

INTERNATIONAL GENEVA AND THE CLIMATE EMERGENCY

by Michel Jarraud

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by Michel Jarraud,
Secretary-General Emeritus of the World
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Disclaimer :

The analyses and conclusions in this report are based on a review of publicly available documents, as well as discussions on the topic between the report's author and a number of key figures. They at times reflect the author's personal view and understanding and shall not be taken to represent the official position of the organizations mentioned. The author kindly asks these organizations for their indulgence should any inaccuracies have inadvertently been included.

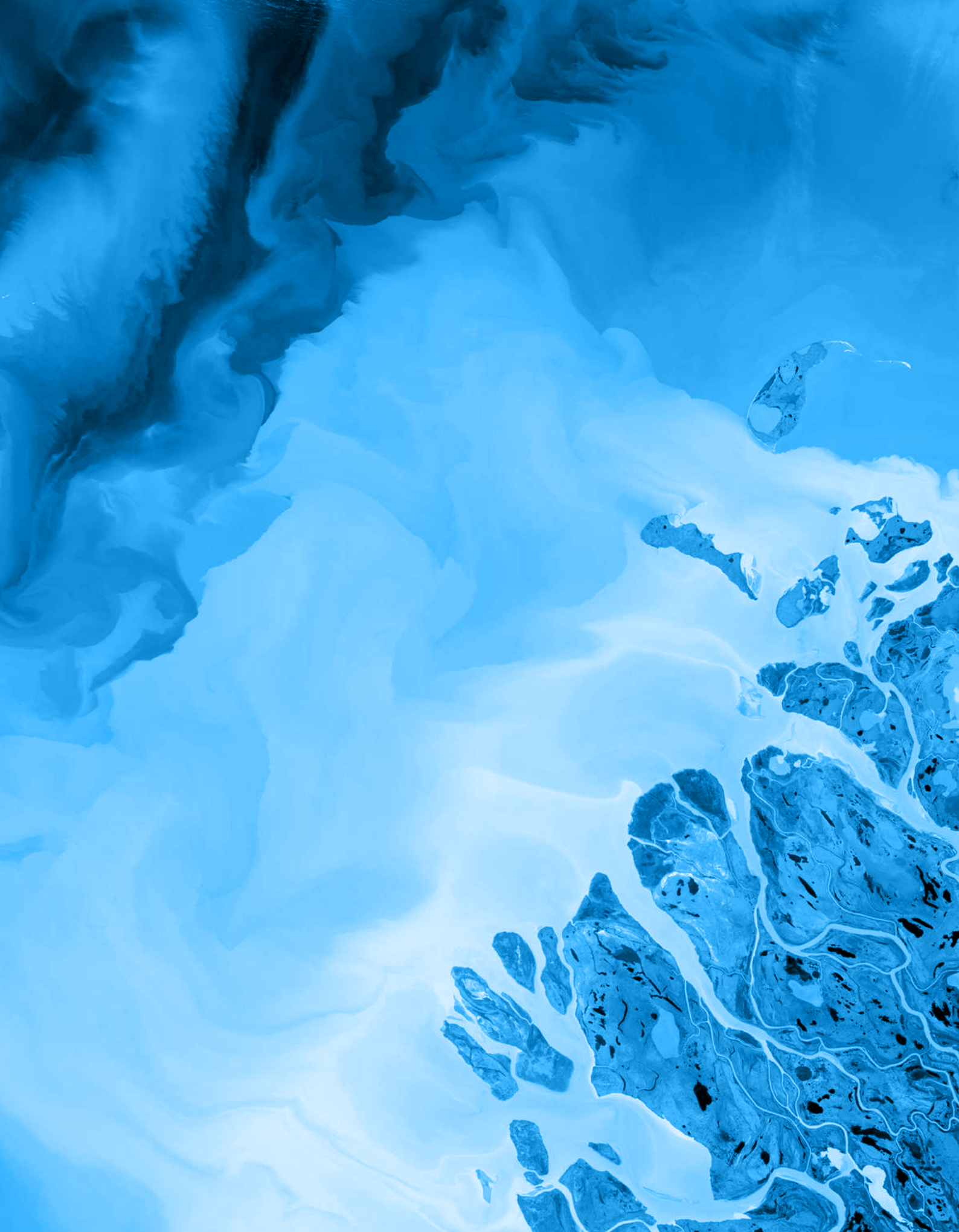


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FOREWORD



Climate change is now a core concern and a matter of political debate worldwide. Even more so than other global issues, it requires governments to take concerted action.

Since it was established 46 years ago, the Fondation pour Genève has been dedicated to supporting and promoting International Geneva. By way of contribution to this crucial topic, this study outlines what is at stake in the climate discussions taking place in our city and formulates proposals to strengthen the role of International Geneva.

As the capital of global governance, Geneva is already home to many key governmental and non-governmental institutions, including the Intergovernmental Panel on Climate Change (IPCC) and other organizations that have made sustainable development a priority.

