

Articles and submissions published by Climate Action Network about the UNFCCC Review 2013-2015

Remember the Science: 2°C is Not Safe

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Remember the Science: 2°C is Not Safe

ECO, September 3, 2015

When working at a microscopic level, we know there is a danger of delegates losing perspective. In June, the presentation of the Structured Expert Dialogue (SED) results saw intensive exchanges on new science, the impacts of climate change and how to keep warming at 1.5/2°C. But the end saw Saudi Arabia and others sideline an agreement to inform the ADP on their work and conclusions.

The SED found that the ‘guardrail’ concept, in which up to 2°C of warming is considered as relatively safe, is in fact inadequate due to the severe risks and potential irreversible impacts. Instead, the long-term goal should be defined as a ‘defence line’ and efforts should be made to put the line as low as possible. It’s important to note that more than 100 Parties already support limiting warming to 1.5°C, a group only likely to gain members in the run-up to Paris. From the 10 key SED messages, ECO wants to reiterate three: 1) Warming of 2°C would lead to catastrophic impacts, slow down economic growth and hinder poverty reduction efforts considerably. 2) The world is not on track for a path towards a 1.5/2°C scenario. Past and recent global GHG emissions have accelerated, the emissions gap is growing, and the current Cancun pledges are more consistent with pathways limiting global warming to 3-4°C. 3) Keeping warming at 1.5/2°C is still achievable. Deep emission cuts are needed to keep warming at 1.5°C and below 2°C levels. This would require full decarbonisation of energy systems. Achieving this would not significantly affect global gross domestic product growth.

No see! No hear! No say?

ECO, June 9, 2015

Yesterday’s Joint Contact Group (JCG) on the 2013-2015 review was like reliving a bad dream. Saudi Arabia used procedural arguments to prevent progress towards the drafting of a COP decision building on the robust climate science contained in the Structured Expert Dialogue (SED). That’s backsliding to the dark ages of the 1990, Saudi Arabia! It was also disappointing to witness China and India siding with the Kingdom rather than standing with countries where acting on the messages of the SED is a matter of survival. All this prevented the JCG from recommending appropriate action on the basis of the key messages highlighted throughout the SED. As a reminder, those messages are: we are not on track to a “below 2°C path”, 2°C warming would be dangerous, and keeping warming to 1.5°C would avoid many disastrous impacts. Rather than wasting more negotiating hours with delaying tactics, Parties should consider what their mitigation policies must be if they respond adequately.

Know your limits

ECO, June 3, 2015

Yesterday saw a special event on the results of the Structured Expert Dialogue (SED) on the 2013-2015 review, which ended its work this February. ECO hears that it might have been this week’s “best show in town”. The SED found that the “guardrail” concept, where up to 2°C of warming is considered safe, is inadequate. Instead the long-term goal made to draw the defence line as low as possible.

1. Even 2°C warming (the limit agreed in Cancún) would result in catastrophic impacts, slow down economic growth,
2. The world is not on a path towards a scenario below 2°C. Past and recent global greenhouse gas emissions have accelerated. So, yes, an emissions gap exists and the current Cancún pledges are more consistent with pathways limiting global warming to 3-4°C.
3. Keeping warming below 2°C is still achievable through deep emission cuts. These cuts can be achieved through full decarbonisation of energy systems, along with scaling-up of low-carbon energy technologies by approximately 90% by 2050 (compared to 2010). Importantly, these measures particularly for human health and biodiversity conservation.

For ECO, aiming for a limit of warming to below 1.5°C would mitigate numerous impacts of climate change, and is not necessarily more costly than pursuing the 2°C limit. However, to keep warming below 1.5°C, emissions reductions must begin earlier. And in each case—even to limit warming below 3°C—a radical transformation is necessary to deviate from current trends.

From the SED discussions in Bonn, ECO is taking away that a draft COP decision should strengthen the long-term goal of the Convention towards 1.5°C. The COP decision needs

to operationalise this temperature threshold by phasing out all fossil fuel emissions and phasing in a 100% renewable energy future with sustainable energy access for all, as early as possible, but not later than 2050.

Not on track

ECO, February 10, 2015

The Structured Expert Dialogue (SED) finished up yesterday. The EU delegate surmised things aptly: “We are not on track.”

With over 19 presentations, the message was loud and clear. We are, unfortunately, on a path that sees warming going well above 2°C. And there were 70 presentations many of which documenting that even 2°C warming is intolerable. We need to limit warming to 1.5°C.

ECO is confident that these findings will be among the prominent results of the SED report coming out on March 20. And ECO hopes that policymakers will recognise the unique value of a dialogue informed by science and act accordingly.

Do the math: 0 fossil + 100% renewables = 1 convention-compliant mitigation goal

ECO, February 9, 2015

The final meetings of the Structured Expert Dialogue (SED) have begun! There are two life or death questions on the table: 1) “Is below 2°C enough to fulfil the goal of the convention?” and 2) “Is enough progress being made to achieve the goal?” The SED’s message is clear: science says warming of 2°C will lead to numerous intolerable consequences that could be avoided if warming stays below 1.5°C.

These consequences do threaten food security, increased extreme weather events, rising sea levels of more than 50cm with serious effects for many coastal zones and endanger the existence of several nations for starters. ECO is saddened by the reality that this list isn’t exhaustive.

Yesterday, AOSIS demonstrated what is required for the survival of many communities in small island states through proposing a “well-below 1.5°C” target to be included in the negotiation text for the Paris agreement.

Today, we hope more time is spent on the second question. Real world evidence shows us: “no, impacts are worsening”, but experts still have an important part to play. When expertise and real world experience come together surely Parties have no choice but boosting their mitigation and adaptation ambition?

