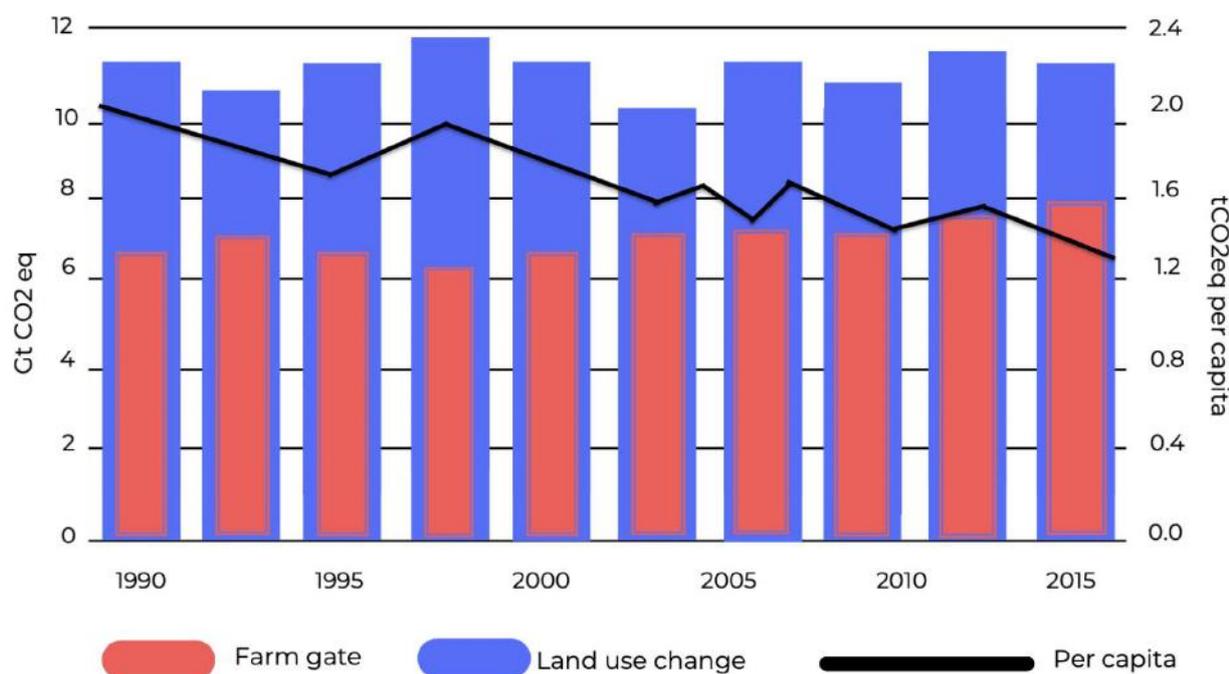
¹⁶ In Europe the percentages are smaller

¹⁷ Rosenzweig et al.,2020 (Nature Food)

¹⁸ Oxford Martin School, 2016

¹⁹ FAO, Emissions from agriculture and forest land. Global, regional and country trends 1990–2019, FAOSTAT *Analytical Brief Series No 25*, 2021 Rome. <https://www.fao.org/3/cb5293en/cb5293en.pdf>

Global absolute and per capita emissions from agriculture, detailing farm-gate and land use change components, 1990-2015



Source: FAOSTAT, 2021

The growth of population and even more of income per habitant coupled with a decrease of land due to climate change is leading to more efficiency. This is producing some spectacular progress in innovation (as in the vast domain of “precision farming”) and research (as for the recent developments of genetic reengineering applied to plants²⁰. And yet this has got drawbacks as for the overuse of antibiotics, chemical fertilizers²¹ (the use of nitrate – one of the most polluting fertilizers - has increased of 476% from 1965 to 2019²²) and the concentration of more and more livestock in smaller amount of spaces which result in the pollution and overuse of water and soil.

The problem, however, is similar to the one that climate changes poses for other industries and segments of world population: the full costs of activities should include “externalities” (often felt in other countries or areas) and these are not reflected in market prices or incentives.