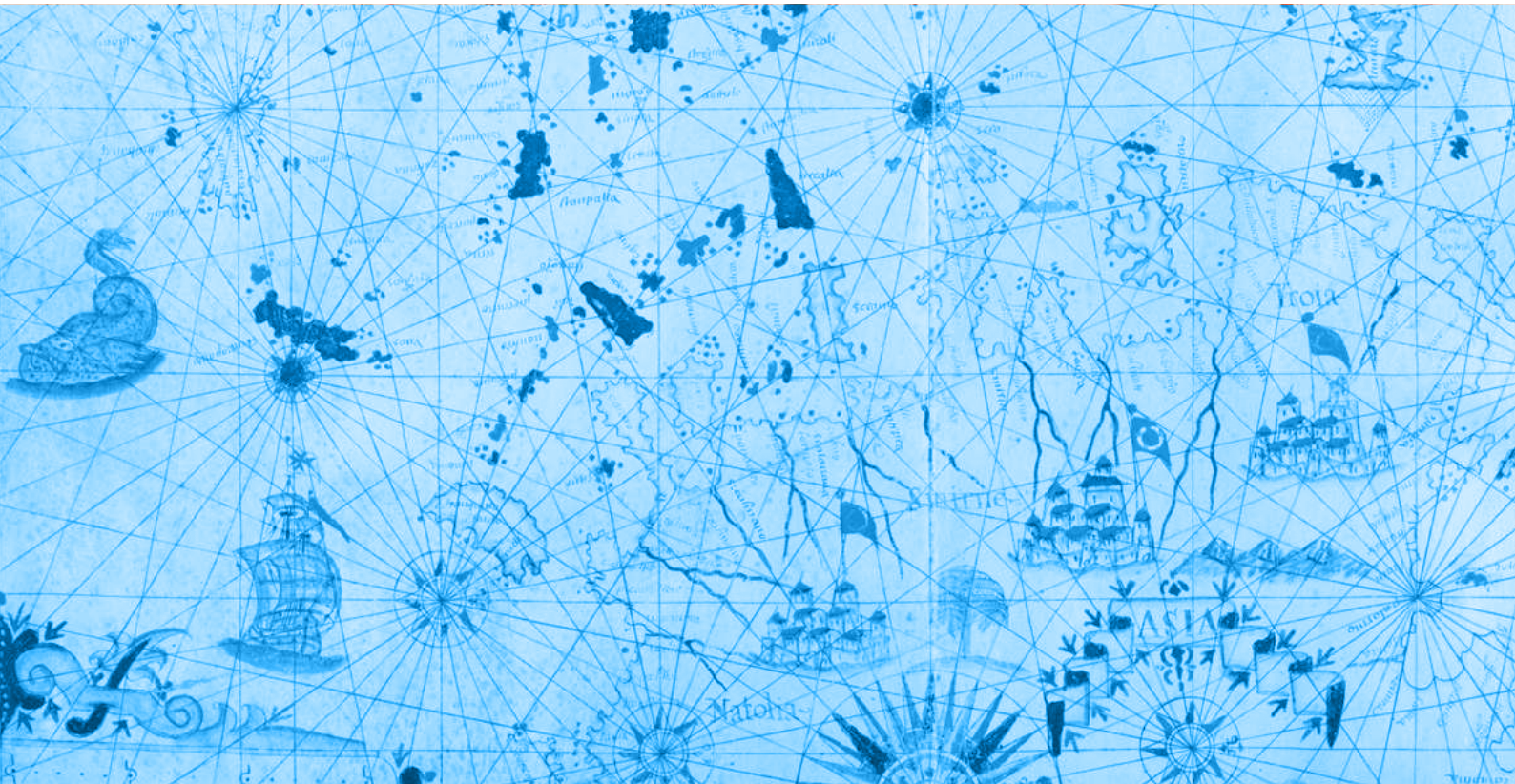
To produce this review and formulate concrete proposals, we have turned to Michel Jarraud, Secretary-General Emeritus of the World Meteorological Organization (WMO) and a renowned expert on climate issues thanks to his long diplomatic and scientific career. No one could be better placed to answer the Foundation's call to not only describe the political and scientific interactions taking place in Geneva on climate issues, but also formulate proposals for Switzerland and Geneva to play a more decisive role in the future by creating the right conditions for solutions to emerge.

Ever since the League of Nations was established over a century ago, Geneva has been the cradle of talks that have proved essential to the equilibrium of our planet and the well-being of its inhabitants. After peace and human rights, labour, health and trade, it is now time for Geneva to take up the challenge of global discussions on the climate emergency.

The Fondation pour Genève is committed to supporting efforts towards better global governance and ensuring that Geneva plays a central role in finding solutions to climate change.

Marc Pictet
President of the
Fondation pour Genève

1 INTRODUCTION AND HISTORICAL BACKGROUND



Weather and climate have always been an integral part of the evolution of humankind, ever since *Homo sapiens* emerged in Africa and embarked on the successive migrations that would spread our species to every corner of the earth. For the longest time, periods of climatic change, which have often marked the rise and sometimes the fall of great civilizations, and extreme weather phenomena were unpredictable and associated with the wrath of countless deities.



The hair hygrometer, invented by Horace Bénédict de Saussure.

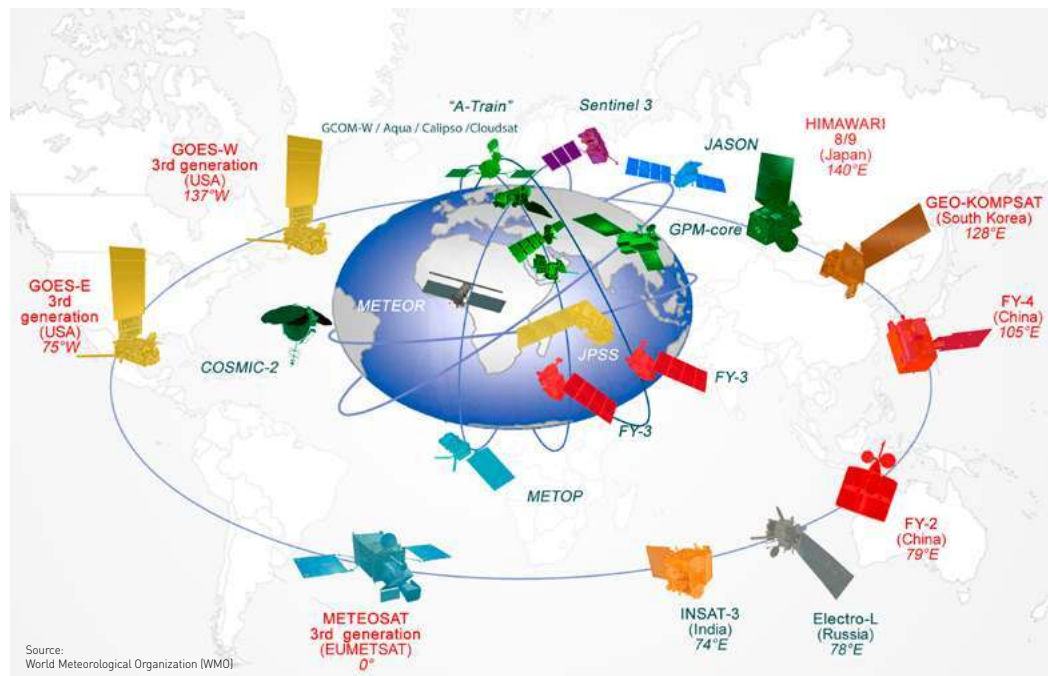
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Despite the efforts of the ancient Greeks and in particular of Aristotle, whose “Meteorology” treatise remained an authoritative source for almost 2000 years, the ability to predict weather events and especially climatic changes continued to elude us.

The turning point came in the 17th and 18th centuries with the invention and development of scientific measuring instruments in the field of meteorology. As well as thermometers (Santorio and Galileo) and barometers (Torricelli), the hair hygrometer was invented by an illustrious scientist from Geneva, Horace Bénédict de Saussure, who was born in Conches in 1740 and also devised a “heliothermometer” (to measure solar radiation). With this, a scientific approach to meteorology and climatology developed, based on observation and the fundamental laws of mechanics and physics that were gradually discovered.

All of this required standardized observations to be collected and exchanged among different countries around the world, something that became possible in near-real time when the telegraph was invented. Shortly after, the world's oldest international organization was established: the International Telegraph Union, the forerunner of the International Telecommunication Union, which has been headquartered in Switzerland since 1865, first in Bern and since 1947 in Geneva. All this led to the foundation of the International Meteorological Organization (IMO) in 1873. The IMO worked via a number of technical commissions that reflected the diversity of its activities and services. These ranged from collecting and exchanging observations to developing meteorological services for various sectors of the economy, such as shipping and agriculture, and later, aviation in the early 20th century. Climate was already seen as an essential field and a Commission for Climatology was formed in 1929. Its visionary decisions have played an important role in the detection and analysis of climate variations and changes ever since.

