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Adapt or Else: What the Latest IPCC Report Means for Europe and the World

Article by Clare Taylor March 16, 2022

The latest IPCC report has been released under the shadow of Putin's brutal invasion of Ukraine. While it missed the attention the last report received, its findings are hard to ignore and its single message clear: we are in the midst of the climate crisis and adaptation is urgently needed. With input from an IPCC lead author and green actors, Clare Taylor explores what the report means for frontlines communities, EU climate policy, and the EU's responsibility to the rest of the world.

On Monday 28 February 2022, the latest report from the Intergovernmental Panel on Climate Change (IPCC) was published. It builds on the previous report (associated with the phrase "<u>Code red for humanity</u>") published in 2021, which found that emissions of greenhouse gases from human activities are responsible for approximately 1.1 degree Celsius of warming since 1850 to 1900, and that over the next 20 years, global temperature is expected to reach or exceed 1.5 degrees of warming. Even with radical emissions reduction, it could take 20 to 30 years before global temperatures stabilise.

Speaking to media on the day of the report's release, UN Secretary-General António Guterres emphasised that the vast majority of investment into climate action is currently directed towards mitigation (reducing emissions) rather than adaptation (preparing for and adjusting to the consequences of climate change). "Investment in adaptation must be pursued with equal force and urgency," said Guterres.

The report focuses on cities as "hotspots" of climate impacts and risks, but also places that can "provide opportunities for climate action – green buildings, reliable supplies of clean water and renewable energy, and sustainable transport systems that connect urban and rural areas can all lead to a more inclusive, fairer society," according to the report co-chair Debra Roberts. Co-chair <u>Hans-Otto Pörtner</u> noted progress such as the emergence of the global youth movement for climate action, and a "deepening understanding of the solutions", but warned that "beyond certain temperatures, adaptation is no longer possible."

The report is based on scientific analysis and consensus at scale. It was prepared by 270 authors from 67 countries, 675 contributing authors, over 34,000 cited references, and more than 62,000 expert and government review comments.

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Climate impacts in Europe

The report strongly reinforces the 2015 consensus on limiting global warming to 1.5 degrees: each increment in global heating means more extreme weather. For a 3-degree increase of global warming in Europe, the number of deaths and people at risk due to high temperatures will be two to three times higher than at 1.5 degrees. For southern Europe, an increase of 2 degrees will result in water scarcity to one third of its population. Over 40 per cent of the EU population lives in or near coastal areas – this means that at least 200 million people are highly exposed to floods, erosion, and sea-level rise.

"Adaptation is the reality – we are no longer in the climate of the 1980s," said Wouter Vanneuville, climate change adaptation expert at the European Environment Agency speaking to the *Green European Journal*. "Mitigation [cutting emissions] matters and holding to well below 2 degrees is of paramount importance. But even if we became a net-zero society by the end of this year, we are still talking about decades before temperatures stabilise."

"The report is confirming a lot of vulnerabilities that have increased since <u>AR5</u> [the previous report in 2014]," added Vanneuville, citing record temperatures across Europe and forest fires in Sweden, the Mediterranean region, and central Europe. The flooding in Belgium and Germany in 2021 in particular was "a big wake-up call. "

"But this can easily happen in other places, for example in central Europe there are a lot of river basins with similar characteristics where a similar event could have the same devastating effect. And we cannot predict exactly where it will happen next. The report consolidates all of this data – and in that sense, we have a kind of benchmark, a new baseline to start from," he said.

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Wouter Vanneuville, European Environment Agency

Given the likelihood of warming beyond 1.5 degrees, the report is timely. It describes climate impacts to date, future scenarios at different levels of warming, and in a clear call to action, identifies a practicable range of options for tackling climate change now. Key risks (127 in total) are listed for every region in the world.

Daniela Schmidt is a professor at the University of Bristol, and a coordinating lead author at the IPCC. In an interview with the *Green European Journal*, Schmidt explains: "What is new in this report is to show what we can do. The focus on adaptation is very strong; the regional analysis sets out the key risks along with what can be done to minimise those risks."

The four key risks to Europe are: mortality and morbidity of people and changes in ecosystems due to heat; heat and drought stress on crops; water scarcity; and flooding and sea-level rise. Although the risks are equally weighted, Schmidt noted that water scarcity is a cross-cutting issue that limits the adaptation responses to the other risks. "We will have to make choices, for example between using water for cooling cities or for irrigation for agriculture."

Exactly what climate adaptation looks like is locally determined: the priorities of water allocation will vary from place to place, with the provision of drinking water usually a top priority. Considering the interaction between the risks also informs the policy response. "Drought becomes water scarcity when it creates an impact," said Vanneuville. "Preventing droughts from happening is very difficult. Preventing water scarcity, or setting

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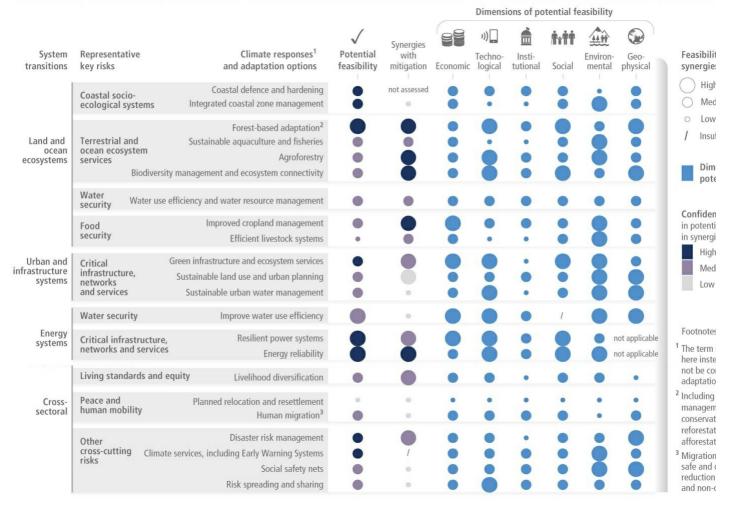
measures in such a way as to prevent water scarcity; this is something that is within reach," he said. "What adaptation does is to prevent droughts from really becoming water scarcity."

