Climate Change – IPCC report: a global wakeup call

Wednesday 17 October 2018, by THORNETT Alan (Date first published: 14 October 2018).

Alan Thornett offers an initial assessment of the UN Intergovernmental Panel on Climate Change (IPCC) special '1.5°C' report published on October 8 on the deepening crisis around climate change [1].

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The timescale available to do something about global warming and climate change just shrank dramatically. Just this year the planet reached a temperature increase of 1°C in the global average surface temperature over pre-industrial levels. This report concludes that, at the current rate of increase, a 1.5°C limit could be reached as soon as 2030 – in just 12 years' time. This takes the climate struggle to a new level of urgency.

This report is a huge victory for those countries directly threatened by rising sea levels who campaigned in Paris in 2015 – under the slogan 1.5 to stay alive – for the UN to set a target to limit global warming to a 1.5°C increase over pre-industrial levels rather than the existing 2°C. They argued that a 1.5°C target would give them a fighting change whilst 2°C would give them no chance.

The report is a monumental wake-up call from the scientific community to the population of the planet in terms of the dangers and the timescale ahead. It has also potentially changed UN policy on climate change from the 2°C maximum increase (over pre-industrial levels) adopted in Paris to a 1.5°C maximum increase – which was only an aspiration not a target in Paris. It will presumably be formally accepted at COP 24 in Katowice in Poland in December.

As Labour's Shadow Secretary for Climate Change, Barry Gardener said 'The IPCC report does not mince its words: we need immediate radical action.'

The problems of the implementation of the Paris agreement will remain an ongoing battle, of course. But it is crucial that the agreement operates on the basis of figures that reflect objective reality (rather than figures that are out of date.)

An additional 0.5°C may not sound very much but in climate terms it is huge. The temperature difference, for example, between today and the last ice-age, when most of Britain was under two kilometres of ice, and the sea level 120 metres lower than it is today, was only 5°C. The next few years could be the most important ever for human life on this planet.

Examples

The IPCC report gives a series of powerful examples as to what 1.5°C limitation will mean for the planet as against 2°C limitation.

On biodiversity: 'Of 105,000 species studied, 6% of insects, 8% of plants and 4% of vertebrates are projected to lose over half of their climatically determined geographic range for global warming of 1.5°C, compared with 18% of insects, 16% of plants and 8% of vertebrates for global warming of 2°C. Impacts associated with other biodiversity-related risks such as forest fires, and the spread of invasive species, are lower at 1.5°C compared to 2°C of global warming.' (B31.1.)

On sea ice, the IPCC report points out: 'There is high confidence that the probability of a sea-ice-free Arctic Ocean during summer is substantially lower at global warming of 1.5°C when compared to 2°C.' (B4.1)

On Global warming: 'Global warming of 1.5°C is projected to shift the ranges of many marine species, to higher latitudes as well as increase the amount of damage to many ecosystems. It is also expected to drive the loss of coastal resources, and reduce the productivity of fisheries and aquaculture (especially at low latitudes). The risks of climate-induced impacts are projected to be higher at 2°C than those at global warming of 1.5°C. Coral reefs, for example, are projected to decline by a further 70–90% at 1.5°C with larger losses (>99%) at 2oC. The risk of irreversible loss of many marine and coastal ecosystems increases with global warming, especially at 2°C or more.' (B4.2.)

On the oceans: 'Impacts of climate change in the ocean are increasing risks to fisheries and aquaculture via impacts on the physiology, survivorship, habitat, reproduction, disease incidence, and risk of invasive species but are projected to be less at 1.5oC of global warming than at 2oC. One global fishery model, for example, projected a decrease in global annual catch for marine fisheries of about 1.5 million tonnes for 1.5°C of global warming compared to a loss of more than 3 million tonnes for 2°C of global warming.' (B4.4.)

On food production the IPCC notes: 'Populations at disproportionately higher risk of adverse consequences of global warming of 1.5°C and beyond include disadvantaged and vulnerable populations, some indigenous peoples, and local communities dependent on agricultural or coastal livelihoods. Regions at disproportionately higher risk include Arctic ecosystems, dryland regions, small-island developing states, and least developed countries.' (B5.1.)

Radical Action

Barry Gardener is right to say that the IPCC report poses stark choices. Whilst it concludes that limiting the temperature increase to 1.5°C is technically (i.e. scientifically) possible it would require, it says, member states to take 'drastic' and 'unprecedented' action in order to do so.

And there are only 12 years in which to do it – i.e. by 2030. After that powerful feed-back processes could well cut in that will make the risks of drought, floods, extreme heat, and the loss of sea ice, arable land and biodiversity significantly worse.