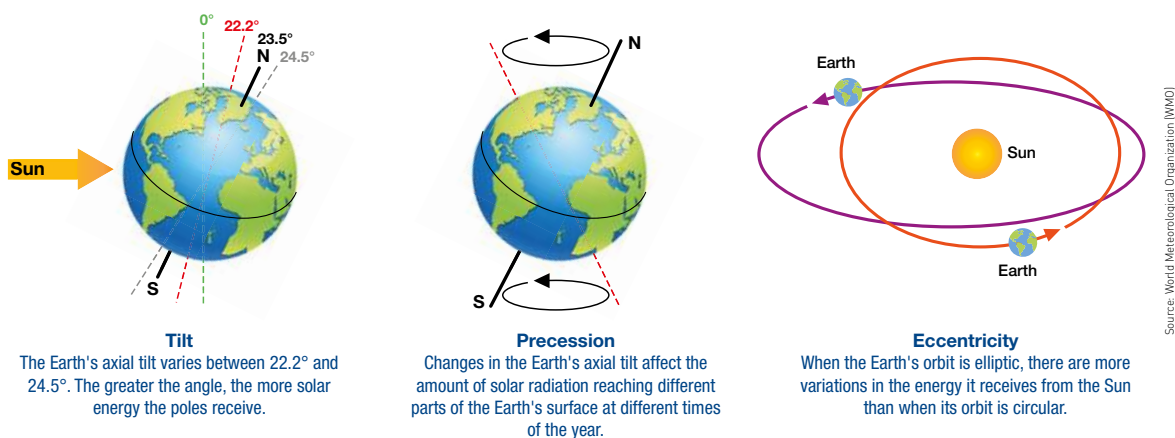
However, the IMO's limited non-governmental structure began to prove increasingly problematic and in 1947, shortly after the Second World War, the decision was made to transform the IMO into an intergovernmental organization. The World Meteorological Organization (WMO) was established in 1950. Since then, there has been a revolution in our ability to observe and model weather and climate. As well as enhanced conventional observation systems, we now have multiple satellite constellations. Most of these observations are exchanged in real time among all countries of the world. In addition, increasingly sophisticated digital models running on the most powerful super-computers available produce evermore accurate weather forecasting and climate simulations. This has provided decision-makers at all levels, as well as the general public, with increasingly accurate and reliable information in virtually all socio-economic sectors and has alerted the world to the reality and risks of human-induced climate change.



2 AWARENESS OF CLIMATE CHANGE

Climate can be defined as the average meteorological situation in a given region over an extended period of time. Climate observation and research have always been part of WMO's core activities.

Until the mid-1970s, this mainly involved studying the major historical periods of climate change and recent variability. We already knew that tectonic plate movements had had a major influence on the Earth's climate, but over extended periods of million of years. Ever since early modern humans emerged, alternating glacial and interglacial periods punctuated their migration and evolution over time periods ranging from tens to hundreds of thousands of years. The work of Milutin Milankovic in the first half of the 20th century revealed that these were linked to variations in the Earth's orbit around the Sun (eccentricity, obliquity and precession). Other factors could also play a role, but to a lesser extent and over much shorter periods (major volcanic eruptions, variations in the intensity of solar radiation, etc.). Over the timescale of a few generations, the climate was considered to be essentially static, with significant variability.



In the early 1970s, at the height of the Cold War, the main concern was the risk of a "nuclear winter", a major and lasting global cooling caused by a nuclear war between the superpowers of the time (USA and USSR).

Then, in 1976, the WMO released its first statement on the possible consequences of rising CO₂ levels in the atmosphere. Shortly afterwards, in 1979, it organized the first World Climate Conference in Geneva, which resulted in significantly stronger international cooperation in this field. This led to the launch of the World Climate Programme and the World Climate Research Programme in 1980, under the joint auspices of the WMO, the International Council of Scientific Unions (ICSU) and UNESCO. Their aim was to facilitate the analysis and understanding of Earth system variability and its evolution in order to develop practical applications. Shortly afterwards, the 1985 Villach Conference in Austria marked a turning point in the awareness of the role of CO₂ and other greenhouse gases. This in turn produced the Intergovernmental Panel on Climate Change, established by the World Meteorological Organization (WMO) and the United Nations Environment Programme (UNEP) in 1988. Since then, the IPCC has produced regular authoritative assessments of the state of scientific knowledge on climate change.



The IPCC's successive reports (1990, 1995, 2001, 2007, 2013-2014, 2021-2022) all confirm, with ever greater precision and force, the reality of climate change and the now undeniable human responsibility for it.



These reports proved a key source of authoritative information in support of negotiations towards the United Nations Framework Convention on Climate Change (UNFCCC). In 2007, in recognition of its contribution to global peace and security, the Panel was awarded the Nobel Peace Prize for its contribution to furthering our knowledge of human-induced climate change.

The WMO organized the Second World Climate Conference in 1990 in Geneva. One outcome was the Global Climate Observing System (GCOS), designed to ensure better observation of the various aspects of the climate system: physical, chemical and biological. It was a decisive step along the way to the Rio Earth Summit (1992) and the negotiations that would lead to the United Nations Framework Convention on Climate Change (UNFCCC).

However, despite the considerable progress in observation and scientific understanding of the climate system, it became clear that in many countries, including the most developed ones, the practical implementation of these scientific developments left much to be desired. As a result, in 2009, the WMO's World Climate Conference-3, also in Geneva, called for the creation of a global framework for climate services, so that all critical socio-economic sectors would have access to the information they needed for timely and effective decision-making.

Throughout the 1980s, a new concept began to emerge, called sustainable development. Defined in 1987 by the World Commission on Environment and Development (also known as the Brundtland Commission) as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs", sustainable development is one of the greatest challenges of our time. In September 2015, the process culminated in the unanimous adoption of the 2030 Agenda and its 17 Sustainable Development Goals (SDGs). It is important to note that all these goals are interconnected, and that a cross-cutting approach is needed for them to be achieved.