To be clear, whatever happens, we will have to phase out emissions to zero to reach any cap in warming, it is only a matter of timing. ECO is here to help with this advice: starting today, with completion by no later than 2050, we must phase out fossil fuels to zero and phase in 100% renewable energy.

The time has come for a Science-Based Equity Review

Eco, December 6, 2014

The ADP decision on INDCs will be the key to the Lima outcome. If Parties agree to solid information requirements and meaningful review mechanisms, then we'll be on the road to success in Paris. But if Parties are not given the tools and guidance that they need to define strong, transparent, and equitable commitments, we'll be on another road altogether, and ECO will not even speculate about its likely destination.

We need INDCs that are based on the three core equity principles of the Convention:

Adequacy: INDCs must be specified precisely, and expressible as an ambitious number of tons of mitigation. If this bottom-line information is not available, then it will be next to impossible to do even the most basic assessment of the INDCs. Including assessing if we're on a pathway that will prevent dangerous climate change and limit global temperature increase to below 2°C that keeps the door to 1.5°C open.

CBDR+RC: INDCs must represent a level of effort that corresponds, at least roughly, to the national "fair share" of the country that tables it. This fair share is to be understood in terms of differentiated responsibility and respective capability, and every country should explain, in just these terms, why it considers its INDCs to meet the requirements of Article 3 of the Convention.

Equitable Access to Sustainable Development: Each INDC must, similarly, be scaled to support a future in which the right to sustainable development becomes a real and living right, one in which all countries can not only lift their people out of poverty, but also provide their citizens with sustainable living standards that can be applied to all (Article 3.4).

These strong, well-founded principles can support a strong, well-founded treaty that will endure the challenges ahead. To that end, transparency is all too important.

Several Parties mentioned the need to include equity in the Upfront Information Requirements (UIRs) in yesterday's ADP discussion. ECO believes that these three core equity principles need to be explicitly included in the UIRs, so that Parties can reflect on them when preparing their INDCs, which will ensure that they prepare them in a manner that meets their national fair shares, as they understand them. Parties that table INDCs that are consistent with these principles will have nothing to fear when other Parties, and Observers all around the world, examine their INDCs for adequacy and equity. As they will certainly do.

Unlike dangerous climate change, the clean energy transition ahead is nothing to fear. We just heard in the Structured Expert Dialogue that, according to the IEA, 80% of the mitigation that is needed before 2020, if we're to get on a path that actually leads to a 2°C future, can be met without any net costs. If we're brave enough to launch immediately on a global campaign to rapidly increase efficiency, cut fossil subsidies, and tighten gas and coal standards. As for the other 20%, and the larger costs ahead – on the adaptation side as well as the mitigation side – we're going to have to bear them equitably. And we're going to have to be able to review and assess ourselves to ensure that we do.

HOUSTON, WE HAVE A PROBLEM

ECO, December 4, 2014

Not only is spaceship Earth badly off the 2020 trajectory needed to stay below 2°C, it is just about to drift further away from the safe pathway. That was the message yesterday from UNEP in the Structured Expert Dialogue: the giga-tonne gap looks to just grow as we approach 2025 and 2030. If you consider warnings by the IPCC and others that the 2°C limit may still be too high and risky, then the situation looks even worse.

But fortunately we do have the survival kit still within our reach.

As ECO learned from the IEA, 80% of the 2020 gigatonne gap in the energy sector could be bridged with measures that have no impact on GDP in all regions (!!). Energy efficiency and renewable energy are the most important survival tools in the short and longer term.

UNEP also emphasised the importance of energy efficiency, which in almost all cases is the option where you have many wins and no losses. So really, Par-ties? What are you waiting for? To quote the IEA presenter yesterday: it really shouldn't be that hard.

What's the course we need to plot? Zero carbon, emissions phase out and decarbonisation were much-used vocabulary yesterday. Having this long-term goal in mind, the World Bank said that this should be the basis for policy.

How long is the long-term? Well, with all GHG, we'd have to be in zero by about 2080 to 2100, says UNEP, if we are to stay within the 2°C limit. For the main culprit, CO₂, zero emissions will need to be achieved sometime between 2055 and 2070. And for a 1.5°C limit we'd obviously have to bring carbon emissions to zero even faster.

The Expert Dialogue also discussed negative emissions: the more we delay action, and the later emissions hit zero, the more negative emissions we'd have to achieve in the future to stay below 1.5°C or 2°C warming levels. ECO was pleased to finally hear a reality check conclude that the main carbon removal technology assumed in present models - biomass with CCS - is pure theory and very little is known how broadly it could actually be implemented, given the multiple barriers, problems and limiting factors that exist in the real world (ECO recommends to check out the useful info box in the UNEP report).

The reality is that IF carbon dioxide removal technologies aren't broadly available (as is generally assumed in models), emissions will have to be brought down to zero even faster.

The IEA reminded Parties that investors are looking for some clear signals from Paris. What's a safe investment? Is it (still) high-carbon or low-carbon technology?

After carefully listening to the experts, ECO is convinced even more than before that the signals the Paris agreement needs to send are: a complete phase out of fossil fuels by 2050, and a just transition to 100% renewable energy for all. And to get there in time, this fossil fuel phase out must start today.

Two degrees too much

ECO, December 3, 2014

The Structured Expert Dialogue (SED) of the 2013-2015 Review gained important Presidential attention yesterday. At the beginning of the meeting, COP President Vidal stated that the SED is the most important space to reconcile science and policy. He continued in mentioning the mandate of the 2013-2015 review - which is to consider the adequacy of the long-term goal and progress towards achieving it - meaning that clear answers must result from the review for the Paris decisions.

On the first task to consider, the adequacy of the 2°C limit, yesterday's meeting gave clear answers from science. If temperature increases are limited to below 1.5°C, there are more chances for adaptation.

