



Climate Policies for All People and for Nature

An Urgent Call on COP28 for a New Approach to Protect Creation



CALL FOR ACTION

1. Climate change is already upon us. If left unchecked, it will become the existential threat and challenge of our times. The planet is about to cross the unprecedented warming threshold of 1.5°C by 2030. The probability and frequency of extreme events has been underestimated. The year 2023 gave us a glimpse into the world in climate crisis, with global average temperatures exceeding 1.5°C for a few months during the summer, shattering the world record for the warmest recorded temperature. Additionally, Antarctic Sea Ice reached its lowest point. *Life on Earth is suffering.*

2. This overshooting of climate change leads to more suffering of the poor, with two billion people exposed to record-breaking events. In response, around 1990 city/state governments from around the world declared or recognized climate emergency. The essentials on which low-income people mainly depend – food and water – become more insecure and expensive, while their work – often in the open – becomes riskier under heat stress. As a consequence, inequality and health risk increase. The climate crisis raises injustice and is immoral. *However, the global population is now sensitized to meaningful actions to solve the climate crisis.*

3. Due to socio-political inertia in the system, the climate crisis is bound to get worse for at least the next 25 to 30 years, even if the most optimistic mitigation actions to bend the emissions curve are put into place now. This implies that we need both a short-term (next 25 years) and a long-term (25 to 100 years) plan to protect all segments of the population and the ecology. *A whole-*

Earth approach is needed to guide urgent action, and the speed of policy change is now essential.

4. Our proposed new approach for climate solutions is to bend the curve and bounce back climate resilient. Current approaches to the climate crisis, especially climate finances, mainly revolve around mitigation, i.e., reducing emissions of climate-warming pollutants. We need to embark on building climate resilience which involves bending the emissions curve and adapting to ongoing climate changes, both of which require behavioral changes, educational transformation, sustainable consumption and a major effort to aid the poorest three billion as they adapt to ongoing and predicted climate changes.¹ *The wealthy nations and the wealthy populations of the world must provide the poorest three billion, whose role in climate pollution is minimal, access to affordable clean energy and water/food security. The Pontifical Academy of Sciences and the Pontifical Academy of Social Sciences, are building upon a [new Climate Resilience initiative](#).*

5. The discovery of the Antarctic Ozone Hole in the 1980s, which led to the Montreal Protocol in 1985 that eventually banned the chemicals that destroyed the ozone layer, provides a valuable lesson for the political framework of required actions.² *We call for a Protocol for Climate Resilience, signed by all nations, that defines the set of mitigation and adaptation actions needed to safeguard people and planet while enhancing development opportunities for the poor segments of the world population.*

6. Despite the growing sense of urgency, international climate consultations at highest governmental level alone have not yet led to the necessary actions. Broader cooperation frameworks are needed, such as among mayors and governors and cooperation between Science and Faith-based communities. This framework can play a significant role and engage policy-making communities in government, as well as many stakeholders, including youth. *As we move to COP28 and beyond, Faith and Science Dialogues should be intensified and broadened with other stakeholders, and engage to act for wellbeing of people and protection of creation, as called for by Pope Francis in his Laudate Deum recently.*³

The following sections of this statement provide further details on the causes and consequences of the climate crisis, as well as a proposal to act upon them.

I. The Moral-Ethical Issue of ongoing climate warming: Approximately 4 billion people (50% of the population) are responsible for [89% of the emissions](#) of heat-trapping climate pollutants. In contrast, the bottom 4 billion people (50% of population), who contributed less than 12% of climate pollution, suffered [75% of the losses](#) due to extreme climate impacts such as weather extremes, melting of glaciers, and biodiversity loss. The number of weather/climate/water-related disasters has increased fivefold during the last 50 years. Climate change also threatens their food and water security. They lack access to modern energy sources, wealth, and education to prepare for or adapt to the unprecedented heat stress, droughts, fires and floods. The poorest 3 billion are experiencing severe losses and damage that need to be compensated by the rest of society,

before the poor succumb to the impending climate extremes. The climate crisis is hijacking the eudemonic development of future generations. We are, literally, robbing future generations of the opportunities to flourish.

