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This is a graded discussion: 2 points possible due 15 Jan at 18:30

Reading Reflection #4

Ashna Misra

12 Jan at 14:49

8 29

Respond to the following question(s) in 200-400 words about the assigned reading.

* The reading was Chapter 3 of the 2017 UN Emissions Gap Report

1. In your own words, describe the implications of the emissions gap.

2. How does this chapter exemplify the scientist's myth from Reading #2 and why could this be an issue? (Reminder: the scientist's myth is that policy will follow scientific consensus.)

This topic was edited by Jackson Herron

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Olivia Locke

(https://canvas.ubc.ca/courses/26675/users/189754)

14 Jan 2019

1. In your own words, describe the implications of the emissions gap.

I found the Emissions Gap Report to be quite challenging to read and understand. I found this site helped explain the charts and what I was reading more clearly.
https://www.wri.org/blog/2017/11/understanding-emissions-gap-5-charts
(https://www.wri.org/blog/2017/11/understanding-emissions-gap-5-charts)
The emissions gap is the difference between estimated or agreed upon emissions based on policies different countries have agreed to, such as the Paris agreement, and the emission levels that are scientifically agreed upon in order to achieve goals of limiting global warming to 1.5 or 2

deg C.

There is a vast disparity between these values, currently at best global emission output growth is slowing but emissions are still rising each year where as to meet either target temperature these emissions need to be decreasing significantly each year. This shows how much more commitment is required by countries if they are to create and meet goals which are inline with a 1.5 or 2 degree increase.

2. How does this chapter exemplify the scientist's myth from Reading #2 and why could this be an issue? (Reminder: the scientist's myth is that policy will follow scientific consensus.)

This chapter, and agreements such as the Paris Agreement, focuses on what emissions countries and are currently outputting and what emissions they should be. Like with the scientists' myth it assumes that once we settle on a target temperature or emission value we will be able to meet that goal. However, at the same time we can see that our current trajectory is no where near what would be required to meet these goals which makes arguing about the precise targets of these goals seem fruitless. Like with CFCs, immediate and drastic action should begin first, once improvement is seen it can be compared to ideal outcomes. Continually refining ideal outcomes while moving further away from them seems unnecessary and unproductive.

Reply

Katie Reeder

(https://canvas.ubc.ca/courses/26675/users/11862)

15 Jan 2019

2/2. Very clearly written. I liked that you chose to use sources outside of the article for context, I agree, it was a dense document for someone with little background knowledge. I wish I had more constructive comments, but you covered your bases!

Reply

Taran Bains

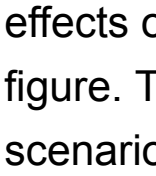
(https://canvas.ubc.ca/courses/26675/users/208520)

15 Jan 2019

I super agree that it was difficult to read and understand, I personally gave up reading it at one point and came across the same website for more clarity. I feel like overall the message was understood. I agree that there always seems to be discussions of this and that and is 2 deg C a good goal, but doesn't seem to help the policy making.

2/2

Reply



Michael Horner

(https://canvas.ubc.ca/courses/26675/users/208938)

14 Jan 2019

1. **In your own words, describe the implications of the emissions gap.**

The emissions gap is the difference between current CO2 equivalent emissions and the hypothetical emissions levels that will keep global mean temperature increase below 1.5ºC or 2ºC. The emissions gap attempts to simplify the complex issue of climate change action down to quantifiable contributions itemized per country. This is a useful approach can be useful approach because it promotes objective policy making where CO2 emissions contributions goals are tied directly to their projected impact on the climate. However, this approach can potentially be reductive as it ignores the extraneous effects of climate change and the approaches that are taken to achieve these goals. The emissions gap and the associated commitments also imply that there are defined pathways to zero or negative emissions, despite some countries not fully defining their commitments or specifying how they will meet them.

2. **How does this chapter exemplify the scientist's myth from Reading #2 and why could this be an issue? (Reminder: the scientist's myth is that policy will follow scientific consensus.)**

The emissions gap is highly speculative and forward looking. It is calculated by combining the effects of many different individual contributions, and as a result has large error bars on the final figure. The scientist's myth is exemplified by the emissions gap because many of the future scenarios that are presented assume that emissions will be reduced. As well, the effects of non-state actors are discussed which, while promising and created with good intentions, do nothing but to inflate the sense of security that the report attempts to give. To a reader of the report, the extensive citations, attractive graphics, and clearly identified problematic countries might lead one to believe that this report is more definitive than it is, and gives the impression that scientists are both influencing and reporting on decarbonization efforts.