One example is the coral reefs provide crucial sources of protein in many peoples' diets. Coping with warming of 1.5°C is already a severe challenge for corals, but they will struggle to survive with 2°C warming. Also, 'below 1.5°C' could mean a chance to protect the summer Arctic sea ice.

It's not only ecosystems or sea ice in danger with 2°C warming, but people are also vulnerable. Cultures of Arctic communities and those on low-lying lands are endangered: for them the risk is high with 2°C.

It was good to hear yesterday that the US is interested in better understanding the differential risk of a world that is 1.5°C warmer and one that is 2°C warmer. AR6 of IPCC could deliver new insights on that, and ECO hopes this is the beginning of a real willingness to act on science-led mitigation ambition.

Of course the SED did not only look at the risks of climate change but also at mitigation opportunities. The scientists state that a fundamental departure from BAU is necessary for a 2°C trajectory. For that, there is a need for carbon removal technologies (CDR) in the second part of the century, unless we make a steep change in emissions reductions by 2050. As we don't really know what CDR is, how it works and which risks are associated with it, this is another convincing argument to begin effective and expeditious mitigation promptly.

IPCC makes a strong case for 1.5° goal

ECO, 2 December 2014

There are many who consider a 2°C limit for global temperature rise to be an unacceptable climate risk. For them it's "1.5°C to stay alive," and the new IPCC report shows that they have a serious point.

The IPCC's newly updated "Reasons for Concern" indicators (sometimes called "the burning embers," refers to a chart showing increasing risk for the key indicators in yellow, orange and red colors) show that 2 or even 3 out of 5 key risks would be at dangerous levels with 2°C warming.

The risks play out most at a regional scale, so let's have a look at what could happen with just 2°C warming globally (recognising that warming also varies by region):

For Africa, of 9 key regional risks, 8 pose medium or higher risk with 2°C warming, even with high levels of adaptation. We're talking fundamentals like water stress, reduced food production and the spread of diseases.

For Small Island States, highly vulnerable to sea-level rise and high-water events, and dependent on ocean ecosystems, 2°C would be a disaster.

For Asia, risks of catastrophic flooding and lethal heatwaves would be in the medium or high range even with high levels of adaptation.

For Europe, there would be medium risks related to freshwater availability and extreme heat events even, again, with high levels of adaptation.

For Australasia, 2°C really wouldn't leave much hope for coral ecosystems, or the fish, tourism, and communities that depend on them.

For North America, 2°C would imply high or very high risks related to wildfires and droughts.

For Central and South America, 2°C with high levels of adaptation would imply high risks of flooding and landslides caused by heavy rains, and big problems for water availability in semi-arid and glacier melt-dependent regions.

For the oceans, risks related to 2°C look particularly devastating: risks are very high for “reduced biodiversity, fisheries abundance and coastal protection by coral reefs due to heat-induced mass coral bleaching and mortality increases, exacerbated by ocean acidification”.

You don't even need to look into the future. Today, with less than 1°C warming, we are already witnessing: • Greenland Ice Sheet losing ice 6 times faster (!) in 2002-2011 than just a decade earlier.

• Unprecedented high-impact climate extremes during the 2001-2010 decade (according to WMO). • The newest findings of the fast-moving research on the West Antarctic Ice Sheet, coming in after AR5 but further refining the assessment, strongly suggests that key glaciers are crossing a point of no return, making at least 1.2 meter sea-level rise inevitable and possibly triggering the collapse of the rest of the WAIS.

What this means is that every new ton of carbon in the atmosphere is making our lives worse. And the further we drift upward from 1.5°C warming, the bigger the necessity for adaptation and compensation for loss and damage.

The conclusion is quite clear: we must act on the science and head for 1.5°C maximum warming instead of 2°C.

Missing: Substance on the 2013-15 Review

ECO June 11, 2014

Up until now, the Joint Contact Group (JCG) on the 2013-2015 review has done an excellent job in its Structured Expert Dialogue (SED) in absorbing new and relevant scientific intelligence from the IPCC's Fifth Assessment Report. When it comes to drawing any conclusions from all of the science though, the JCG is still only discussing procedural issues, like timing of the next SED.

Yes, ECO wants SED sessions at all SB sessions for gathering information from sources other than AR5. SB42, though, should be restricted to JCG only so that it can concentrate on its assigned task: to review the adequacy of the long-term global goal and overall progress towards achieving it. The SB42 session should be reserved for text work in order to prepare decisions for Paris as input into the ADP and to the COP.

To help, ECO suggests that:

- Parties conduct a stocktaking in the JCG at COP20 to capture the relevance of the information gathered from the IPCC AR5 during the SED.
- The JCG sends a strong signal to Workstream 2 of the ADP that the overall progress towards achieving the long-term goal is “off track” and that urgent action under WS2 is required for taking us to a 1.5°C pathway.
- Parties discuss a process to communicate the results of the JCG's work and the new scientific intelligence collected during the SED sessions.
- The JCG urges the IPCC to urgently conduct more research on scenarios to reach a below 1.5°C target.
- See more at: <http://www.climatenetwork.org/blog/missing-substance-2013-15-review#sthash.jbFwmgLV.dpuf>

Listen to the science

ECO, 5 June 2014

The IPCC was here in town yesterday to hand deliver its latest reports to you. Today, the UN-FCCC will start formal consideration of the IPCC reports in the next round of the Structured Expert Dialogues (SED). This is part of the 2013-2015 review of the adequacy of the long-term global goal and the overall progress towards achieving it.

Ministers in Bonn should welcome the good news from the IPCC: it is still possible to limit global warming to 2C. The really big news is a clear finding that the overall “cost” to the economy for the needed changes is smaller than the rounding errors commonly found in long-term economic growth projections. It’s not just the scale of the total global investment in infrastructure that has to change dramatically; rather, it is the direction of the investment that has to change in order to decarbonise the world’s infrastructure. That means complete transformation of our energy sector and important changes to our society as a whole. Investments in renewables have to triple soon and proven fossil reserves have to be left underground.