It is essential to stress here that anthropogenic climate change can potentially undermine all our efforts to achieve these goals. The effects of climate change rising temperatures, changes in precipitation patterns, rising sea levels, more frequent and intense extreme weather and water events will negatively impact most of the SDGs. For example, natural disasters such as cyclones, hurricanes, typhoons or floods can wipe out years of

development efforts within hours or days. Heat waves or higher pollution can drive up mortality rates significantly. More frequent and severe droughts can endanger food security in already highly-vulnerable countries, leading to the recurrence of famine. The number of people living in water-threatened areas is likely to skyrocket, with serious consequences for health, gender equality and education. Hundreds of millions of people and the infrastructure on which they depend will be impacted by rising sea levels, which will affect health and could render many megacities unviable, even threatening the very existence of small island states. When combined with the countless other effects of phenomena such as the acidification, deoxygenation and warming of our oceans, the consequences for biodiversity are already visible and could become more severe than anything ever seen in human history. These factors also exacerbate other challenges, such as migration, with many studies indicating that these developments pose a serious threat to peace and security. In its recent reports, the World Economic Forum (WEF) identifies the failure to mitigate and adapt to climate change as one of the greatest threats to the global economy. In other words, there can be no truly sustainable development unless climate change is mitigated and we adapt to its inevitable consequences.

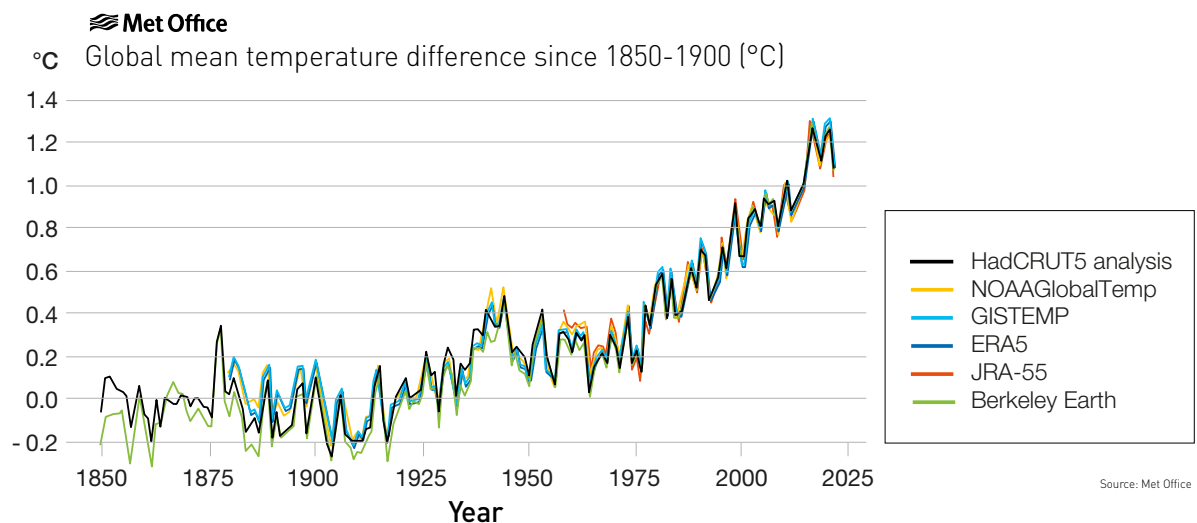


This growing awareness of the complex links between climate change and development aspects, as well as the greater frequency of events and mounting scientific evidence that this is human-driven, has made it impossible to plead ignorance as an excuse for inaction. Moreover, it is increasingly clear that no country can tackle this challenge alone, not even the most developed ones. All of this helped to produce the historic Paris Agreement unanimously adopted by the 21st Conference of the Parties (COP21) of the UNFCCC in December 2015. However, progress since Paris has been woefully slow. Since 2016, commitments have fallen short of ambitions and too many countries have switched to focusing on short-term nationalistic priorities in various sectors. Solidarity has faltered, at both national and international level, and misinformation and fake news are proliferating.

3 THE ISSUES AND CHALLENGES OF CLIMATE CHANGE : STATE OF PLAY

The WMO's most recent provisional report on the State of the Global Climate 2021, which was prepared for the COP26 in Glasgow and subsequently confirmed, contains an alarming assessment of the situation. «Scientists are clear on the facts. Now leaders need to be just as clear in their actions. The door is open; the solutions are there. COP 26 must be a turning point. We must act now – with ambition and solidarity – to safeguard our future and save humanity.» said United Nations Secretary-General António Guterres in his opening remarks.

- The past seven years, including the first nine months of 2021, have been the warmest on record. The average global surface temperature is more than 1.1°C warmer than in the pre-industrial period.



- Several regions around the world have experienced exceptional heat waves with significant excess mortality. Many all-time record temperatures have been recorded, such as 49.6°C in south-western Canada, 48.8°C in August in Sicily and 38.0°C in June in Verkhoyansk, the highest temperature ever observed north of the Arctic Circle.
- Sea levels are rising at a faster pace, now at 4.4 mm/year, more than twice the 20th-century average. In addition, ocean heat content and acidification has increased significantly over the past two decades, reducing the oceans' capacity to moderate climate change.
- The minimum Arctic sea ice extent was the second lowest since satellite measurements became available.



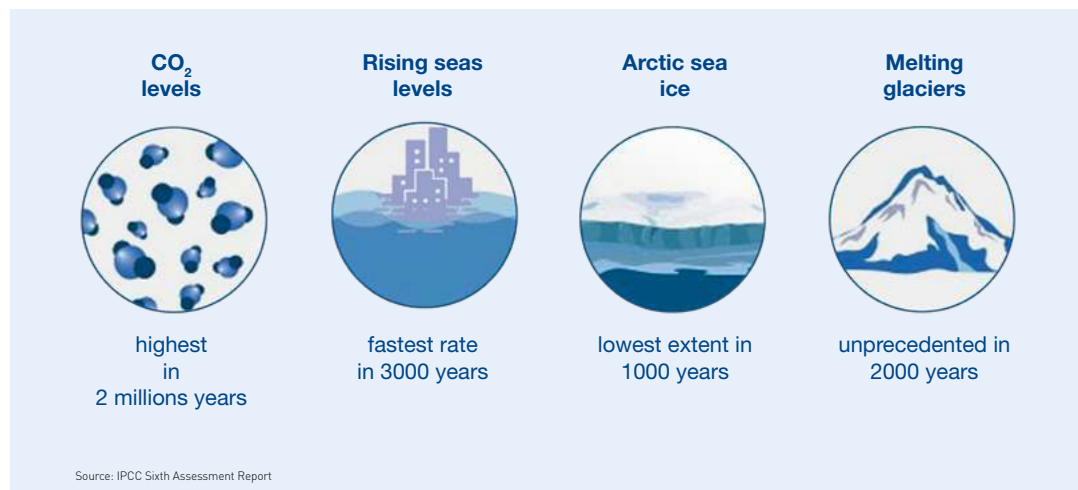
- Mass loss from the Antarctic ice sheet has accelerated since 2005 to nearly 200 Gt per year. During an episode of exceptional melting, it rained for the first time on record at the weather station at the peak of the Greenland ice sheet.



- Many regions in China, Europe and Africa have experienced extreme rainfall and flooding.