Reply

Olivia Locke

(https://canvas.ubc.ca/courses/26675/users/189754)

15 Jan 2019

2/2

Good summary of the report. I agree with your response that the emissions gap makes it falsely seem like there is a defined path to go from where we currently are to where we need to end up.

Reply

Alexis Lytle

(https://canvas.ubc.ca/courses/26675/users/38541)

15 Jan 2019

2/2 Excellent point about the false sense of security that might arise from reading this report. It raises the question in my mind of whom the title of each myth refers to; is it that the general public thinks that scientists, environmentalists, and engineers will help up, or is it so named because the professionals themselves are too overconfident?

Edited by Alexis Lytle (https://canvas.ubc.ca/courses/26675/users/38541) on 15 Jan at 18:52

Reply

Taran Bains

(https://canvas.ubc.ca/courses/26675/users/208520)

14 Jan 2019

(1) The 2017 emissions gap report tells us where the global greenhouse gas emissions are headed and compares them to where they need to be to meet the 2°C and 1.5°C targets outlined by scientists. From my understanding, this report outlines specific countries (the larger GHG emitters) current emissions, what they are headed towards given their current policies and then where they have said they wanted to be by 2030. Overall, the reports conclusion is that majority of the countries still have a lot of work to do, and that we are at risk of not meeting the 1.5°C targets at all but possibly may be able to meet 2°C with serious intervention right now. On top of that, their is a lot of uncertainty with the data, and it constantly requires new data as well as knowing and understanding all the assumptions that have been made in the process.

(2) We have been meaning to meet the 2°C for a few years and every year, even the latest 2018 emissions gap report stated that we were basically not doing enough. The report outlines why we aren't doing enough but also does not give concrete ways to do better. I think in this sense it illustrates the scientists myth because these scientists have put together all this data to say that

we need to meet the 1.5°C and 2°C targets but doesn't guide us. This is an issue if your intention is to look at these reports and expect guidance from them in regards to policy, but they can still be looked at as motivation to do ~something~.

Reply

Ashna Misra

(https://canvas.ubc.ca/courses/26675/users/94031)

15 Jan 2019

2/2 Great answer for one, especially pointing out the level of uncertainties in these reports. Wow I love the way you broke down question 2. It's totally true that where science often lags post analysis of data. I suppose it's also hard for them to give policy recommendations without getting lost in the weeds of economics and culture.

Reply

Katie Reeder

(https://canvas.ubc.ca/courses/26675/users/11862)

15 Jan 2019

2/2. It might also be useful to mention how there are large margins of uncertainty in the emissions report, and the scientists' myth suggests that policymakers might spend more time arguing over emissions targets than implementing policy.

Reply

Katie Reeder

(https://canvas.ubc.ca/courses/26675/users/11862)

15 Jan 2019

1. In your own words, describe the implications of the emissions gap.

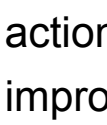
The emissions gap report reveals that the emissions cuts from the implementation of our current NDC's are insufficient to remain below 1.5 and 2 degrees . Should we wish to stay below 1.5 degrees, we are left with a *massive* emissions gap; unless we cut emissions by 50% in roughly the next decade, we are on track to hit 1.5 degrees above pre-industrial levels by 2030. Additionally, we must cut emissions from 54 GtCO2e (2017) to 24 GtCO2e in 2030 to stay below 2 or 3 degrees by 2100. As state NDC commitments are insufficient, the emissions gap implies that non-state actors (like cities, businesses, non-profits, and provinces) must innovate to bridge the gap. If

state or non-state actors do not address the discrepancy in a timely way, then the emissions gap is a sign that a 'hothouse earth' scenario is most likely.

2. **How does this chapter exemplify the scientist's myth from Reading #2 and why could this be an issue?** (Reminder: the scientist's myth is that policy will follow scientific consensus.)