This raises a number of strategic questions to which the plenary will attempt to find answers to be suggested to the next COPS:

Which incentives can promote markets where farmers can conceive a long-term project which cross borders? Which productions/ segments of the value chain are polluting the most (meat?) and which are suffering more because of climate change? How can technologies (like precision farming) be a lever to bring primary sector back to its core values? Can soil become a main retainer of emissions? Is genetic engineering a threat or an opportunity for

²⁰ The Economist, **A genetic tweak that makes soya plants 20% more productive**, 24th August 2022

²¹ The issue of fertilizers may also lead, much like gas and other sources of energy, to geopolitical imbalances, like the case of global potash fertilizer, one of the main exports of Belarus that President Lukashenko has threatened to reroute towards Russia, putting European agriculture under stress.

²² International Fertilizer Association, 2019, https://www.ifastat.org/databases/graph/1_1

more efficiency and less footprint? Is this an opportunity or a threat for Europe and European farmers?

PLENARY SESSION 5 – OCTOBER 21st - CLIMATE JOURNALISM AS A LEVER TO MAKE THE WORLD TO BE AS ONE

Journalism has been living a profound crisis for years. It is an economic crisis where journals have lost most of their revenues from advertising to the likes of Facebook and Google (as for the chart below); others, including television broadcasters, lost subscriptions and sales as new competitors entered the market and as consumers came to demand new skills and insights. This trend does, however, have remarkable, interesting exceptions (like some of the media that are covering the VISION conference): some traditional newspapers did manage to continuously propose new, interesting, fact based stories; new business models are emerging on line.

Climate is one opportunity to launch a “counter offensive” to find new narratives; but it also represents the challenge for media who have often and increasingly shown tendencies which are incompatible with a good “climate journalism”: too much short termism and little space for longer term trends; an excessive search for catastrophic/ sensational accounts which risks to endanger a scientific approach which public opinions should share; too much “political correctness” that produces conformism and can alienate readers.

The plenary sessions will try to find answers to a simple and yet complex question that may apply to climate as well as all main global questions: is there a way to make citizens move from a hyper polarized media context to a debate which can promote collective problem solving? At different levels (from what should national politicians do, how could small local communities and individual households change their behaviors)?

MOVIE SCREENING – OCTOBER 21st – WILD RECOVERY PROTECTING NATURE AND PREVENTING THE NEXT PANDEMIC WITH MALAIKA VAZ (NATIONAL GEOGRAPHIC EXPLORER AND TV PRESENTER)

“Humans are always in search of hope, and when it seems harder to find it in trying times such as these—we are ready to create and contrive fictions that bind us together. The internet is abounding with stories of wildlife bouncing back in the most surprising urban locales—from the canals of Venice to the rural villages of China—with many prophesying that the natural world is finally receiving the respite it needed to bounce back.

Most of these stories are contrived, but more importantly, they can placate souls, helping us believe that all that it takes is large scale shutdowns of human activity for a few weeks to undo decades of ecological devastation. It will take much more, and perhaps our response to this global pandemic can provide us with a few insights as to what it would take to tackle our other big planetary challenge of climate change”

This the introduction to the movie that Malaika Vaz produced for Al-Jazeera and that will be presented at the Dolomite Conference.

DIALOGUE – OCTOBER 22ND – GEOENGINEERING: THE PROMETEUS' DREAM OR A SCIENTIFIC NIGHTMARE? THE POSSIBILITIES AND THE ETHICAL IMPLICATIONS.

If it is true that we are close to a tipping point for climate change alterations, there may be room for considering interventions meant to produce CO₂ removal. Especially, the possibility of deliberately manipulating the planetary environment (Watts, 2002). The removal of CO₂ can happen thanks to Negative Emissions Technologies. The NETs operate to directly capture air, where carbon dioxide is captured and stored. NETs are often grouped with geoengineering; however, they have a different functioning. Even, in the Paris Agreement of 2015 there is a reference to them. Indeed, there is a call on parties "to achieve a balance between anthropogenic emissions by sources and removals by sinks of greenhouse gases" (Paris Agreement, 2015) ²³. Despite their importance in climate change policy, their use is still problematic as they are very expensive and risky.

Another path considered from some scientist is represented by geoengineering. The suggestion made is that the incoming solar radiation that reaches or is absorbed by the Earth could be reduced through the modification of the Earth's radiative balance. In the last years, the European Commission and some national governments have funded projects in order to progress in this field. The most popular method of solar geoengineering is aerosol injections a technology inspired by the volcanic eruptions (Reynolds, 2019).