In addition, in August 2021 the IPCC published the first part of its Sixth Assessment Report, on the scientific basis of climate change. Its conclusions were the firmest yet:

- There is no longer any doubt that human influence has warmed the atmosphere, oceans and land.
- CO₂ levels are the highest in at least 2 million years.
- Climate change is now widespread, rapid and intensifying. "Many of the changes observed in the climate are unprecedented in thousands, if not hundreds of thousands of years, and some of the changes already set in motion—such as continued sea level rise—are irreversible over hundreds to thousands of years".
- The 1.5°C limit in the Paris Agreement is likely to be exceeded before 2040, and a business-as-usual scenario would see warming of between 3.3 and 5.7°C in 2100 compared to pre-industrial levels.
- In particular, there is a high degree of confidence that the frequency and/or intensity of heat waves or record temperature will increase and that these are human-induced.
- An increase of 2°C compared to the pre-industrial era would cause over a fivefold increase in the frequency of extreme heat waves.
- Low-likelihood yet high-impact phenomena "cannot be ruled out", in particular tipping points such as strongly increased Antarctic icesheet melt and widespread forest dieback and the ensuing loss of their carbon sink function.



In addition, since 2020, the coronavirus (COVID-19) pandemic has slowed the momentum generated by the Paris Agreement. As governments act to tackle multiple, urgent and interacting crises (particularly health, economic, migration, food security and of course climate), many have resorted to decisions that at times undermine climate action. Many countries are also seeing a resurgence or bolstering of nationalistic approaches based on short-term interests, to the detriment of international solidarity and a long-term vision.



The COP26 that took place in November 2021 in Glasgow should have been held the previous year but was postponed for the first time in COP history due to the COVID-19 pandemic. Given how urgent it is that we act now to limit climate change, this delay was problematic in itself, but the gap between the increasingly alarming and indisputable findings of the latest IPCC report (see above) and the smattering of progress made at COP26 is a major concern.

The outcomes (or non-outcomes) of this COP26 include:

- some States were more ambitious in their nationally determined contributions compared to the levels agreed in Paris in 2015: the handful of new commitments announced in Glasgow fall short of the goal to limit global warming to +2°C, let alone 1.5°C. Still, the parties did agree to review their commitments more frequently than originally planned under the Paris Agreement, starting in 2022.
- Reference to a commitment to “phase-out coal” was removed at the eleventh hour due to lack of consensus, and replaced by the term “phasedown”, but with no quantified targets.
- No significant progress was made on the sensitive issue of “loss and damage”, mainly due to potential legal implications.
- Progress on a carbon pricing mechanism was equally absent.

One noticeable difference about this COP was that the boundaries between negotiators, NGOs and civil society were less clear-cut, probably a sign of the growing role of non-state actors.

The next COP27 in Egypt at the end of 2022 will have a busy agenda, but these delays are sure to have serious physical, economic and social consequences.

4 GENEVA, ITS CONTEXT AND THE ROLE OF ITS DIFFERENT ACTORS IN THE CLIMATE CHANGE ARENA

As the brief overview above shows, the challenges are multiple and complex. Multilateral governance, of which Geneva is a key component, relies on specialized agencies and specifically mandated programmes, such as the World Health Organization (WHO), the Food and Agriculture Organization (FAO), WMO, UNEP and many others. This tried and tested approach has functioned for decades and continues to play a vital role. But today's global challenges, particularly those around sustainable development, are fundamentally cross-sectoral in nature, an aspect that calls for innovative approaches. A culture of interdisciplinary cooperation can often be sorely lacking among experts and organizations in each of the various disciplines involved. This is clearly the case in the climate change arena, where dialogue between physicists and economists has been practically non-existent for far too long. Things have begun to change, but too slowly and with still a long way to go.

In addition, conventional governmental and intergovernmental approaches remain insufficiently inclusive of a growing number of key stakeholders and decision-makers from civil society, the private sector and sub-national structures like regions and cities. No single organization or structure can claim to solve these issues alone, particularly when it comes to climate change.

To successfully tackle climate change, we must also radically overhaul our approach to decision-making. All too often, decisions continue to be based on short-term considerations and past experience. However, climate change is a rapidly changing context where the past has only limited predictive value and can even be misleading. Moreover, many decisions are taken with a short and even very short term perspective, especially by politicians and in many industrial sectors. If we care about truly sustainable development, it is crucial that we consider longer time scales, of decades or even centuries.

In this highly complex context, Geneva is uniquely positioned for intersectoral and multidisciplinary approaches. As host to the headquarters of several major UN and other intergovernmental organizations as well as a plethora of NGOs and multinational companies, it is ideally placed to facilitate interactions between these scientific and technical bodies and the world of business and trade: the World Trade Organization (WTO), the World Business Council for Sustainable Development (WBCSD) and the World Economic Forum (WEF) among others. Moreover, the permanent representation of 177 UN member states allows for close political relations, while Geneva's academic institutions, think tanks and cooperation platforms have always included a distinctly global dimension.

So as to understand how Geneva could play a more prominent role in addressing all these challenges, an overview of the different actors and initiatives in the region is needed. As there are simply too many to provide an exhaustive list, we will focus on just a few, selected for the significance of their current or potential work in relation to climate change.

For ease of reading, these actors are grouped into three main categories: multilateral organizations, other international players present in Geneva and the region, and finally Genevan initiatives and actors. Nonetheless, many initiatives are hybrid in nature and straddle more than one category. As well as the lists in this section, readers will find more detailed descriptions in Appendix 2.

4.1. The multilateral intergovernmental system

- a. Intergovernmental Panel on Climate Change (IPCC)
- b. World Meteorological Organization (WMO)
- c. World Health Organization (WHO)
- d. United Nations Office at Geneva (UNOG)
- e. International Labour Organization (ILO)
- f. International Organization for Migration (IOM)
- g. United Nations Institute for Training and Research (UNITAR)
- h. United Nations Office for Disaster Risk Reduction (UNDRR)
- i. United Nations Environment Programme's (UNEP) Europe Office
- j. United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries (UN-REDD)
- k. World Trade Organization (WTO)
- l. European Organization for Nuclear Research (CERN)

There is a broad range of expertise within this category:

- Organizations or programmes providing the scientific data and analyses used for negotiations or decision-making (IPCC and WMO).
- Those with more specific mandates but with strong ties to climate change issues (WHO, ILO, UNDRR, IOM, WTO, UN-REDD).
- Those with a transdisciplinary role, providing coordination or support (UNOG, UNEP), or training and capacity building (UNITAR).

These categories are of course reductive. As Appendix 2 explains, most organizations contribute in multiple ways.

Furthermore, it is important to mention that through their membership, these organizations have almost universal geographical coverage. They are global bodies and contact with the member states generally passes through the diplomatic missions in Geneva.