The Scientists Myth suggests that scientific certainty on the finer details of climate change is a prerequisite for making policy to address greenhouse gas emissions. This chapter theorizes about the size of the emissions gap under different policy scenarios (no-policy, current policy, unconditional NDC and conditional NDC). There may be more focus placed on the scale of emissions that signals a 'point of no return', rather than focusing on the development and implementation of policies to cut greenhouse gas levels. Others may argue that a scientists prediction of 66% likelihood of reaching 1.5 degrees in the next decade still leaves 37% chance of not reaching 1.5 degrees. Before policy moves forward, some might argue that we need a need a better understanding of global warming potentials, and need to be relatively certain, not *fairly* confident that our contributions are insufficient.

Reply



Antonio Rodriguez

(https://canvas.ubc.ca/courses/26675/users/15905)

15 Jan 2019

- Nice job including all the specific detail and important figures.

- Important to remember that cities and businesses also need to be included in policy making, we cant generalize and discriminate with the country as well

- Also believe that the nations will follow through and doesn't consider any future modifications to policy or conditions.

-Great job! 2/2

Reply

Ashna Misra

(https://canvas.ubc.ca/courses/26675/users/94031)

15 Jan 2019

2/2 In your first response you do a lovely job of connecting this report to the people who will have to take action in lue of government apathy. I suppose my hope is that with aggressive action from independents, governments will be convinced that their citizens care enough to improve and meet their NDCs. I like how conscious you are about your phrasing in the second

response. That said I think it would be interesting to hear how you feel about those approaches to policy and if it is sufficient.

Reply

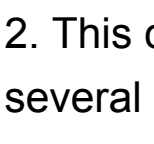
David Ontaneda

(https://canvas.ubc.ca/courses/26675/users/27548)

15 Jan 2019

2/2 - Good use of figures to illustrate the emissions gap. I like how you include non-state actors and their role in achieving the emissions goals. Especially since the USA claims to withdraw from the Paris Agreement, we will see it more important to start talking about the non-state actors. For the second question it would be interesting to know who makes the claims that policy needs more scientific certainty.

Reply



Antonio Rodriguez

(https://canvas.ubc.ca/courses/26675/users/15905)

15 Jan 2019

1. The Emission Gap Report puts forth six different scenarios for policy implementations and selects a pathway to limit average global temperature increase to below 2 C and 1.5 C. It takes into account the policies from different countries as well as the projected trend lines for a greater than 66% chance to limit global warming in 2100 to 2 C; and 50% - 66% chance to limit global warming in 2100 to 1.5 C (the two scenarios for limiting global warming). Two scenarios are reference scenarios: the no-policy scenario that projects GHG emission assuming no additional mitigation policies since 2005; and the current policy scenario that takes into account all currently implemented policies. The last two scenarios use the countries NDCs. The unconditional NDC scenario projects the GHG emissions from the countries proposed NDC excluding any conditional targets. The conditional NDC scenario projects GHG emissions from the countries proposed NDC including all conditional targets. From figure 3.1 we can see that even projecting the conditional NDC scenario, which would reduce GHG emissions the most, there still needs to be a lot of work done to reach the limiting global warming to below 2 C and 1.5 C scenarios. Also, some countries, such as Russia or India, show that their NDCs are not ambitious enough because their current policy scenario GHG emissions is already below their NDCs GHG emissions. There are some countries who are also not on track to meet their NDCs.

2. This chapter talks a lot about models and the predicted outcomes from these models from several different scenarios. It exemplifies the scientist's myth because most of the trends expect

that the countries will follow their NDC projections. Very little models take into account future events such as the increase frequency and severity of extreme weather events. Also, the science is very uncertain and we do not know which scenario will actually play out and therefore it is hard to determine. Policy and technology is always changing as well and most of these models don't take into account any of the future policies or technologies that would be introduced. It is also hard for a lot of the countries to meet their NDCs due to internal policies and unforeseen developments; so NDCs will also change.

Reply

Jackson Herron

(https://canvas.ubc.ca/courses/26675/users/31047)

15 Jan 2019

2/2

Very thorough response! Definitely nice to include the statistical representation "66% chance to limit global warming in 2100 to 2 C" because the science is so uncertain and difficult to quantify. No countries NDCs are really ambitious enough, which is daunting.