In general, all of these actions imply, however, two risks: the first is the moral hazard to reduce the pressure on the transformation of consumption and production patterns which may be obsolete; the second are side effects and unforeseen consequences which may be associated to further modification of the mechanisms of the natural climate machine. However, could geoengineering and reduction of the stock of CO₂ be a way to buy us some more years in the run against time which is climate change? Which are the scientific advancements capable to address these concerns?

PLENARY SESSION 6 – OCTOBER 22ND - THE HOLY GRAIL OF PLURIDISCIPLINARITY: THE NEW RESEARCH AND TEACHING BET.

Climate change is a paramount example of what we define as complexity: a complexity which is reaching new heights in a century where Internet is connecting not only devices but also domains which we used to analyze separately. One of the problem to be tackled is, in fact, about too much specialization which is making difficult to understand and then manage issues which spans across a very wide spectrum of intellectual approaches: from experts of weather to the ones of politics and international relation; from economy to computer science; from communication to lawyers and people who know how logistics of value chains operate. We would need not just to put together people with different academic approaches but pragmatic intellectuals who are capable to understand each other across different languages. This is the attempt that some European universities (including the Conference's scientific partners) are doing: in effect to return the pursuit of knowledge and wisdom to the

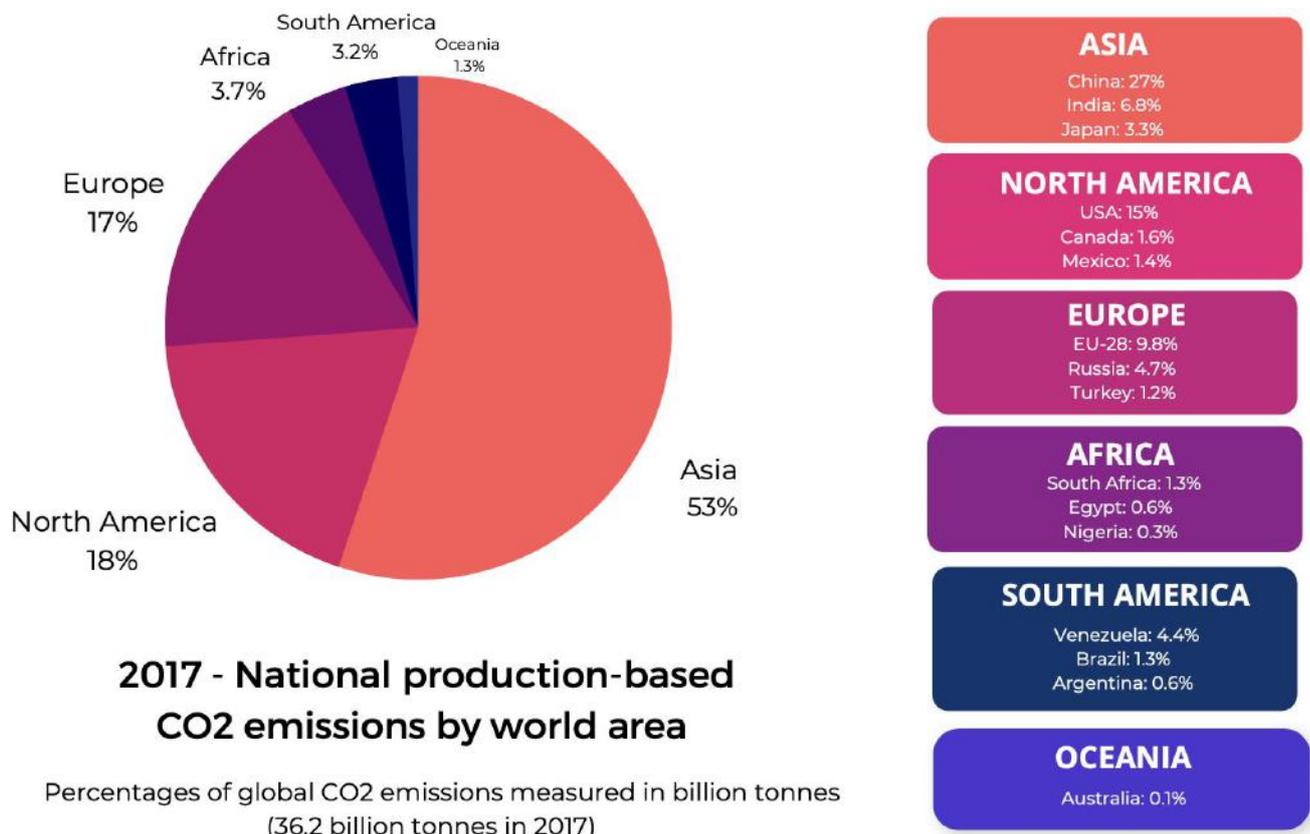
²³ Paris Agreement 2015, (https://unfccc.int/sites/default/files/english_paris_agreement.pdf)

hands of polymaths (as were Leonardo or Galileo, to name but two) rather than narrow specialists.