The IPCC WGII shows that the costs of inaction are catastrophic. The risks of climate change are widespread, they concern every region and every sector. Ministers, be courageous and take decisive, ambitious action today. The people, biodiversity and ecosystems upon which they depend are counting on you.

Close the Gap!

ECO, November 15, 2013

On Wednesday the second Structured Expert Dialogue of the 2013-2015 review began to assess overall progress towards achieving the long-term global goal, including the implementation of commitments under the Convention.

The IPCC authors conclude that there is a 1000 Gt carbon budget for humankind from the starting point of the fossil fuel era. Within that budget there is a 66% likelihood of staying below 2 degrees.

We have already used half of that budget and, taking into account other greenhouse gases, only 270 Gt can still be emitted to remain within the safe lines. That’s a shockingly small carbon budget to stay with a climate that is relatively safe – and even then substantial impacts will still occur.

Most numbers from the IPCC are associated with uncertainties. From a risk assessment perspective (or common sense, depending on how formal you want to be), higher uncertainty requires a lower carbon budget. So remember, even a 66% likelihood means a one-third chance of going beyond 2 degrees.

Furthermore, action on short-lived forcers like methane cannot replace or ‘buy time’ on long-lived greenhouse gases, especially CO₂. We need substantial reductions of them all.

However, while the Structured Expert Dialogue did not formally draw conclusions, it is clear that the overall progress made so far towards achieving the long-term global goal is small and far less than what is necessary.

That point was underscored by the side event on the UNEP Emissions Gap Report 2013, which followed shortly after the conclusion of the dialogue. This third update of the now famed gigatonne gap report shows that the actual trajectory of global emissions is much higher than emissions pathways needed to keep global temperature rise below 1.5/2°.

We are now at annual emissions of 49 Gt CO₂e, when we should be at no more than 44 Gt. On current trends, the gigatonne gap could increase from 5 Gt per annum to 12 Gt or more unless the world takes effective action.

But all is not lost. The UNEP report shows which measures should be implemented to close the gap and reap substantial co-benefits at the same time.

Borrowing a famous quotation, ECO’s advice is: Make it so!

IPCC: 1.5 Still Alive

ECO 3, November 13, 2013

Parties in Doha requested expert advice to ensure the scientific integrity of the 2013–2015 Review. Well, yesterday they got it, fresh from IPCC Working Group I. In the first of two dialogues in Warsaw, IPCC experts provided advice on the adequacy of the 2°C goal in light of the ‘ultimate objective’ of the Convention.

Working Group I confirms what we already knew: warming is unequivocal, human influence is clear, and limiting climate change and its impacts requires substantial and sustained emissions reduction – in fact, down to zero.

But there is good news as well. The “peak and decline” trajectory of the lowest concentration pathway (RCP2.6) could limit the increase in global mean temperature to 1.5°C and would increase the likelihood of meeting the long term global goal of keeping below 2°C. That’s not easy, but it’s still within reach.

The findings show that even 2°C warming will increase the potential for dangerous anthropogenic interference with the climate system, and delaying emissions reductions would speed the pace and severity of impacts such as sea level rise and storm intensity. The WG I report gives Parties one less excuse to delay or hedge their mitigation commitments and actions up to and beyond 2020.

Working Group II will not release its full report on impacts until March 2014, but it is already evident that failing to reduce emissions quickly means that the ultimate objective of the Convention would not be met: sustainable development, food security and ecosystem adaptation would all be sacrificed. The joint contact group of SBSTA and SBI at COP 19 should advise that Parties’ commitments and actions must be tabled at COP 20 and their adequacy must be benchmarked against the IPCC findings.

The second session of the IPCC expert dialogue is at 3 pm today, and it will continue to address findings of the highest importance.

- See more at: <http://www.climatenetwork.org/blog/ipcc-15-still-alive#sthash.NjApAmsx.dpuf>

Next Steps to Enhance the Review

ECO, December 5, 2012

The start of the first periodic review (2013 – 2015) is approaching. This is intended to be a strong sciencebased instrument to increase ambition.

But still there is no decision on which body will conduct the review. Informal groups have ongoing meetings but there has not been much convergence. The most convincing solution would involve a review expert group which would preferably be established here in Doha and assisted by the Secretariat going forward. This group would gather new scientific intelligence from the coming Fifth Assessment Report of the IPCC and many other sources including the UNEP gigatonne gap overviews, biannual reports and reports from ICA and IAR.

Of course inputs and submissions from Parties are necessary. But ECO is perplexed: why is there no mention of observer participation in the draft decision, through submissions or otherwise? Surely those experiences, data and insights can add measurable value to this crucially important new initiative.

Small But Powerful

ECO, May 24, 2012

The Review is sometimes thought of as a minor agenda item. ECO does not agree. It reincorporates scientific findings in the political UNFCCC negotiations in order to raise ambition and close the gigatonne gap. So, negotiators, if you happened to forget its significance, this is a reminder to pay sufficient attention to the discussion on the first periodic Review (2013-15).

At COP18, we need several decisions on the Review – most of all a decision on its scope, but also on the modalities. Modalities would include the body to conduct the Review and a finalized workplan for a timely start, effective work and strong recommendations in 2015. The workplan must not be forgotten over contradicting views on the scope (reviewing 2°C or reviewing the long-term global goal and the process towards achieving it (as phrased in Cancun) or to the means of implementation). Mexico yesterday suggested bridging the differing views on the scope by starting with the Cancun language and possibly later further defining the scope. Gracias, Mexico!