Focusing so much on the science can detract from a focus on practical policies to reduce GHG emissions now.

Reply

Melissa Prado

(https://canvas.ubc.ca/courses/26675/users/3017)

15 Jan 2019

2.

Good response, especially in the second part I agree that these model do not take into account the changes that may take place in the future with respect to technology.

Reply

Ashna Misra

(https://canvas.ubc.ca/courses/26675/users/94031)

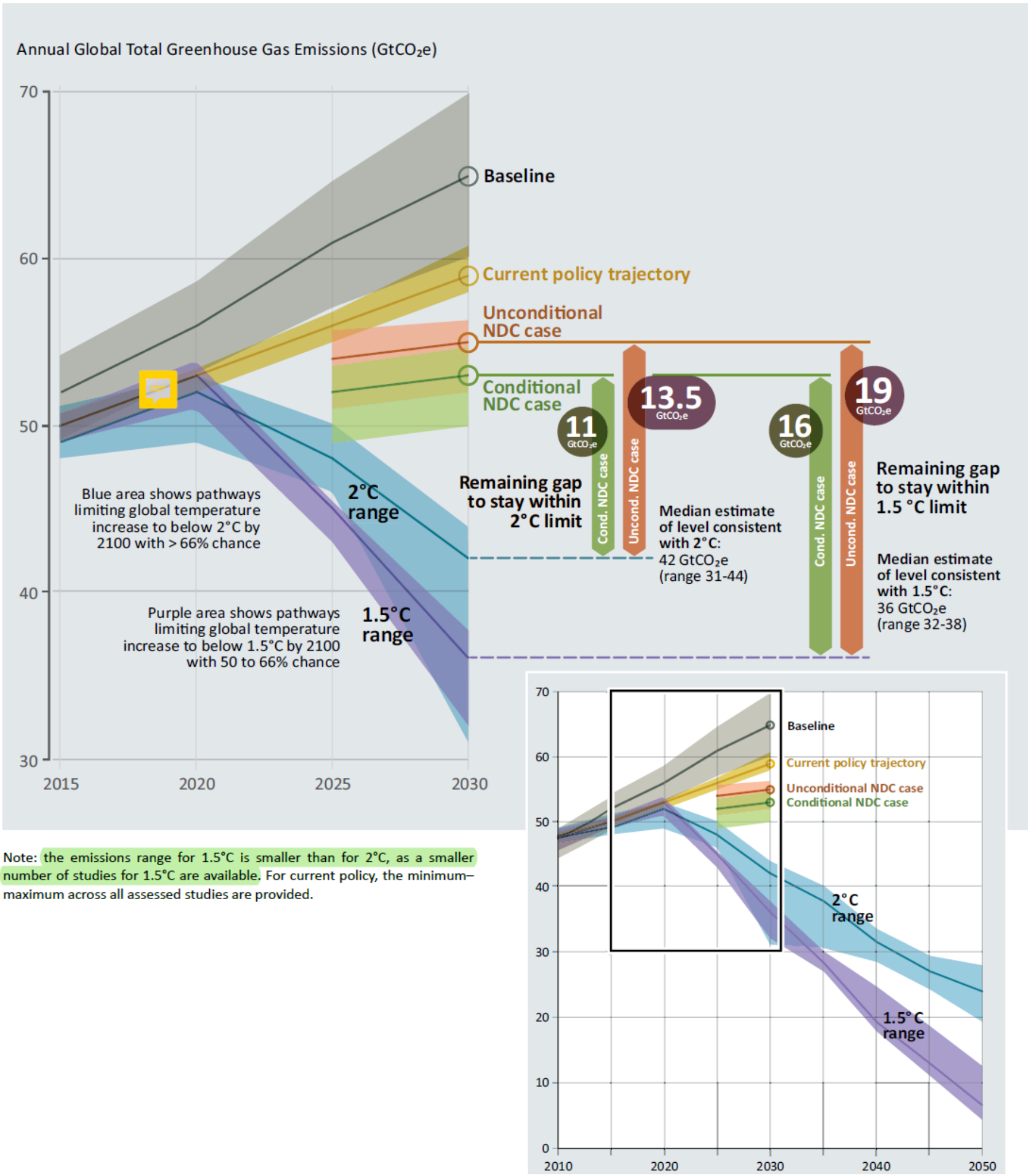
15 Jan 2019

1. In your own words, describe the implications of the emissions gap.

The emissions gap shows the scale of change required to mitigate climate change. Figure 3.1 (below) is the best representation of the information in the UN report. Based on this report there are 11-19Gt of emissions that must be kept from the atmosphere to keep global temperature increases within 1-2C. The report also states that G20 countries are responsible for 3/4 of global GHG emissions.