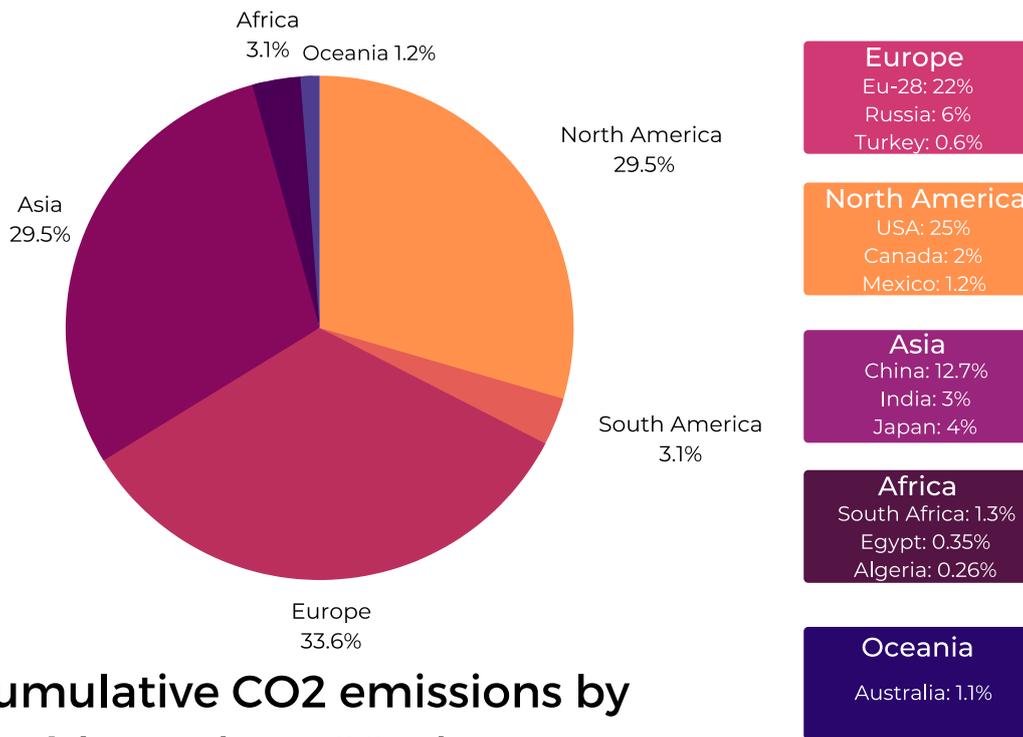
PLENARY SESSION 7 - OCTOBER 22nd - HOW TO END THE ZERO-SUM GAME BETWEEN DEVELOPING AND DEVELOPED WORLD – IDEAS FOR SHARM EL-SHEIKH

It is an endless tug of war between two different kind of responsibilities towards the same disaster: as shown by the following picture, if we consider the cumulative contribution to the emission of CO₂ which stays in the atmosphere for decades, the WEST (meant by that the US, the EU, the UK and the other OECD countries of earlier industrialization) bears a much higher percentage of pollution produced in history; if we instead move to look to current CO₂ emissions, Asia and, more specifically, China are the greatest polluters.

Graph – DISTRIBUTION OF CURRENT AND PAST EMISSION OF CO₂ (% , BILLION OF TONNES, BASED ON PRODUCTION)



Source: VISION on Oxford Martin School data



Cumulative CO2 emissions by world area (1751-2017)

Percentages of global cumulative emissions by world area.
Global emissions from 1751 to 2017 = 1.5 trillion tonnes of CO₂