II. Climate change poses a grave danger to public health, including mental health: High-intensity cyclones, monsoons, floods, hurricanes, droughts, heatwaves, and forest fires increase the risks of [zoonoses and food-, water- and vector-borne diseases, as well as mental health issues](#). [Furthermore, climate change is undermining many of the social determinants for good health, such as livelihoods, equality and access to health care and social support](#). Air pollution from fossil fuels alone lead to over 3 million premature deaths (children to adults) every year. The single most important immediate human impact of switching from fossil fuels to clean renewables will be to avoid about 30 million early deaths per decade. In addition, climate change resulting from fossil fuels has contributed to hundreds of thousands of deaths over the last 50 years, as well as increased incidence of waterborne and airborne diseases such as dengue, malaria, Valley fever, Zika virus, and others. Recent studies have uncovered the serious mental health effects of extremes such as fires, in addition to the mental anxiety of climate threats collectively referred to as Climate Trauma.

III. Economic Losses: Climate impacts have resulted in loss of [\\$4.3 trillion and 2 million lives](#) over the last 50 years. If emissions remain unchecked, the loss incurred by future climate impacts from now until 2070 could be a staggering [\\$178 trillion](#).

IV. Forced Migrations: Today, over 3.6 billion people live in areas highly [susceptible to climate change](#). For them, extreme weather patterns are the new drivers of forced migrations. The climate crisis is exacerbating the current unprecedented flows of forcibly-displaced migrants. [An average of 21.5 million people](#) have been forcibly displaced by weather-related sudden onset hazards, such as floods, storms, wildfires, and extreme temperatures, each year since 2008. Most forced migrations take place within countries, with lesser numbers settling in neighboring countries with weak institutional capacity to serve them. The World Bank's [Groundswell](#) report estimates that climate change could force 216 million people across six world regions to move within their countries by 2050.

V. New Opportunities for a Sustainable Future: The climate crisis has also opened new pathways and opportunities for sustainable ways of development, sustainable consumption of natural resources and an informed stewardship of the planet: in short, it has given rise to the movement towards a sustainable humanity. We must capture this moment and transition to a benevolent era with no one left behind. What we urgently need is societal transformation of the global population through mass-scale climate education and behavioral changes, so the public has the agency to support and undertake the sort of drastic climate actions called for by scientists and civil society.

VI. The New Approach for Climate Solutions: Bend the Curve & Bounce Back Climate Resilient.

Current approaches to the climate crisis revolve mainly around mitigation, i.e., reducing emissions of climate-warming pollutants. But let's be clear: we no longer have the luxury of relying just on mitigation of emissions. We need to embark on building climate resilience, which involves bending the emissions curve and adapting to ongoing climate changes. This requires a societal transformation that includes behavioral changes, educational transformation, sustainable consumption, and a major effort to aid the poorest three billion as they adapt to ongoing and predicted climate changes.

VII. Ten Solutions towards Climate Resilience: Climate change is part of a cluster of interlinked socio/environmental/ecological crises, including biodiversity loss, global inequality, and forced migrations. The design of climate solutions must factor in co-benefits to biodiversity loss and inequality. Climate resilience needs to be built on three pillars: *Mitigation, Adaptation and Societal Transformation*.

Pillar 1 is Mitigation of emissions for bending the warming curve down. There are three levers we can pull to bend the warming curve quickly and sustainably.