In case Parties, at a later point in time, seek to consider reviewing the means of implementation, ECO suggests inserting a chapeau in the coming draft decision on the scope, referring to the different reviews in the Cancun and Durban decisions on finance, technology, capacity building and biennial reporting. These various decisions to review the means of implementation have already been taken, so that there is no need to duplicate this undertaking in the first periodic review (2013-2015). A better approach would be to strengthen all reviews by linking the first periodical Review to the other review processes. This would make them more powerful at all ends.

In summary, ECO is confident that it is possible to find a way out of the present stalemate concerning the review 2013-2015, so that the review can begin in 2013.

ECO appreciated the chair's facilitation of yesterday's spin-off group, moving the discussion to the modalities, such as the potential expert group that would conduct the Review and first steps in organising the work starting next year.

Of course, ECO already has its own perceptions and milestones in mind for the 2013-2015 Review roadmap:

1. Beginning in 2013 with a workshop on the Special Reports of IPCC (SRREN and SREX) at SB38
2. A subsequent workshop back-to-back to the adoption of AR5/WG I of IPCC at the COP in 2013, where conclusions on WG I-related issues for the Review will be drawn.
3. In May 2014 there should be a second workshop back-to-back to the adoption of AR5/WG III (including WG II related issues), so that...
4. ...SB40 in June 2014 could draw conclusions on it
5. After adoption of the Synthesis Report of AR5, a workshop could be planned
6. The COP in 2014 should take note of this analytical phase of the review and take a decision on the envisaged steps on the Review for 2015 that lead to action
7. In 2014/15 the political analysis should take place
8. To ensure action in 2015, SB 42 should write a draft decision on the action the COP should take on the basis of the review

All these activities should inform the other, above-mentioned review processes to create small but powerful tools for avoiding dangerous climate change.

- See more at: <http://www.climateactionnetwork.org/category/tags/2013-2015-review#sthash.ZcjB79ym.dpuf>

Climate Action Network

2013 – 2015 Review of the UNFCCC

May 30th, 2015

Climate Action Network International (CAN-I) is the world's largest network of civil society organizations working together to promote government action to address the climate crisis, with more than 900 members in over 100 countries. www.climatenetwork.org

In 2012, the COP decided to establish a structured expert dialogue (SED) with the aim to support the work of a Joint Contact Group of SBSTA and SBI and to ensure the scientific integrity of a review in 2013-2015 on the adequacy of the long-term global goal in light of the ultimate objective of the Convention. Through a focused exchange of views, information and ideas SBSTA and SBI should give recommendations in relation to party commitments. The message of the SED could not be clearer: 'Climate change is here and it is a matter of survival'.

The SED has shown to be an appropriate vehicle for open and substantive discussions between Parties on the scientific knowledge and evidence based climate policy formulation. It considered scientific information, especially the latest IPCC Report (Fifth Assessment Report), relevant to the review through regular scientific workshops and expert meetings and assisted in the preparation and consideration of synthesis reports on the review.

Since its inception, the SED has held five meetings. After the last meeting in February 2015, the Co-Facilitators were requested to prepare a final factual report on the SED. This report summarizes the face-to-face dialogue between over 70 experts and Parties on: "the adequacy of the long-term global goal in the light of the ultimate objective of the Convention; and the overall progress made towards achieving the long-term global goal, including a consideration of the commitments under the Convention."¹ It includes a technical summary and a compilation of the summary reports on the four sessions of the SED.

The aim of this paper is twofold: To get greater recognition of the significance of the 1.5°C goal from all stakeholders and to make recommendations on how to translate the findings of the SED into concrete outcomes, in the context of the UNFCCC negotiations. The Report on the structured expert dialogue on the 2013-2015 review will be the main basis for CANs analysis.

A. Main messages of the structured expert dialogue on the 2013–2015 review

Overview

The report of the Co-Facilitators on the SED begins with general statements on global warming and its dynamics. The SED report gives a good picture of the irreversible consequences of overshooting, on the relationship between cumulative emissions and global warming and on the need to reduce global CO₂ emissions in the short to medium term. The report states that even a 3°C limit requires a substantial reduction in global GHG emissions and fundamental transformation of the energy system is needed (see also para. 17, 19, 21, 23 and 26 of the Report on the structured expert dialogue on the 2013–2015 review.)

¹ UNFCCC: Subsidiary Body for Implementation (SBI)/Subsidiary Body for Scientific and Technological Advice (SBSTA) (2015): Report on the structured expert dialogue on the 2013–2015 review. Note by the co-facilitators of the structured expert dialogue. See: http://unfccc.int/documentation/documents/advanced_search/items/6911.php?preref=600008454#beg

“Limiting global warming to below 2 °C necessitates a radical transition (deep decarbonization now and going forward), not merely a fine tuning of current trends.”

1. Impacts of Climate Change differ substantially between 1.5°C and 2°C.

The first key message of the SED is that even a warming of 2 degrees (the objective of the Convention) would already lead to catastrophic impacts, slow down economic growth and hinder poverty reduction efforts considerably (see para. 107, 108, 110, 114, 115 and 117 of the Report on the structured expert dialogue on the 2013–2015 review)

For CAN, aiming for a ‘below 1.5 degrees’ limit would avoid and weaken numerous impacts of climate change and is not necessarily more costly than pursuing the ‘below 2 degrees’ limit.

“114. In terms of feasibility, costs and risks of the 1.5 °C scenarios, the IPCC indicated that overshooting is a typical feature of low-emission scenarios, with its related risks. Higher emission scenarios come with higher risk of feedbacks that accelerate climate change, so keeping the temperature rise below 1.5 °C could help control carbon cycle feedbacks and reduce risks from them. The technologies required for the 1.5 °C scenarios are the same as for the 2 °C pathway, but need to be deployed faster, and energy demand needs to be reduced earlier, implying a higher cost than in the 2 °C scenarios.”