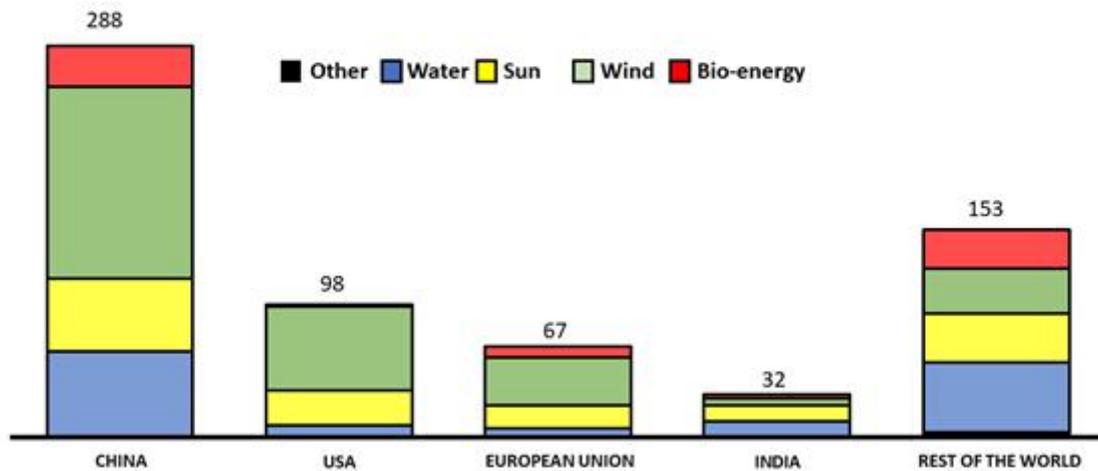
Source: VISION on Oxford Martin School data

If we focus on growth rates, the developing countries are increasing their yearly footprint, while the US and much more the EU are lowering that; however, if we take in account emission per person, the US is still by far the biggest polluter. Furthermore, if we consider production Asia is contributing more than if we switch to consumption.

In 2020, China emitted 7.4 billion metric tons of carbon dioxide (Gt CO₂) from coal combustion, which accounted for more than 50 percent of the global coal emissions (the second-largest emitter - India - produced 1.6 Gt CO₂ (11.4% of global coal emissions which amounted to 13.97 Gt CO₂)²⁴. And yet if we consider the production of renewables the greatest producer of CO₂ – China – also happens to generate as much as clean energy as the rest of the world combined.

²⁴ Global Carbon Atlas Data, 2021 <http://www.globalcarbonatlas.org/en/CO2-emissions>

INCREASE IN ENERGY PRODUCTION FROM RENEWABLE SOURCES BY REGION IN THE PANDEMIC YEAR (2020 – 2021, IN TWH)



SOURCE: VISION ON IEA DATA

These arguments simply reflect different patterns and stages of industrialization and yet they provide some justification to each of the side of the endless negotiation that continue to end up into results which are not adequate to the challenge. We need to urgently revert the very logic of the negotiation into cooperation: this requires different approaches, formats of decision making, even languages used to discuss problems.

WORKING GROUPS

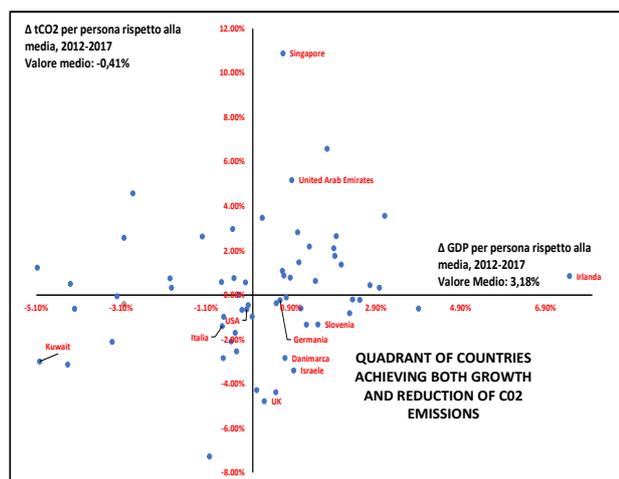
WG 1 - THE ECONOMIC / ENERGY DILEMMA - How can we make the world greener without reducing economic growth? Which are the merits and limits of different technologies / energies?

The perceived trade-off between the cost of the environmental transition and the (much higher) cost of mitigating/ preventing the impact of climate change has been one of the elements that have oriented global actions to climate change policy.