Building the right response

The need for long-term planning for resilience is another central theme. "There is increased evidence of maladaptation across many sectors and regions since the AR5," according to the report, referencing short-term stop gaps which actually undermine longer term adaptation to climate change.

"Maladaptive actions are a real problem," said Schmidt. "One leading example is hard infrastructure [dikes, dams, sea walls and barriers] around rivers and coastlines. Sea-level rise will continue – but wetlands can be effective coastal flood defences. Hard infrastructure solutions may provide only temporary protection. In all of our planning we must take into account not only what the world looks like today, but also what possible futures may look like."

Diverse feasible climate responses and adaptation options exist to respond to Representative Key Risks of climate change, with varying synergie Multidimensional feasibility and synergies with mitigation of climate responses and adaptation options relevant in the near-term, at global scale and up to 1.5°C of global wa



Infographic from page 24 of Summary for Policymakers

A major recommendation of the report is that climate actions should simultaneously mitigate and adapt (also known as "no regrets" options), emphasising that nature protection and restoration underpins many options. The report lists and rates such no regrets options. Both forest-based adaptation and energy reliability are rated highly (see figure).

Commenting on the option of forest-based adaptation in Europe, Schmidt cautioned against monocultures or planting trees at random. "We have a huge amount of land in Europe that was forested so reforestation is something we can do. We know what tree species to plant and where to plant them, we have regional forecasts and projections for climate change so we can plan that very well. Afforestation [planting trees where there were none before] is really dangerous and in monocultures it makes us extremely vulnerable." A case in point is the impact of <u>the multi-year droughts</u> from 2014 to 2018 on European monoculture forest plantations.

Regarding energy reliability, climate resilience in northern Europe is running higher than in southern Europe, due to decentralised, renewablesbased electricity production and lower summer temperatures, according to Elena Georgopoulou, senior researcher at the National Observatory of Athens and a contributing author to the report. The extreme summer heat in southern Europe since 2000 has given rise to be effective adaptation measures such as <u>early warning systems</u>, but there is no room for complacency. All power systems will be vulnerable as "heat extremes increase in all regions, increasing significantly cooling needs and consequently peak loads. Heavy precipitation events and severe storms will also create additional risks in all European sub-regions," said Georgopoulou. Energy reliability adaptation calls for demand-side measures to reduce peak load, and avoiding short-term over-reliance on air-conditioning that adds to the peak load.

We will have to make choices, for example between using water for cooling cities or for irrigation for agriculture. Daniela Schmidt, coordinating lead author of IPCC Chapter 13 (Europe Chapter)

The role of European Green Deal

In short, the report is a clarion call to mainstream adaptation. To some extent, <u>the EU Green Deal</u> (which covers nine policy areas), has already begun this process, bringing in February 2021 a new <u>EU adaptation strategy</u>. The strategy mandates annual <u>data collection on economic losses and</u> <u>fatalities from weather and climate extremes</u> – the type of data sets that can potentially feed into and influence the insurance and banking industries and the growing momentum for <u>sustainable finance</u>.

"Adaptation deserves more attention," said Carolina Cecilio, policy advisor on risk and resilience at independent environmental think tank E3G, in an interview with the Green European Journal.. "Green Deal initiatives such as the <u>Forest</u> and the <u>Soil Strategies</u> were successful examples of combining mitigation and adaptation - but more is needed. Political signs were sent, now we need to see implementation."

Mainstreaming adaptation across policy areas could redirect much-needed investment into resilient, no regrets options. Under the EU Green Deal, the <u>Commission has pledged to mobilise at least 1 trillion euros</u> in sustainable investments over the next decade. But although 30 per cent of the EU's multiannual budget (2021 to 2028) and 30 per cent of the pandemic recovery instrument NextGenerationEU is earmarked for green investments, the ultimate implication of the report is that, going forward, every euro spent should be promoting resilience via informed decision-making. "Funds need to be planned, stress-tested and future-proofed for different climate scenarios and to maximise adaptation efforts," said Cecilio. "Climate impacts are already affecting the EU, so there needs to be a push to act on mainstreaming adaptation across policies and financing, both at the national and EU levels – we still have time, we just cannot afford to waste it."

Supporting adaptation globally at COP27

At the global level, adaptation – and how to finance it – are set to be the hot topics for the next round of <u>negotiations at COP27</u> in Egypt in November 2022. This follows the justifiable demand at COP26 from low-income nations for financial contributions from richer nations for climaterelated loss and damage. The report adds weight here, warning that the losses and damages caused by climate change which cannot be adapted to are "strongly concentrated among the poorest vulnerable populations."

The IPCC reports typically do not make for comfortable reading: this latest report again makes clear that emissions reduction and adaptation are not on track, neither in Europe nor globally. "It paints a grim picture of an increasingly instable world in a time of rapidly rising geopolitical tensions," said Bas Eickhout, MEP for Greens/EFA speaking to the *Green European Journal*. "Scaling up adaptation finance will be crucial for securing immediate action and ambition on climate mitigation – and it will be a central item on the agenda [at COP27]. The EU has to come prepared – let's use the precious months until November to increase provisions, also beyond 2025. Only then are we a credible partner for the developing world in tackling climate change", added Eickhout.



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