- 1) **Short-lived climate pollutants lever:** This lever involves reducing emissions of methane, Hydro-fluoro-carbons (HFCs), lower atmosphere ozone, and black carbon soot. Using known and off- the-shelf technologies to reduce their concentrations by 40% to 100% within 20 years can cut the rate of warming by a third to half within a few decades.
- 2) **Decarbonize the economy lever:** This lever involves switching to renewables (solar, wind, green hydrogen, geothermal, and nuclear if needed) over the next 25 years.
- 3) **Carbon Extraction lever:** This lever involves thinning the blanket of manmade CO₂ surrounding the planet, which weighs 1200 billion tons today (accumulated over last 150+ years) and trapping heat. About 300 billion tons of CO₂ have to be removed from the air over the next 50+ years. Nature-based solutions, involving the oceans, mangroves, agroforestry, working farmlands and forests, can play a major role in atmospheric carbon extraction.

Pulling on the three levers would keep the warming under 2°C, but warmer than 1.5°C, for the rest of the century.

Pillar 2 is Adaptation, which has three phases: Reductions in sensitivity to climate change; Reductions in exposure to climate threats; and Enhancement of adaptive capacity. However, there are limits to human adaptation, and to stay within these limits, adaptation must be tightly integrated with mitigation.

- 4) **Reducing Inequality:** Adaptation and resilience building is most urgent for the poorest three billion and must begin now. The milestones of adaptation for this group include access

to affordable clean energy, clean water, sustainable farming, health care, early warning systems of weather extremes, and education.

5) **Local to Nationally-Coordinated Efforts:** Researchers and policy makers working on solutions should adopt trans-disciplinary collaborations that involve Mayors, Governors and local NGOs to manage the resources available at various levels of government.

6) **Ensuring Food and Water Security as well as WHO air quality standards** should take high priority: Sustainable land and soil management, forest protection, agroforestry, water use efficiency in farming, and enhancing soil capacity for carbon sequestration and access to clean drinking water should be prioritized. Maintaining acceptable air quality in poor neighborhoods through air quality monitoring and indoor filtration systems should also be part of the plan.

7) **Regional climate hotspots** such as Amazonia, Small Island Nations, Drylands of Africa, Southern Africa, South Asia, Middle East, NE China and Southwest USA should receive special attention.

Pillar 3 is Societal Transformation, which includes the transformation of people, ecosystems, and economic systems to mitigate, adapt and bounce back climate resilient. In Pope Francis' words, this transformation is akin to an ecological conversion.

8) **Transformation must be a central feature of climate actions and summits** and involves fundamental shifts in behavior, including consumption, and in socio-economic systems, including governance.

9) **Harmful subsidies for fossil fuels and unsustainable agriculture must be shifted** to support health coverage, public transport, health food choices and promote equality.

10) **Behavioral change of people, communities, and private sector** must be rooted through a new global initiative to educate everyone from childhood to old age.

Designing and developing solutions that prioritize climate resilience requires the active engagement of natural and social scientists. Scientists must also ensure that their actions are evidence-based, while keeping in mind the ethical and moral issues surrounding intra-generational and inter-generational equity. To achieve climate resilience, cross-disciplinary partnerships among researchers, engineers, and entrepreneurs are essential, as well as transdisciplinary partnerships between science and community leaders, including faith leaders, NGOs, and the public. Mayors and Governors, who are on the front lines of fighting climate change, must form the core of such transdisciplinary partnerships.

Statement prepared by

- Sr Helen Alford, President of the Pontifical Academy of Social Sciences
- Joachim von Braun, President of the Pontifical Academy of Sciences
- Veerabhadran Ramanathan (Council Member, Pontifical Academy of Sciences)
- Marcelo Suárez-Orozco (Council Member, Pontifical Academy of Social Sciences)
- Cardinal Peter Turkson, Chancellor of the Pontifical Academies of Sciences and Social Sciences

1 [Scripta Varia 152](#).

2 Scientists were at the foundation of the identified action addressing the Ozone Hole, especially PAS Academicians Paul Crutzen, Mario Molina and Susan Solomon.

3 [Laudate Deum](#) and [Faith and Science Dialogues](#).