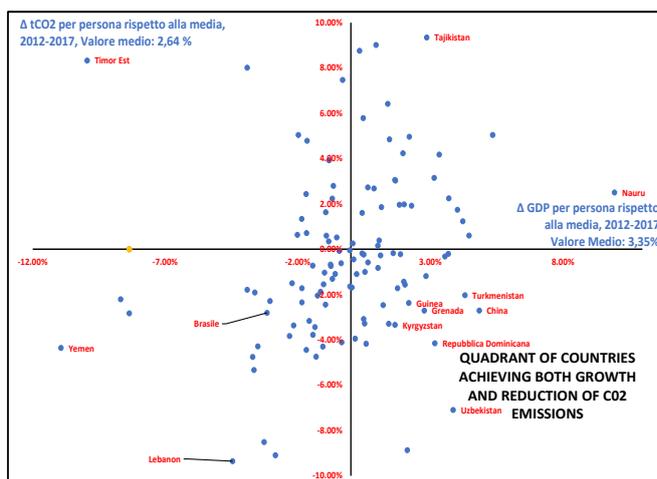
One preliminary reflection is, however, on whether this trade off unavoidable. The chart below seems to say that this is not the case.

Graph - CHANGE IN GDP AND CO₂ EMISSIONS BEFORE THE PANEMIC (% , PER CAPITA, 2012 – 2017, TONS OF CO₂)

DEVELOPED COUNTRIES



AND LESS DEVELOPED ONES



Source: VISION ON WORLD BANK AND IEA DATA

The Great Green Transition will require huge investments and the development of a series of instruments catered towards regulating, nudging and incentivizing the transition. These investments however will produce innovation and economic growth if governments will choose to partner with private investors and individuals and the right incentive system will be engineered so that interests of different parties and of different generation can be carefully aligned.

There are three main macro areas where the economy and the green transition meet.

First, investments in the green transition will avoid depletion of resources and thus enable the long-term resilience of all global production chains. At the most basic level, safeguarding resources will avoid the cost of a slow demise of obsolete industrial patterns.

Secondly, sanctions and nudging measures. These include carbon trading and those measures that make it more costly to pollute than to invest in green energy. The issue here arises on the instability and lack of global coordination on these measures. SDG can also

be considered part of this macro area, with issues ranging from homogenous implementation of the indicator to effective monitoring and the possible collateral risk of creating bubbles of pushing investments away from industries that are currently very polluting but that exactly for this reason need the most investments.

Thirdly, the green transition opens up huge opportunities to invest in new technologies and riding the wave of innovation. Those who will be able to capitalize of these opportunities will probably be the leaders of tomorrow's world order. In this matter, the issuing of green bonds by governments and the overview of how money from bonds is invested needs to be taken into consideration. In a similar way, enabling SMEs to develop and invest in sustainable solutions will also contribute to the economic sustainability of the transition. Loan guarantee programs could be an instrument to reduce interest rates and could be funded by green bond revenues.

Overall, while considering the possible instruments and solutions, we should keep in mind the sustainability of public debt and aiming at not penalizing future generations, as well as ensuring a fair transition also for developing countries.

WG 2 - THE DEMOCRACY QUESTION How can we find a common agenda between different generations (and solve the problem of the embedded short termism of electoral cycle)? How can we avoid the gilets jaunes effects?

In 2018, France had to face the gilet jaunes manifestations. Initially following the rise of oil products (which may sound familiar even today), the protest quickly spread and turned to encompass a multitude of revendications that made decision makers all over Europe finally aware of multiple, deeper discontents and gaps in the state of current European democracies. These included a dissatisfaction with fiscal and social policy, as well as public spending and, more generally, a criticism towards liberalism and current social democracies. The movement, characterized by a strong reliance on social media and a decentralized and disintermediated nature (Boyer and others, 2020), is not too dissimilar to other kinds of protests (for example the very recent Canadian "Freedom Convoy") that are currently taking place all over Europe in reaction to the management of the COVID19 pandemic.

On the opposite side of the political spectrum, the global "Fridays for Future" also saw the questioning of established frameworks and priorities.

In short, we are, as defined by Capoccia and Kelemens (2007), at a moment of critical juncture, a "relatively short periods of time during which there is a substantially heightened probability that agents' choices will affect the outcome of interest" where not only we are fighting for climate change, but where we are also forced to confront the democracy question and the changes that need to be implemented in order to make it functional for our new, more connected and globalized world.