4.2. Other international actors present in Geneva and the region

a) Geneva's diplomatic community

Geneva is often described as the operational centre of multilateral diplomacy. 177 States are represented in Geneva. The discussions that take place here touch on all aspects of sustainable development and can often be more technical than in New York, thanks in part to the presence of many scientific and technical organizations and institutes. This is the case when it comes to climate change issues.

b) The WEF and other economic and business organizations

Geneva and the surrounding region are home to many international economic and business organizations, which are increasingly active and motivated when it comes to addressing climate change. An exhaustive presentation would be impossible here, and this report focusses on two of them with a truly global reach:

- World Economic Forum (WEF)

The WEF's annual reports reflect the business community's growing awareness of the risks associated with climate change and the need to address them.

- World Business Council for Sustainable Development (WBCSD)

c) International Non-Governmental Organizations (INGO's)

- Inter-Parliamentary Union (IPU)
Parliaments play a crucial role in ratifying (or rejecting) international agreements like the Kyoto Protocol, or more recently the Paris Agreement, as well as in passing budgets and preparing legislation to transform commitments into action.
- International Committee of the Red Cross (ICRC)
The flagship of Geneva's humanitarian tradition
- International Union for Conservation of Nature (IUCN)
- International Air Transport Association (IATA)
- International Emissions Trading Association (IETA)
- Regions of Climate Action (R20)
Beyond national governments, cities and regions are major players when it comes to the strategy and implementation of crucial measures to combat climate change. There are many examples of such subnational structures overcoming roadblocks where national governments and parliaments have failed.
- Global Footprint Network

4.3. Initiatives and actors from Geneva

There are so many home-grown actors in the field of climate change in the City and Canton of Geneva that it is impossible to mention them all here. Several of them receive Swiss government support. Below are just a select few from a number of different sectors.

a) The academic community

- The Geneva Graduate Institute (IHEID) places particular importance on interdisciplinarity and has several research centres and training activities focussed on these issues.
- University of Geneva, in particular via its Geneva Science Policy Interface (GSPI), the Global Studies Institute (GSI) and now the 2050Today initiative (see below).

b) Other actors

- Geneva Science and Diplomacy Anticipator (GESDA)
Science and technology are evolving at an unprecedented pace, yet the consequences of these innovations are not always visible. For this reason, anticipation is key if we are to build a future that leverages the full potential of new developments.

- **2050Today**
More than 60 Geneva-based institutions are pooling their expertise and taking concrete action to tackle the climate change challenge.
- **Sustainable Finance Geneva (SFG)**
The financial sector has a key role to play in this area. SFG's objective is to use awareness-raising to encourage and guide the sector's involvement.
- **Climate Council (Canton of Geneva)**
This ideas lab aims to provide creative input alongside existing advisory bodies.
- **The City of Geneva's Climate strategy**
This strategy was adopted in February 2022 and sets ambitious objectives in eight main areas.
- **The Foraus Think Tank on Foreign Policy (FORAUS)**
One of its objectives, in conjunction with the Swiss Federal Department of Foreign Affairs, is to support networking among the various think tanks in the Geneva region.
- **1000+ solutions (Solar Impulse Foundation)**
This foundation is helping to demonstrate that there are major economic opportunities in tackling climate change.
- **The International Institute for Sustainable Development (IISD)**
Its mission is to promote human development hand in hand with environmental sustainability.
- **Geneva 2030 Ecosystem**
This is an initiative of the SDG Lab and IISD (see above).
- **Financial Centres for Sustainability (FC4S)**
This is a network of 39 of the world's financial centres with a combined market capitalization of over US\$ 84 trillion.

5 STRENGTHS AND WEAKNESSES OF GENEVA COMPARED TO OTHER HUBS



Compared to other cities competing for a more prominent role in the fight against climate change, Geneva has many strong points but also some weaknesses.

5.1. Geneva's strengths

- The density, diversity and complementarity of key players in the relevant fields is unparalleled
- More specifically:**
- The presence of major international players in the fields of science, the environment, finance, industry and academia.
 - A unique tradition of building transdisciplinary bridges and the potential to take this to the next level.
 - The active representation of almost all UN member states.
 - Complementarity between non-governmental and institutional actors.
 - Strong historical support from local and national authorities.

- A diverse and well-respected media presence with access to international audiences for greater messaging impact.
- Geneva's relatively small size, while in some ways a weak point, is also an asset when it comes to facilitating interaction among actors from different disciplines and cultures. For example, it is easier to establish dialogue between political and scientific and technical experts.

5.2. Geneva's Weaknesses

- The high cost of living in Geneva and its surroundings is a well-documented weak point that affects all areas.
- Hotel accommodation is limited and costly, making it difficult to hold very large meetings such as a UNFCCC COP, which can attract between twenty and forty thousand delegates.
- Other potential hubs are taking an increasingly aggressive approach, underscoring the need to diversify such hubs or create new ones in regions where they have yet to develop (Africa, Asia, South America, etc.). A number of recent choices for the location of new institutions in the field of climate change show that this approach is producing results.
- When it comes to their own efforts to implement the Paris Agreement, in the eyes of the international community, Geneva and Switzerland are not always perceived as leading by example.

6 RECOMMENDATIONS

The above analysis inspires a number of recommendations, some general, some more specific, and some addressed more to Swiss or local authorities. The nature, scope and impact of the following initiatives vary and they are complementary, though independent of each other.

The suggestion is not to create a new organization, but rather to build on existing or emerging initiatives, support some of them more and promote flexibility and innovation through targeted focus groups with flexible membership.

6.1. General recommendations

- **Post COP analyses**

After each Conference of the Parties (COP) of the United Nations Framework Convention on Climate Change (UNFCCC), or other major international meetings on related topics, an ad-hoc working group, acting as a kind of observatory for climate action, could analyse the decisions reached, initiatives announced and challenges highlighted so as to identify opportunities for Geneva to cooperate and/or follow through. For example, following the COP26 in Glasgow (November 2021), we would suggest focussing on the following topics:

- Health: with so many major global players in the health sector concentrated in Geneva and Switzerland, stronger support for WHO's initiative to ensure carbon-neutral health systems globally by 2040 at the latest would appear relevant. Ten Swiss companies have already made commitments in this direction.
- Carbon pricing: considering the many initiatives in this field, leverage the power of Geneva's business and financial sectors and its multilateral organizations to speed up the development of a carbon pricing approach and position Geneva at the heart of this effort.
- Socio-economic impacts of the transition to a greener and more sustainable economy. The COP26 adopted a Just Transition Declaration, an initiative of the ILO. Geneva is home to major players in its three dimensions economic, social and environmental hence the new initiatives and multiple partnerships required to implement the declaration will find significant added value in the Geneva ecosystem. Geneva clearly has the potential to become a global hub.
- Geneva and its various actors can improve their positioning if they lead by example in a more visible way, showcasing concrete initiatives such as those of the SDG Lab or 2050Today while more systematically incorporating sociological aspects so as to achieve true net zero as soon as possible.

The members of this working group should be renowned experts participating in their individual capacity and not as representatives of their organization.