The IPCC calls for global CO_2 emissions to be cut by nearly a half by 2030 and to zero by 2050. This to involve the ending of the use of fossil fuels (coal and gas) in electricity supply, the ending of the use of fossil fuel boilers for space and water heating in houses and buildings, and their replacement by fossil free alternatives. It calls for the replacement of all petrol and diesel cars by electric vehicles

by that time. It calls on people to eat less meat in order to reduce CO_2 emissions in agriculture. The report estimates such a changeover would necessitate a $2.5 trillion global investment.

The IPCC report puts it this way: 'Pathways (options) limiting global warming to 1.5°C with no or limited overshoot would require rapid and far-reaching transitions in energy, land, urban and infrastructure (including transport and buildings), and industrial systems. These systems transitions are unprecedented in terms of scale, but not necessarily in terms of speed, and imply deep emissions reductions in all sectors, a wide portfolio of mitigation options and a significant upscaling of investments in those options.'(C2)

The report demands not only major structural changes from government across the globe but big changes in the way individuals conduct their lives. This is right (in my view) although the principal responsibility is clearly with government. But what people eat, and the choices they make in the way they travel and heat and insulate their homes is hugely important as well. There is no way that climate disaster can be avoided, or even mitigated with today's production and consumption models in place – particularly in the rich countries of the global North.

Controversies

There are controversial aspects of the IPCC report as well. As well as leaving open the use of nuclear energy, bio-fuels, it also proposes, alongside unprecedented short-term reductions in carbon emissions also the longer-term use of measures to remove carbon dioxide from the atmosphere by what it calls CDRs –or carbon dioxide removals. These it says are an essential component of reaching a long-term zero-carbon balance and to deal with residual or overshoot emissions.

Most CDR uses proposed in the report involve massive programmes of planting trees afforestation and reforestation – which is the best form of CDR available to us – along with land and soil carbon sequestration. Reforestation is already happening, of course, although it is nowhere near enough and the balance remains with deforestation.

Some pathways (or options) the report also proposes the use of some mush more questionable CDR methods, for example the use of carbon capture and storage – a completely unproven technology. Some pathways also drag up old and discredited ideas such as enhanced weathering (removing carbon dioxide from the atmosphere is the chemical weathering of certain types of rocks) and ocean alkalinisation, although it concedes that these are unproven technologies and 'differ widely in terms of maturity, potentials, costs, risks, co-benefits and trade-offs'. Such proposals should, in my view, be rejected.

Exit strategy

We should not allow the mention of such methods to overshadow the huge significance of the report in terms of its principal recommendation. The question posed, however, what should be done to meet its main proposals: i.e. how to cut global carbon emissions in half in 12 years by means that are socially and economically ecologically just and capable of commanding widespread popular support. It is a huge challenge.

I would argue personally that carbon pricing – i.e. heavily taxing or levying the polluters – has an important to play along with the rapid introduction of green energy and energy saving and conservation measures at every level of society and the economy. The reality is that as long as fossil

fuels remain the cheapest energy available they are going to be used. The most effective way to cut carbon emissions quickly and democratically is by making fossil fuels far more expensive than renewable energy.

The only proposal on the table aimed at delivering rapid change of this sort, as far as I am aware, is James Hansen's fee and dividend proposition. In my view it is worth at least thinking seriously about.

Hansen's plan provides is a high impact measure that can bring about big reduction in fossil fuel usage in a short period of time and on the socially progressive basis of a major transfer of wealth from the rich to the poor as an incentive to drive it forward. It has the potential to mobilise the kind of mass popular support that would be crucial for the kind of rapid change that is needed.

It is an idea that is gaining ground. An interesting article appeared in recently in the 2018 summer issue of Jacobin by Anders Fremstad and Mark Paul, entitled *Why socialists should back a carbon tax* [2] that gave strong support to a version of a fee and dividend scheme proposed by the People's Policy Project

This IPCC report will strengthen the climate movement in the ongoing struggle to implement the Paris agreement and force governments to take the climate crisis seriously. The struggle for the implementation of this report should be an integral part of an ongoing global struggle to force governments around the world to take the measures necessary to achieve the objectives it outlines and to act in defence of those, usually the poorest in society, that are the most deprived of climate justice.

Alan Thornett

Comments

Mark Findlay says:
15 October 2018 at 9:40 am
One thing to consider is a massive switch towards public transport, which would require both lower fares (or free travel) and reinstating and expanding the network. However a very hard look needs to be taken at monster mega-projects like HS2 to look for less destructive and more egalitarian approaches.

P.S.

• Posted on 14 October 2018:
https://redgreenlabour.org/ipcc-climate-report-global-wakeup-call/

Footnotes

[1] http://www.ipcc.ch/report/sr15/

[2] ESSF (article 46531), Climate: Why Socialists Should Back a Carbon Tax.