2. The 2°C limit should be seen as a defence line, while less warming would avoid substantial impacts.

The second key message of the SED is that the world is not on track for a path towards a ‘below 2 degrees’ scenario. Past and recent global GHG emissions have accelerated, an emissions gap exists, and the current Cancun pledges are more consistent with pathways limiting global warming to 3°C. (see para 67, 68, 70, 72, 87 of the Report on the structured expert dialogue on the 2013–2015 review.)

“67. Regarding past and current global GHG emissions, WGIII found that growth in global GHG emissions has accelerated despite mitigation efforts and the global economic crisis, and that emission growth between 2000 and 2010 was greater than in any of the previous three decades (...). In addition, about half of the cumulative anthropogenic CO2 emissions between 1750 and 2010 occurred in the last 40 years. The IPCC and WMO also underscored that this happened while roughly half of those emissions were absorbed by the oceans and the terrestrial biosphere.”

3. Limiting global warming below 2°C is still feasible and will bring about many co-benefits, but poses substantial technological, economic and institutional challenges.

The third key message of the SED report is that keeping warming below 2 degrees is still achievable. Deep emission cuts are needed to keep warming below 2 degrees and would require approximately 90 per cent scaling-up of low-carbon energy technologies by 2050 compared with 2010 and full decarbonization of energy systems. However, achieving this would not significantly affect global gross domestic product growth. It is helpful to mention that mitigation action comes with co-benefits, in particular for human health, biodiversity conservation and other societal goals. (See para. 42, 46, 47, 48, 49, 51, 52 and 55 of the Report on the structured expert dialogue on the 2013–2015 review.)

“52. Mitigation action comes with co-benefits, in particular for human health, biodiversity conservation and other societal goals, that are however challenging to define and quantify. The IEA emphasized that in many cases these non-climate drivers are the real reasons that governments take action and should therefore be harnessed.”

B. Key recommendations drawn from the SED for the UNFCCC negotiations

CAN suggests that the deliberations of the SED should lead to the initiation of a COP-decision in Paris that will strengthen the long-term goal of the Convention to '1.5 degrees'. CAN would like the COP decision to operationalise this temperature threshold. Climate Action Network's proposed long term goal does exactly that - "phasing out all fossil fuel emissions and phasing in a 100% renewable energy future with sustainable energy access for all, as early as possible, but not later than 2050".²

The COP decision should also acknowledge that the Parties are not on track to meet the previously agreed long term goal and therefore parties need to reduce their emissions substantially to prevent the impacts from climate change.

Finally, the SED did not address several important issues that should contribute to inform the 2013-2015 review. Firstly, the issue of international bunker fuel emissions from aviation and maritime transport although this is a source of growing GHG emissions with no regulation in effect to cap emissions. CAN calls for the COP in Paris to send a much clearer signal than before to ICAO and IMO to introduce global regulations on limitation and reduction of GHG emissions (including the warming effect of contrails and cirrus clouds) from these sectors.

Secondly, CAN notes that the SED did not consider in sufficient depth the social implications of the long-term global goal (such as consequences for human rights, mobility and labour). Such information is of particular importance for the review, particularly considering that – as noted in the co-facilitators' report – assessing the adequacy of the long term global goal involves value judgment at the global, regional and local levels (key message 3). When considering the outcomes of the SED and the report by the co-facilitators, CAN invites the SBI and SBSTA to also consider additional information submitted by several parties. These issues should be addressed during the next periodic review.

² Climate Action Network (2014): CAN Position, Long Term Global Goals for 2050, see: <http://www.climate-network.org/publication/can-position-long-term-global-goals-2050>

Climate Action Network

Submission on the Future of the IPCC

July 31, 2014

Climate Action Network Submission on the Future of the IPCC July 31, 2014 Climate Action Network (CAN) is the world's largest network of civil society organizations working together to promote government action to address the climate crisis, with more than 900 members in over 100 countries. www.climatenetwork.org

Scientific intelligence is key to understanding the facts and challenges of human induced climate change. For CAN, the Intergovernmental Panel on Climate Change (IPCC) is the most authoritative scientific body on these issues, because there is no other body whose methodologies guarantee a scientific quality of any comparable level as the IPCC.

Science is a strong driver for progress in the UNFCCC negotiations. The First Assessment Report of the IPCC (FAR) previously led to the UN Framework Convention on Climate Change (UNFCCC), the Second Assessment Report (SAR) to the Kyoto Protocol, and the Fourth Assessment Report (AR4) helped to mobilize the public and 120 heads of state on a global scale for COP 15 in Copenhagen, which was expected to produce an important climate treaty. Furthermore, the Fifth Assessment Report (AR5) should now prepare for an effective outcome of COP 21, in Paris.

Based on these experiences, CAN considers the work of the IPCC essential for the UNFCCC and strongly supports the establishment of a Sixth Assessment Report (AR6). Some adjustments stimulated by the lessons learnt during AR5 could further improve the products of the IPCC.

Suggestions and Adjustments for the next IPCC Cycle

A. Future products of the IPCC

CAN agrees with the division of work of the IPCC in three working groups on science, on vulnerability, impacts and adaptation and on mitigation. As every cycle by now, the 6th cycle of the IPCC should be completed with an Assessment Report (AR). From AR5 we have learnt that the volume of AR6 could be smaller compared to AR5 so that the work over-load of the authors could be reduced.

Nevertheless, on several items AR6 will be more detailed than AR5. CAN sees this because of research for the 1.5 degree target. We refer to the Copenhagen Accord, which demanded an evaluation of the 1.5 C target, and the Cancun agreement, where more than 100 countries called for a 1.5 C target. The IPCC should call on science to develop more scenarios where warming won't exceed 1.5 degrees compared to preindustrial levels. The Assessment Report of AR6 should have a chapter on coastal ecosystems and human settlements, which are threatened by sea level rise above 1.5 C.