In turn, the exemplary nature or broader scope of the initiatives born in Geneva could then be promoted at future COPs.

- **Strengthening links between intergovernmental and non-governmental organizations in Geneva**

Mechanisms already exist in other areas but are notably lacking in the field of climate action. Possible mechanisms include strengthening the status of official observers at a number of intergovernmental organizations, and more systematic participation in task forces or think tanks, for example by building on existing structures such as FORAUS. Conversely, experts from intergovernmental organizations could become more involved in the events of NGOs and INGOs.

- **Ethics and equity**

The various facets of the fight against climate change pay insufficient attention to these dimensions. Equity here means equity among countries, among social classes but also among generations. These are also critical issues in the world of work, which is undergoing a major transition. Some professions will disappear, while tens of millions of new jobs will also be created. In order to minimize the risk of rejection, tension and even conflict, these dimensions must be incorporated early on. Developing concrete proposals will require NGOs, academic institutions and international organizations to join forces, no doubt initially in the form of a think tank. Given the various potential contributors, Geneva is particularly well positioned.

- **Training and awareness-raising**

Geneva has considerable yet under-utilized potential in this area. UNITAR (see Appendix 2) and many other organizations have initiatives with a potentially global reach that can build on the diversity of experience here in Geneva, which has no equivalent anywhere else in the world. Moreover, there is considerable potential for partnerships with the private sector. If Geneva were to provide more support for such initiatives, it could position itself as a major player in this field.

- **Role of the Permanent Missions to the International Organizations**

These missions play a key role in the governance of intergovernmental organizations. The most motivated among them, for example the 2050Today partners, could better coordinate their position with regard to the organizations they oversee, in order to encourage and support them in their efforts to become carbon neutral.

As has been done on other issues, such as water, particularly in New York, some missions could initiate a “friends of climate action” group.

- **Cross-sectoral initiatives**

To help break down silos and bridge divides, cross-sectoral integration should be encouraged as early as possible in any process, rather than waiting until problems emerge. The diverse array of focus groups and think tanks in the Geneva region could be mobilized, and dialogue among them encouraged. The COVID-19 pandemic also underscored the need to incorporate resilience-building into these initiatives.

6.2. Specific recommendations

- **4th World Climate Conference**

After the success of the first three conferences held in Geneva (1979, 1990 and 2009), all of which produced major tangible progress (see section 2 above), now may be the time to consider holding a fourth conference in 2024-2025, with a focus on some of the more neglected topics that are now becoming crucially important. For example, it could address issues related to geoengineering, especially its scientific basis, but also the fundamental issue of governance. The conference could also cover the role of parliaments in transcribing the outcomes of diplomatic processes such as the UNFCCC COPs into law. It could also focus on training issues at all levels and for the various socio-economic sectors. Lastly, it could bring a multidisciplinary perspective to the issue of transitioning to a greener economy.

As with previous World Climate Conferences, the WMO could be the lead organizer, alongside traditional partners (UNESCO, UNEP, FAO, ICSU, etc.) but with the added involvement of Geneva-based entities such as the IPU (Inter-Parliamentary Union), the ILO or GESDA, as well as others of special relevance outside Switzerland. There is no doubt that Geneva is a credible organizer and host for such a conference.

- **UN-Climate**

UN-Water is the internal coordination mechanism of the United Nations' system (and the Bretton Woods institutions) for its work on water issues. There is no doubt a need for a similar structure for the climate sector. If indeed the UN Secretary General were to initiate this, given the unrivalled density of multilateral bodies active in this field in Geneva, a move by Switzerland for it to be hosted in Geneva would be entirely logical.

- **Cartooning against Climate Change**

Given the communication impact of editorial cartoons in the media, much like Cartooning for Peace, a Cartooning against Climate Change award could have a significant impact if it were clearly associated with Geneva and Switzerland.

- **Climate Champions**

Like the Gender Champions, the UN could promote the creation of a network of Climate Change Champions. This could be an effective way of recognising and encouraging the contribution of individuals, groups or institutions.

6.3. Recommendations to the authorities

- **Geneva and Switzerland as role-models for climate action**

For these initiatives aimed at strengthening Geneva's role to be credible, Geneva and Switzerland must show their determination to be role models in the fight against climate change, acting to uphold the commitments contained in the Paris Agreement.

Increased support for initiatives such as 2050Today would send a strong message. It is time to move from the 'findings' phase to the 'action' phase. For this, Geneva can also rely on its strong academic sector and attract young researchers into the area of applied research.

Another idea worth promoting would be for products and services on sale in Geneva to display not only their price but also their carbon footprint, as suggested by 2050Today. By making this happen soon, Geneva would become the first significantly-sized city to do this (so far).

- **A UNFCCC COP in Geneva**

Until recently, this scenario was highly unlikely due in part to the Geneva region's hotel capacity. Now, the game-changing COVID-19 pandemic has shown us that a number of COP components can be held in hybrid mode. In a welcome development, Simonetta Sommaruga, who holds the environment portfolio on the Swiss Federal Council, has just announced that the government is reviewing the potential benefits of holding a future COP in Switzerland.

