

Global Emergency:

Mobilisation Needed to Confront Climate Change



SUMMARY OF IPCC SYNTHESIS REPORT - SUMMARY FOR POLICY MAKERS

THE LATEST SCIENTIFIC REVIEW OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE confirms that the world faces a planetary emergency threatening our food, our water, and our homes. It shows we must rapidly mobilize to transform our energy systems, change our patterns of production and consumption, and transfer wealth and technology to the poor if we are to effectively respond to this crisis.

Human-driven climate change is real

The IPCC has found that warming of the climate system has been unequivocal and 'each of the last three decades has been successively warmer at the Earth's surface than any preceding decade since 1850.'

Causes of warming can be varied but the report finds that, 'human influence has been detected in all components of the climate system and is extremely likely to have been the dominant cause of the observed warming since the mid-20th century.'

This human influence is predominately from the emission of greenhouse gases (GHGs).

It is already causing a planetary emergency

The impacts of already experienced climate change contribute to hunger, poverty, death, property destruction and the displacement of people.

Current observed warming, that is the impacts from climate change that has already occurred is affecting 'water

resources in terms of quantity and quality' and has shifted the 'geographic ranges, seasonal activities, migration patterns, and abundances' of many freshwater and saltwater fish – which is hugely significant given 1 billion people rely on fish as their primary source of protein.

The report also shows that climate change has had a 'negative impact on crop yields' across regions. These impacts can contribute to price-spikes and hunger.

'Increases in the frequency or intensity of ecosystem disturbances', in some cases attributed to climate change, 'such as droughts, wind-storms, fires, and pest outbreaks have been detected in many parts of the world.' These destroy homes, lives and livelihoods – demonstrating the enormous destructive power of climate change.

And we are currently on track for far worse

The IPCC finds that 'without additional efforts to reduce GHG emissions, global emissions growth is expected to persist' and by the end of the century risks 4.8C of warming [using basic models] and up to 7.8C if 'including climate uncertainty.'

It warns that to 'exceed 4 °C by 2100' would exceed high or very high risk for every 'Reason For Concern' [the UN's term for grouping climate impacts] including: 'substantial species extinction, global and regional food insecurity, consequential constraints on common human activities, and limited potential for adaptation.'

It also highlights the risk of 'tipping points', which could drive abrupt and irreversible changes in the natural systems. It says that 'the precise levels of climate change sufficient to trigger abrupt and irreversible change remain uncertain, but the risk associated with crossing such thresholds increases with rising temperature.'

The Report is critical of current proposals for climate action, saying that 'estimated global emissions levels in 2020 based on the Cancún Pledges are not consistent with cost-effective trajectories that are at least about as likely as not to limit temperature change to 2 °C.'



That threatens even worse hunger and poverty

The IPCC warns that 'it is virtually certain that there will be more frequent hot and fewer cold temperature extremes and that it is very likely that heat waves will occur with a higher frequency and duration.' Heat waves have significant impacts on crop yields, which subsequently drive food price spikes and hunger.

It warns that on current trajectories the Arctic Ocean sea ice minimum will be nearly ice-free before midcentury, whilst *even if* we manage to reduce our emissions in line with a 2C or 1.5C objective, glacier volume is projected to decrease by 15-55% with huge consequences for drinking water.

These impacts will contribute to a 'reduction in food security for wheat, rice, and maize in tropical and temperate regions.' Similarly, movement in species and extinction 'in the oceans will challenge the sustained provision of fisheries productivity.'

Climate change is expected to lead to 'increases in ill-health in many regions', including greater likelihood of death, 'especially in developing countries with low incomes.'

In urban areas, climate change is projected to 'increase risks for people, economies and ecosystems,' including risks 'from heat stress, storms and extreme precipitation, inland and coastal flooding, water scarcity, sea-level rise, and storm surges.'

The report finds that these risks ‘are amplified for those lacking essential infrastructure and services or living in exposed areas.’ And that it is rural areas that ‘are expected to experience major impacts on water availability and supply, food security, infrastructure, and agricultural incomes.’

All of these impacts will make for a poorer and hungrier world, and the IPCC specifically acknowledges that climate change will make ‘poverty reduction more difficult, further erode food security, and prolong existing and create new poverty traps, the latter particularly in urban areas and emerging hotspots of hunger.’

So we must set a global limit on climate pollution

The IPCC is clear that the ‘continued emission of greenhouse gases will cause further warming and long-lasting changes in all components of the climate system, increasing the likelihood of severe, pervasive and irreversible impacts for people and ecosystems.’

It therefore clearly implies that a global limit on GHG emissions is necessary, and the Report provides the information necessary to set this limit over time – such a limit is often referred to as an “emissions budget.”