The tradition of Special Reports should be maintained. CAN has identified several themes as potential subjects for a Special Report for the 6th cycle:

- i. Non-linearities in the climate system, which may lead to major or even catastrophic impacts, including a detailed analysis concerning the "tipping point" of the ice-sheets.

- ii. If possible, the IPCC should give a clear answer at which local/regional temperature rise the tipping point for irreversible melting of ice sheets will take place.
- iii. Ranges for expected sea level rise in the light of a better understanding of Antarctica, Arctic sea ice, Greenland ice sheet and high--mountain glaciers.
- iv. Numerous countries rely on exporting fossil fuels as a central pillar of their economy. This is why many of them do not favor phasing out of fossil fuels nor are they active on policies for ambitious emission reductions. To increase understanding of alternative models of economic growth that are decoupled from greenhouse gas emissions, the IPCC should call for more research on development alternatives for these countries and then summarise the achieved results in AR6.
In generalising, the notion of a 'just and fair transition' for all countries gains ground in the discussion. IPCC could develop a Special Report on components and elements of such a needed transition which are of course tailor--made in all countries depending on their economic, political, etc, circumstances but still there are some general principles to work on and agree with domestic and international stakeholders. This is true for high-- and low-- greenhouse gas emitters, importers, exporters of fossil fuels and those depending on their own sources, etc.
- v. On 'Energy Efficiency & Conservation, low carbon materials and resource efficiency'. IEA came out recently in their June 2014 'Investment Report' that Energy Efficiency Investments are at only \$US 130 billion annually (2012 & 2013) but to achieve their 450 ppm scenario this has to go to almost \$US 1.1 trillion by 2035 in all sectors in addition to clean energy investments such as renewables. The IPCC/AR5 in WG III (2014) also showed that investments in Energy Efficiency have to go to up to \$US 600 billion by 2029. Also, low carbon and efficient processes as well as new materials mainly for infrastructure are needed such as at least partly to replace high process emissions from metallurgical coal--based blast furnace steel, clinker for cement and certain chemicals (polyethylene). Recycling and re--use are fundamental parts of that approach. Unless we reduce overall energy consumption while growing energy services and useful energy demand, world runs in problems with the need for extractive minerals in highly sophisticated [renewable] energy and ITC devices.

B. Appropriate structure and modus operandi for the production of IPCC products

- vi. Approval of reports is essential because all states agree formally with the findings of the IPCC. For Approval Sessions CAN would welcome a development that increases the transparency on the draft texts and on the text already adopted without damaging the approval process.
The IPCC secretariat might consider if it is possible to make a file available -- in the papersmart, bar-coded if necessary -- at the end of each negotiating day with the agreed text or to follow the agreed text on personal screens.
- vii. ii. The IPCC should call on the science and governments for more research of political and social sciences on the implementation of climate policies, which reduce emissions. This research should not only analyse obstacles, which avoid efficient and effective climate regulation, but research should focus on how to overcome these obstacles.

C. Ways to ensure enhancement of the participation and contribution of developing countries in the future work of the IPCC

CAN suggests the establishment of a fund for scientists from developing countries so that they are able to have enough time to work as an IPCC author. To encourage more scientists from developing countries CAN would welcome if IPCC could increase communication and outreach to IPCC focal points in developing countries in the nomination process.

D. Other matters

- i. Such as in the past, the scheduling of the release of the coming IPCC report should be synchronised with the UNFCCC negotiations. AR6 should be adopted well before climate summits where big outcomes are expected. The work and timing of AR6, to come out several years after COP 21, in Paris, in December 2015, will depend on the results of COP 21. Only from then on IPCC can begin to schedule the preparation and release of the different parts of AR6.
- ii. After the restructuring of the IPCC (reforms of the processes and procedures) where the proposals of the IAC (InterAcademy Council) were taken into account, CAN does not see a need for any additional major change on the formal level.
However, CAN calls on the IPCC to step back from its positivist role. Also, if global emissions develop in a way that is not compatible with the objectives of the UNFCCC anymore, scientists have the responsibility to communicate this.
CAN expects from the IPCC to list a portfolio of actions might become necessary or at least to provide substantive information on the actions that are available so that Art.2 of the Convention can be achieved.

- iii. As we have learnt from AR5, even if we successfully implement the Cancún pledges, we are still not on track for keeping warming below 2 degrees. Without further ambitious emission reductions we head for a world with 3 degrees warming or more. Therefore, in the next cycle, WG 2 of the IPCC should communicate more intelligence on the impacts of climate change in a 3-degree-world.
- iv. As work on the 6th cycle will begin only after COP 21 in Paris, the IPCC may analyse which ambitious warming goals are achievable under different conditions taking into account the results of COP 21.
- v. Numerous countries rely on exporting fossil fuels as a central pillar of their economy. This is why many of them do not favor phasing out of fossil fuels nor are they active on policies for ambitious emission reductions. To increase understanding of alternative models of economic growth that are decoupled from greenhouse gas emissions, the IPCC should call for more research on development alternatives for these countries and then summarise the achieved results in AR6.
- vi. Nearly 200 countries are Parties to the UNFCCC. However, good governance is not practised in every country, and even so called 'failed states' exist where governance has faded away. In these countries, climate policies cannot be implemented, and there is no powerful regulator who rules greenhouse gas emissions or who restricts deforestation or mining of fossil fuels. More prominent than in AR5 AR6 should include a short description and analysis of this situation on governance and what this means for combatting climate change.