6.4. Other recommendations

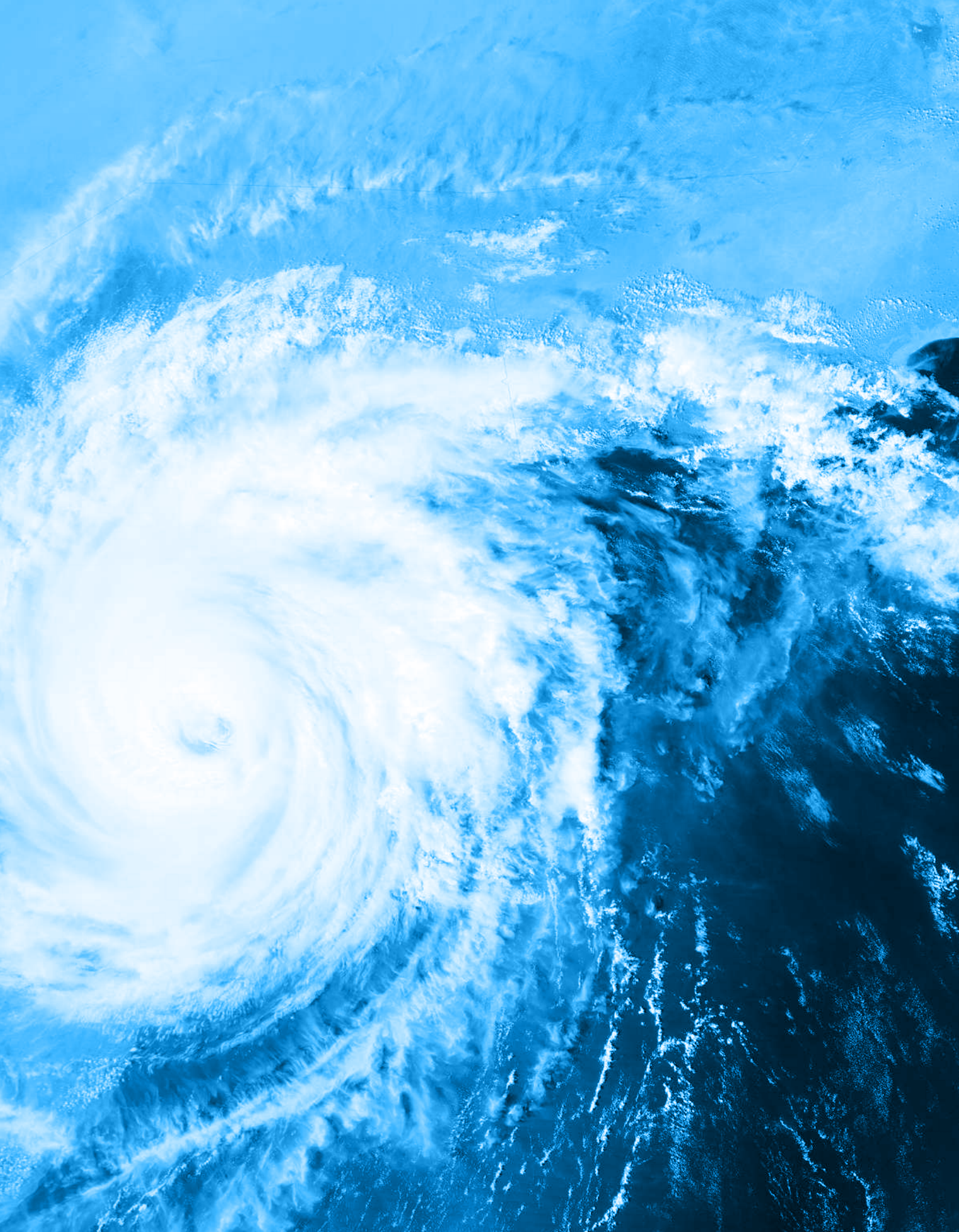
- **Awareness-raising in the financial sector**

Geneva's financial sector is both extensive and diverse. While some awareness already exists, more can be done to ensure that the entire sector grasps the challenges of climate change and gives due consideration to all the ways in which its activities impact climate action and achieving truly sustainable development. CO₂ costs (and other greenhouse gases) should be factored in throughout the entire economic chain (from production to recycling), as should medium and longer-term economic aspects, the impact on the world of work, image risks and also potential opportunities, as well as environmental impacts such as biodiversity loss.

Initiatives already exist, such as Sustainable Finance Geneva, but with limited resources. The success of "Building Bridges - Aligning finance with sustainability" is promising to say the least. Bridges are indeed crucial for turning intentions into action. We need to go further, faster.

- **Foundations and philanthropy**

Several of these important actors in environmental conservation and the fight against climate change are based in the Geneva region. Some of them, such as the Mava Foundation, have restructured their organizations in order to become more effective. It is important to involve them in the cross-cutting approach we recommend.



7 CONCLUSIONS

This study shows the impressive resources concentrated in Geneva and its region, as well as its potential to be a driving force in the fight against climate change at the global level. Its pool of skills, diverse ecosystem, experience, prestige, international credibility and the collective weight of its economic actors are second to none.

We are facing a climate emergency where the status quo is no longer acceptable. Geneva has a unique opportunity to strengthen its role, leading by example and supporting and developing initiatives that can make a difference quickly.

Responsibilities are both individual and collective. We must promote better alignment among the various agendas, initiatives and mechanisms. Many pieces of the puzzle already exist. We need only put them together. Networks exist. They must be strengthened and encouraged to dialogue with each other.

Geneva has always been a place for sharing and comparing ideas and building convergence and consensus in highly diverse and sensitive areas. The fight against climate change is the core challenge for the future of humankind. Geneva has a responsibility and a unique set of assets to contribute to this effort.

It is the modest ambition of this report to contribute to this process. I wish to thank the Fondation pour Genève for initiating and supporting it.



8 APPENDICES

APPENDIX 1

People interviewed for this report

- Martin Chungong, IPU Secretary General
- Alexandre Fasel, Ambassador, Special Representative of Switzerland for Science Diplomacy
- André Hofmann, Vice-Chairman of Roche Holding
- Nadia Isler, Director of the SDG Lab - UNOG
- Pascal Lamy, former Director-General of the WTO
- Elena Manaenkova, Deputy Secretary-General of the WMO
- Michael Moller, former Director-General of UNOG
- Abdalah Mokssit, Secretary of the IPCC
- Maria Neira, WHO Director, Department of Environment, Climate Change and Health
- Janos Pasztor, Executive Director of the Carnegie Climate Governance Initiative
- Jean-Pierre Reymond, Global Coordinator of 2050Today
- Guy Ryder, Director-General of the ILO
- Sandrine Salerno, Executive Director of Sustainable Finance Geneva
- Marie-Laure Salles, Director of the Geneva Graduate Institute (IHEID)

APPENDIX 2

Geneva ecosystem analysis

The appendix will be available shortly.

In the meantime, the content is available in [French](#) and in [German](#).

APPENDIX 3

Glossary of acronyms

- CERN - European Organization for Nuclear Research
- COP - Conference of the Parties
- FAO - Food and Agriculture Organization of the United Nations
- FC4S - Financial Centres for Sustainability
- GCOS - Global Climate Observing System
- GESDA - Geneva Science and Diplomacy Anticipator
- GSI - Global Studies Institute
- GSPI - Geneva Science Policy Interface
- IATA - International Air Transport Association
- ICRC - International Committee of the Red Cross
- ICSU - International Council of Scientific Unions
- IETA - International Emissions Trading Association
- IHEID - Geneva Graduate Institute
- IISD - International Institute for Sustainable Development
- ILO - International Labour Organization
- IMO - International Meteorological Organization
- IOM - International Organization for Migration
- IPCC - Intergovernmental Panel on Climate Change
- IPU - Inter-Parliamentary Union
- ITU - International Telecommunication Union
- IUCN - International Union for Conservation of Nature
- SDGs - Sustainable Development Goals
- SFG - Sustainable Finance Geneva
- UNDP - United Nations Development Programme
- UNDRR - United Nations Office for Disaster Risk Reduction
- UNEP - United Nations Environment Programme
- UNESCO - United Nations Educational, Scientific and Cultural Organization
- UNFCCC - United Nations Framework Convention on Climate Change
- UNITAR - United Nations Institute for Training and Research
- UNOG - United Nations Office at Geneva
- UN-Redd - United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries
- WBCSD - World Business Council for Sustainable Development
- WEF - World Economic Forum
- WHO - World Health Organization
- WMO - World Meteorological Organization
- WTO - World Trade Organization



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