First of all, there is the issue of short-term electoral cycles and the necessity of being able to plan on the very long term, keeping in mind the imperative of safeguarding future generations (according to the 1983 Brundtland Commission definition of sustainability). How can we find a common agenda between different generations (and solve the problem of the embedded short termism of electoral cycle)?

Secondly, how can we empower the democratic process to avoid the gilets jaunes effects? May, for example, technologically enabled participative democracy actions be a possible solution?

And lastly, can climate change policies, if sufficiently owned by citizens at both the national and European level, be an opportunity to bring people closer to decision makers and re-awaken trust and collaboration between the two?

WG 3 - THE PROBLEM OF GLOBALIZATION How can we make policy making processes at global level both more to respond to the crises which are defining the 21st century?

Our current world is characterized by increasing interdependence on both the economic, social and political level. The emergence of two new main “global commons²⁵”, the environment and cyberspace, has further increased the demand for global governance²⁶.

On one hand, we may argue that we are in the golden age of global governance. Never like today the world has seen such a dense, interdependent, and institutionalized net of global governance institutions such as the United Nations, the World Trade Organization, COP and the International Criminal Court.

However, we are also living through a period of great contestation and fragilization of this system (Zurn, 2018), where the legitimacy of these institutions is being questioned based on their effectiveness.

We need a global governance system in order to tackle issues that can only be conceived on a global scale, but we are faced with inefficient and outdated global governance structures that struggle to respond to crisis. In particular, we see fragmented institutions, with slow decision-making processes and with little accountability systems that go beyond simple state compliance.

For climate change governance we have seen a multitude of Conferences, summits and groups see the light of day, but their usefulness, legitimacy and effectiveness are subject of debates: some scholars accuse institutions such as COP, the G7/8 and the UN of having crystallized the debate around climate change in a neo-liberalist key, impeaching the advance of more structural changes (Bernstein, 2000, Gill 2000). Some others criticize the often weak and fragmented nature of international institutions that are dedicated to climate change governance.

However, other currents of thought praise the ability of these institutions to embed environmental priorities in the public discourse. In general, there are some key issues that need to be addressed in the development of new global governance system:

Firstly, harmonizing objectives, concepts, and priorities between countries. What kind of economic development is compatible with environmental sustainability? How to find and what common concepts and principles should provide the basis for debate in a new global governance system? How find common goals?

²⁵ Global commons are defined as natural assets that are outside national jurisdiction, such as the oceans, outer space, and the Antarctic” (Goldin, 2013, p.48). In this respect, “the internet and cyberspace are...a global commons, as is peace and security” (Goldin, 2013, p.48).

²⁶ Global governance is here understood as a non-hierarchical power structure among countries, NGOs, economic and civil society, that share basic norms of political legitimacy, war and peace, and commerce

Secondly, a harmonization of economic incentives. SDGs are a step in the right direction, but how can we make sure that countries or regions do not create imbalances through diverging economic incentives?

Lastly, how can we make the decision-making process faster, more efficient and more democratic, ensuring the actual representation of developing countries?

WG 4 - CITIES AS PLACES FOR EXPERIMENTING THE FUTURE: why are different cities differently performing as far as efficiency of waste management, housing and mobility?

Cities are one of the four corners of the system we need to reinvent in order to save it: factories and offices where most of our goods are manufactured and services are designed; farms where food is produced; physical and digital infrastructure through which goods and services are exchanged; and cities where 78% of consumption²⁷ happens, 60% of emissions are generated and which host most of the communities (universities, government agencies, media, think tanks) where the ideas to fight climate change can come.

Each of the above components is affected by technologies evolution which have been further accelerated by the innovation that the COVID19 Pandemic unleashed (from remote working to the Internet of Beings²⁸) and yet cities are impacted even more.

Forecasts on the future of cities range from visions where the entire world population will be rationalized in megacities to their decline due to the possibilities that technologies open up to work even from the countryside. What the cities of the post-Covid era will look like it's not easy to say, what it is certain is that many urbanists are discussing on creating cities with more public spaces to booster outdoor activities that make communities more inclusive and healthiest (Zevi, 2021).