Climate Action Network

Submission on 2013-2015 review

April 1, 2013

Climate Action Network (CAN) is the world's largest network of civil society organizations working together to promote government action to address the climate crisis, with more than 700 members in over 90 countries. www.climatenetwork.org

The First Periodical Review process provides the opportunity to reinforce science-based knowledge into the highly political UNFCCC negotiations. It could contribute to the new deal in 2015. Some say that the review is probably the most important near-term opportunity to strengthen action to limit climate change.¹ Thus, an effective review process could contribute to an 'upward spiral of ambition' on global emission reduction limiting global temperature rise below 1.5 degree C. This can only be achieved if the current pledge-and-review phase is overcome and the international community agrees on a new legally binding instrument applicable to all countries, including developed countries that are not parties to the Kyoto Protocol.

As already outlined in section (a) application of principles of the Convention, the 2015 agreement should fully respect the principles of equity including common but differentiated responsibility and respective capability and equitable access to sustainable development. This will result in a range of national obligations, including mitigation actions. It is appropriate for countries at different levels of responsibility and capacity to take different kinds of mitigation action.

Countries with high capacity and responsibility are candidates for ambitious, legally-binding, economy-wide, quantified emissions reduction targets. Countries identified in Annex 1 of the Convention must agree in the 2015 agreement to legally-binding, economy-wide, quantified emissions reduction targets, the level of ambition of which should be informed by the science and the 2013-2015 Review and by equity. It is expected that this will be in excess of 40% below 1990 levels by 2020. Other kinds of commitments include, but are not limited to, renewable energy and/or energy efficiency targets and sectoral targets. Countries with low capacity and responsibility would only be obliged to take nationally-appropriate mitigation actions explicitly contingent on financial and technical support. All commitments and actions should be amenable to measurement and reporting to ensure that global goals are being met.

The ADP is mandated on preparing the 2015 climate deal, which can be supported by an efficient first periodical review.

The Review starts in 2013 and should be concluded by 2015 with COP21 taking appropriate action according to the Review's findings. The foremost scientific source of information will be the IPCC with its Special Reports on extreme weather events (SREX) and renewable energies (SRREN) and in particular, its 5th Assessment Report (AR5) to be adopted in 2013/2014. Moreover, the national communications and the biannual reports of the countries will be taken into consideration.

The Review should take into account an assessment of the overall aggregated effect of the steps taken by Parties in order to achieve the ultimate objective of the Convention and should consider strengthening the long-term global goal, referencing various matters presented by the science, including in relation to temperature rises of 1.5 °C.

¹ See e.g. http://www.field.org.uk/files/field_2013-2015_review_elements_march_2013.pdf

As Parties need to commit to a solid process to identify and agree on a long term global goal and commit to inscribing it in the 2015 legally-binding outcome, it is necessary to turn this around and put global emissions on a pathway to keep warming well below 2°C, and to keep 1.5°C within reach, global emissions must peak by 2015. The long term global goal should be informed by the science and by the 2013-2015 Review. How the effort to achieve this long term global goal is allocated amongst parties, or groups of parties, should be informed by the discussions on equity. In order to inform the scale of individual party commitments, the global goal will need to be determined early in the process – by 2014 at the latest.

Whilst a 2050 goal is very important, it will be of greatest use with an indicative pathway, which can be used as a guide for future ambition, and can be used as a measure of whether we are on track to meet internationally agreed objectives.

In light of this, in the in-session workshop on the first periodical review during SB 38, available information should be considered. Paragraph 161 in 2/CP.17 mentions sources, as long as IPCC AR5 has not been adopted, the IPCC Special Reports SREX and SRREN (e.g. the scenarios with the highest Renewable Energy shares global primary energy supply reach approximately 43% in 2030 and 77% in 2050) contain important relevant information. CAN wants to mention, additionally,

- to better understand which different short term action is needed either to limit warming below 1.5 degrees
- to better understand the roles and characteristics of different sectors and technologies for mitigation: e.g. that transport - in line with decision 2/CP.17, par. 160 (c) and (d) especially international transport, as a major, general point must be included in FPR considerations - might will probably be one of the most difficult sectors and what implications this has for the dynamics to tackle it especially when structural change is part of the solution
- to ensure cumulative global CO2 emissions until 2100 compatible with the long term goal and which share of proven fossil resources need to remain below the ground and what are the best instruments to guarantee that this will be respected
- how the special warming effects from aviation emissions (from contrails and cirrus clouds) can be effectively mapped in climate scenarios until 2050 or even 2100 so that policy makers better understand this effect, draw conclusions on that and discuss on action necessary to minimise these effects.

COP decision 1/CP.18 states “Recalling that the first review should start in 2013 and be concluded in 2015, when the Conference of the Parties shall take appropriate action based on the review”.

The workshop should give signals if direct action as draft COP decision in 2015 should result from the 2013 – 2015 Review, or if the FPR primarily feeds ADP Workstream 2 to increase short-term ambition.

Annex: Literature for specific items

The message to the Parties of March 11th of the secretariat invites:

“... submit views with regard to what available information should be considered at that workshop”.

For the forth item on aviation issues on last page CAN recommends relevant information in:

Lee, D. et al (2013): Shipping and aviation emissions in the context of a 2°C emission pathway. Available: <http://www.transportenvironment.org/sites/te/files/publications/Shipping%20and%20aviation%20emissions%20and%202%20degrees%20v1-6.pdf>

Lee, D. et al (2010): Transport impacts on atmosphere and climate: Aviation; Atmospheric Environment 44 (2010) 4678–4734. Available: <http://elib.dlr.de/59672/1/scientdir.pdf>

Grassl, H.; D. Brockhagen (2007): Climate forcing of aviation emissions in high altitudes and comparison of metrics. An update according to the Fourth Assessment Report, IPCC 2007

December 2007. Available: <http://www.mpimet.mpg.de/en/wissenschaft/publikationen/papers/climate-forcing-of-aviation-emissions-in-high-altitudes-and-comparison-of-metrics.html>