The IPCC details that to ‘ensure a two-in-three chance or higher that total human-induced warming remains less than 2 °C’ we must limit ‘total CO₂ emissions since 1870 to about 2900 GtCO₂ (2800-3200 GtCO₂), two-thirds of which had already been emitted by 2011.’

This suggests we only have 17 years left emitting at current levels before the emission budget completely expires.

Such a limit would align with its projections under a scenario it labels “RCP2” which it says is the only scenario under which it is not likely that surface air temperature will exceed a 1.5C increase on preindustrial levels– reaffirming that limiting warming to 1.5C is still possible.

In grappling with the IPCC’s proposals for limits its important to distinguish between the emissions budget – the total number of tonnes – and the suggested pathway to that budget – the pathways can suggest levels of reductions in particular years but are representative of political and economic choices.

This is important because some may suggest less steep emission reductions immediately followed by steeper ones that could still in theory comply with the budget; but the IPCC

is clear that ‘delaying additional mitigation to 2030 or beyond will substantially increase the challenges associated with limiting warming to 2 °C. It will require substantially higher rates of emissions reductions in the future.’

In fact, almost all of the IPCC’s pathways contemplate negative emissions and the use of ‘carbon capture and storage’ in the later half of this century, something which science has not yet confirmed is possible. This means the actual emission reductions that we aim for in any given year should be much more stringent than those included in the IPCC.

We have to work together to meet this limit and respond to climate impacts

In order to meet the limits set out in the Report, humanity needs to act together to both reduce emissions and prepare for locked-in impacts.

The IPCC finds that both ‘mitigation and adaptation raise issues of equity, justice, and fairness and have implications for sustainable development and poverty eradication.’

In the underlying reports the IPCC has found that climate change is a ‘global commons’ problem and therefore we need to approach it in a way all countries and people perceive as fair.

Similarly, the Report acknowledges that reducing emissions will not be enough to prevent negative impacts on people, particularly the poorest and most vulnerable. It finds that ‘climate change exacerbates other threats to social and natural systems, placing additional burdens particularly on the poor.’ It says that therefore, ‘aligning climate policy with sustainable development requires attention to both adaptation and mitigation.’

The Report calls for ‘adaptation’, which ‘can contribute to the wellbeing of populations, the security of assets, and the maintenance of ecosystems now and in the future.’ However, it advises that ‘adaptation is place- and context-specific’ and so warns against one size fits all approaches, whilst acknowledging that ‘evidence indicates a gap between global adaptation needs and the funds available for adaptation.’

Starting with the transformation of our energy systems and energy use

The Report is clear about the biggest driver of climate-change causing emissions – ‘CO₂ from fossil fuel



combustion and industrial processes contributed about 78% of the total greenhouse gas emissions increase from 1970 to 2010, with a similar percentage contribution for the increase during the period 2000–2010.’

Therefore the report calls for a transformation of energy systems and notes that in order to achieve a 1.5C or 2C pathway ‘annual investments in low carbon electricity supply and energy efficiency in 4 key sectors are projected to rise by several hundred billion dollars per year before 2030.’

But it notes that investments are not the whole story, ‘behavior, lifestyle and culture have a considerable influence on energy use and associated emissions, with high mitigation potential in some sectors, in particular when complementing technological and structural change.’

Without being distracted by false solutions

Geoengineering – The report refers to scenarios that limit warming to 2C as ‘typically’ relying on Carbon Dioxide Removal (CDR) technology - this is not a prescription of a policy response but a description of modelling choices. With respect to the technology itself it says, “the availability and scale of CDR technologies is *uncertain* and CDR technologies are associated with a *diverse set of mitigation risks*,” suggesting pathways that rely on CDR may be very dangerous.

Nuclear – The report describes ‘*major barriers*’ to this technology including: ‘operational safety and uranium mining risks, financial and regulatory risks, unresolved waste management issues, nuclear weapon proliferation concerns, and adverse public opinion.’

Waste – In contrast to an increasing focus on burning waste for energy, the report actually finds that, ‘*the most straightforward option for mitigation in waste management is waste reduction*, followed by re-use, and recycling.’

Carbon-trading – The report highlights that cap and trade carbon trading systems have had ‘*limited environmental effect*’ in contrast to ‘tax-based policies’ which ‘have

contributed to a decoupling of carbon emissions from GDP in some countries.’ Similarly, with respect to the UN’s Clean Development Mechanism for offsets, it cites ‘concerns about emissions leakage and whether those reductions were truly “additional.”

NOTE: This summary is based on early drafts of the Synthesis report, please check against final version.

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DEMAND
CLIMATE JUSTICE!**