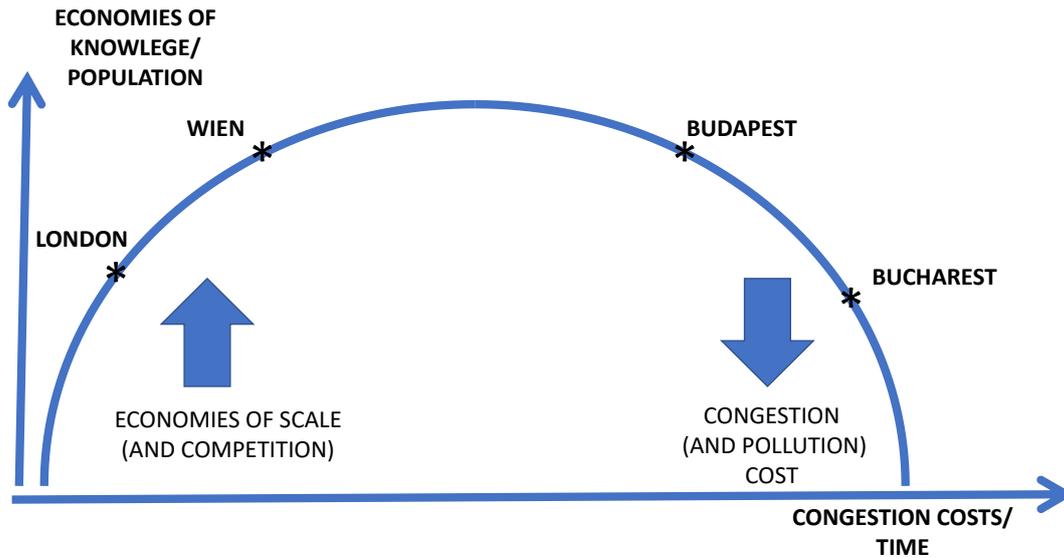
Certainly, the idea that many management consultants seem to like that cities will unavoidably attract more and more people seems to be naïve. European capital cities, for instance, are losing people; the same applies to Chinese megacities where the government has deliberately put limit to their expansion. Urban agglomerations appear to follow the same law that economic geographers (Krugman and Venables, 1995) envisaged: they first grow thanks to the advantage of having talents to meet, compete, partner with each other; they then risk to shrink when the congestion costs exceed the benefits of proximity.

The figure below appears to effectively represent the forces that make cities to rise and fall and the cases of some of the European capitals appear to provide evidence.

²⁷ According to UN habitat

²⁸ This is seen as the evolution of the INTERNET OF THINGS by one of the most recent VISION project on the great convergence between big data and health care systems; Internet and medical research.

Figure – EVOLUTION OF POPULATION IN TIME



Source: VISION on the basis of EUROSTAT NUMBER

The growth of cities is, then, 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 archeologists²⁹. Even the mantra of the “smart cities” does not seem to always hold true: after years of conferences and exhibitions on the unstoppable progress of technologies delivering sustainability, European Commission’s numbers say that we are still wasting enormous amount of energy: at any moment of an average day, we only use about one third of the habitable space of our houses; we (fortunately) use only one quarter of the speed that cars were meant to accommodate; we throw away one third of the food we buy and for each kilogram of food we buy, we also purchase another kilogram of package.

However, there is no deterministic pattern to establish the destiny of cities. Technologies can solve each of the three above mentioned examples of inefficiencies (housing; mobility; consumption) which can make them less attractive. They can enable process which require transformations which will involve everybody – households, firms, governments – and which can still lower congestion costs and footprint.

The wills and skills of local communities and their leaders will matter a lot and make huge differences even vis-à-vis similar pre-existing conditions. We will need leaders capable to “plan” the future; or, at least, to coordinate the efforts of many different actors which now speak different languages, use different metrics and time horizons, hold different interests.

The European Commission has launched the mission of having 100 cities to accomplish zero net neutrality by 2030 (in a way which appears to be compatible with the eleventh SDG

²⁹ 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).

of having “sustainable cities and communities”³⁰). The questions are, however, are these attempts equipped of enough (financial and political) resources to accomplish such high expectations?

The working group will do problem-solving starting from the section of the VISION concept paper trying to frame the following questions: why are different cities performing differently as far as efficiency of waste management, housing, mobility? What about recognizing a formal status to cities as parts of the global or European decision-making process? How is the pandemic (and, thus, remote working as well as the explosion of e-commerce, food delivery, NETFLIX) changing the role of urban agglomerations?

³⁰ UNEP, <https://www.unep.org/explore-topics/sustainable-development-goals/why-do-sustainable-development-goals-matter/goal-11>

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