It's common to hear that the focus of renewable energy and infrastructure should be on developing nations instead of changing existing systems. However I think the emission gap shows it is critical to implement new infrastructure and aggressive carbon policies in developed nations for any chance of mitigating climate change.

Figur : Global greenhouse gas emissions under different scenarios and the emissions gap in 2030 (median estimate and 10th to 90th percentile range).



Note: the emissions range for 1.5°C is smaller than for 2°C, as a smaller number of studies for 1.5°C are available. For current policy, the minimum–maximum across all assessed studies are provided.

2. How does this chapter exemplify the scientist's myth from Reading #2 and why could this be an issue? (Reminder: the scientist's myth is that policy will follow scientific consensus.)

This chapter, along with the IPCC headlines, show that even though the scientific community has consensus on the negative effects of climate change it is still difficult to enforce climate policy. Furthermore, these reports combine a myriad of academic reports outlining the ways countries are failing to meet their NDCs and yet there is no indication of change. International apathy towards

aggressive carbon caps is apparent in the latter half of the chapter where only 5-6 countries are expected to reach their unconditional targets of the 16 discussed. This is disappointing considering the unconditional target itself is well over emissions for the 2degree scenario. Thus the scientist myth that policy will follow academic consensus is an optimistic view when the reality of policy is deeply connected to industry and the economy.

Reply

David Ontaneda

(https://canvas.ubc.ca/courses/26675/users/27548)

15 Jan 2019

2/2 - Very clear description of the emissions gap. I think it's great that you highlight the G20 countries' responsibility to address their emissions. I find it true that we often hear about how this is now on the developing countries, yet like you say we won't get anywhere if developed countries don't also take part. It would be interesting to break down how policy is connected to industry in this particular case.

Reply

Antonio Rodriguez

(https://canvas.ubc.ca/courses/26675/users/15905)

15 Jan 2019

- Nice job including important figures in your explanation. It is impressive that G20 countries contribute 3/4 of GHG emissions!!

- I like that you included you opinion and stated what you thought needed to be done.

- Very thorough explanation. The science is also changing as they implement the policies, almost none of the hundreds of models include any future events into their analysis.

-Good job! 2/2

Reply

Melissa Prado

(https://canvas.ubc.ca/courses/26675/users/3017)

15 Jan 2019

2.

Great use of specific numbers to explain the emissions gap. Great that you connected how

policy right now may focus on the building more sustainable systems in developing countries while policies are not being imposed enough to change the current systems.

Reply

Melissa Prado

(https://canvas.ubc.ca/courses/26675/users/3017)

15 Jan 2019

The emissions gap is a measure that scientist do regarding the difference in greenhouse gas emission levels by countries that have promised to undertake international agreements such as the Paris Agreement, and the emission levels that would result if we keep the same current policies without implementing any improvement to these.

This report highlights the ways in which warming could be limited to either 1.5 or 2 degrees. While doing so it emphasizes the urgency for policymakers to take the topic of climate change as a more serious issue and make more ambitious targets. Having said this, I believe this chapter is a clear example of the Scientific myth. Although every year the UN environmental program works hard to bring the best scientists together to build this report, time goes by and its recommendations have not all been implemented. The Kigali Amendment, for example, has the objective to diminish emissions from Hydrofluorocarbons (HFCs), however, for countries that follow the NDCs, this does not seem to provide an additional benefit since their targets already include Hydrofluorocarbons. However this is not always the case, China, for example, does not include HFCs in their NDCs and adopting this amendment could make a great contribution to lower emissions. The report compares how countries such as Australia, India, Brazil, and others are on track to meet their commitments made by 2020, however, Canada, Mexico, USA and others still need to strengthen their actions in order to meet the targets.

Scientists have clearly shown through this report the results from diverse scenarios (with and without the implementation of policy and action) and concluded that emissions MUST be reduced if we want to keep temperature increases within the range of 1.5 and 2 degrees. It shows the various solutions that exist and evidence that if such are implemented soon we could expect great results. Something important to mention is that the report does go beyond taking policies as the only solutions, but suggests that subnational and non-state actions could have a significant impact especially in countries where there is no state support for international agreements, initiatives such as US Climate Alliance and Climate Mayors could have great potential to contribute to narrowing

the emissions gap.

Reply

Michael Horner

(https://canvas.ubc.ca/courses/26675/users/208938)

15 Jan 2019

2 - pts.

1. Yes. It definitely implies that there is collaboration on the NDCs, when this is not the case ***at all.***

2. Yes.

Reply

Jackson Herron

(https://canvas.ubc.ca/courses/26675/users/31047)

15 Jan 2019

2/2

For me, the emissions gap really highlights the urgency of action to reduce GHGs and how our current trajectories don't get us anywhere close to our climate goals.

Great succinct explanation of the scientists myth: time goes by, studies are done, but recommendation do not get implemented. The UN should probably expend more effort in developing and implementing practical policies to reduce GHGs as fast as possible. At least the report does stress the need to do this, and the limited timeline.

I like how you tied in the roles of sub-state on non-state actors, because honestly these will bring forth a lot of the policy solutions to limit GHGs. However, it's very hard for a body like the UN to quantify to measures of all of these actors. I hope Trump gets ousted and the US stays in Paris, but the actions of substate actors gives me hope!!

Reply

Jackson Herron

(https://canvas.ubc.ca/courses/26675/users/31047)

15 Jan 2019

1. The Emissions Gap underscores the need for immediate action on reducing GHG emissions. The scenarios show that the world needs to peak it's GHG emissions in the next several years and begin reducing emissions significantly through 2030. This is the case and yet 2018 was the highest year on record for carbon emissions. Current policy trajectories, as well as the NDCs submitted by Paris signatories get us nowhere near the level of emissions we need to be to limit the most severe impacts of climate change. Basically there is no time to lose in starting to reduce carbon emissions, and yet we are not anywhere close to achieving this.

2. The Emissions Gap exemplifies the scientist's myth because it is all about setting a red line on the number of carbon emissions we can emit by articulating the climate science. This science is confusing and steeped in uncertainty. In actuality, we need to start reducing carbon emissions now regardless of the exact science, so focusing on this too much gets in the way of developing practical policies. However, it is relatively useful to understand the urgency of what science is telling us, and hopefully it can encourage policy makers to take more significant action.

Reply

Michael Horner

(https://canvas.ubc.ca/courses/26675/users/208938)

15 Jan 2019

2 pts

1. I agree. The report could be more urgent in tone

2. Uncertainty is a key point - huge error bars on a lot of those graphs. Policy makers might not understand the math at all.

Edited by Michael Horner (https://canvas.ubc.ca/courses/26675/users/208938) on 15 Jan at 18:44

Reply

Olivia Locke

(https://canvas.ubc.ca/courses/26675/users/189754)

15 Jan 2019

2/2

Good summary of the article. I agree with your second point that it is very important to start doing instead of focusing on where the red line should be. This is a lot like what happened with CFCs and the ozone layer, the science was continuously worked out at the same time as drastic changes and improvements were made.

Reply

Alexis Lytle

(https://canvas.ubc.ca/courses/26675/users/38541)

15 Jan 2019

2/2 Good point about how uncertain and confusing the fine details can be in this area, and that we need to start reducing emissions immediately regardless of what the exact science ends up being. This is also related to one of the points brought up in previous readings: some people are looking for an exact scientific description of climate change because then we can figure out a number for "safe emissions" to enforce with policies, when the reality is we are already far beyond that point.

Reply

Alexis Lytle

(https://canvas.ubc.ca/courses/26675/users/38541)

15 Jan 2019

I am commenting so I can view the other posts!

Reply (1 likes)

David Ontaneda

(https://canvas.ubc.ca/courses/26675/users/27548)

15 Jan 2019

hello

Reply