
The Emissions Gap Report

Are the Copenhagen Accord pledges sufficient to
limit global warming to 2° C or 1.5° C?

Overview presentation

23 November 2010

www.unep.org/publications/ebooks/emissionsgapreport



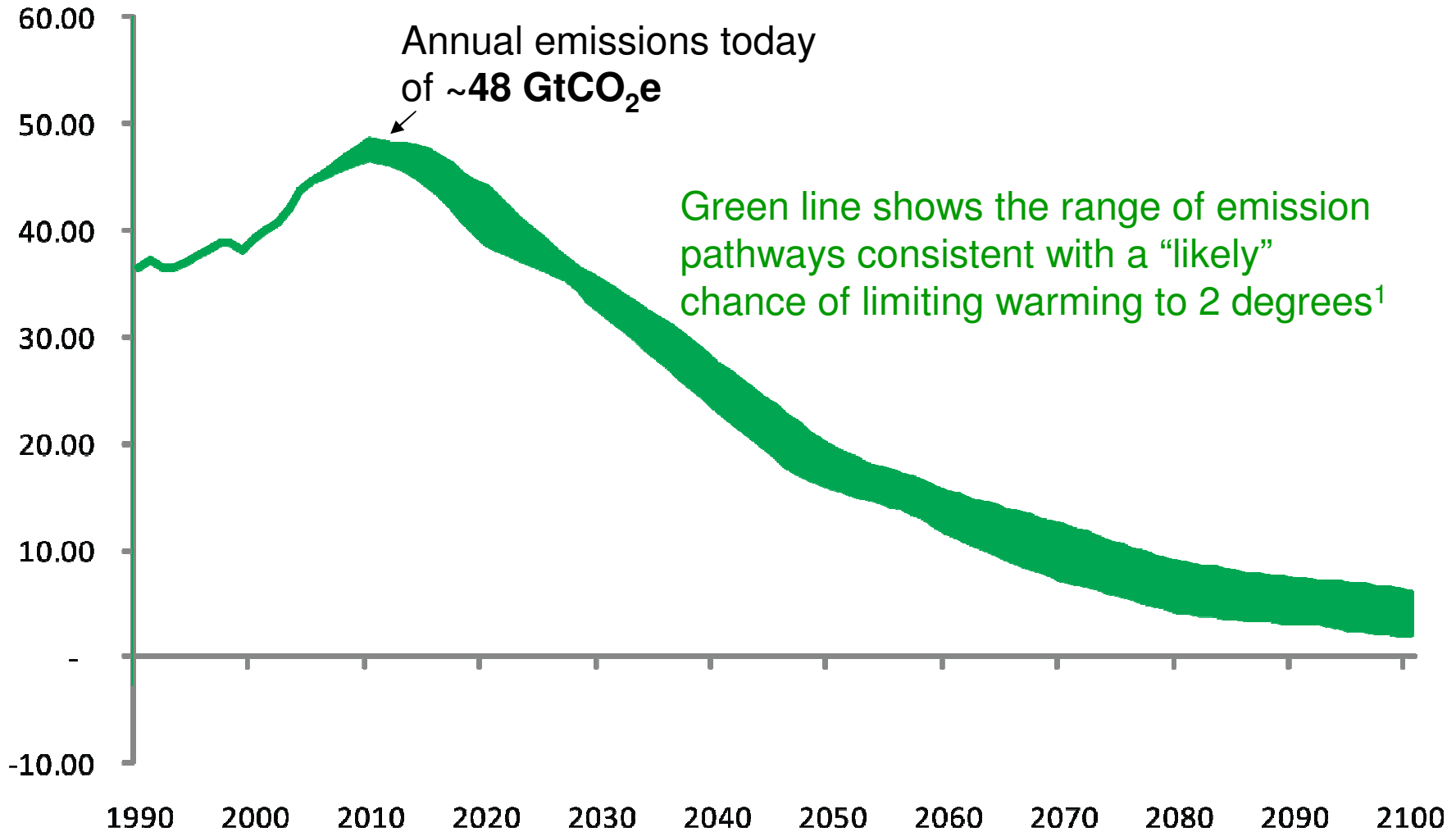
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What are we aiming for? Findings from Chapter 2

Global emissions, GtCO₂e



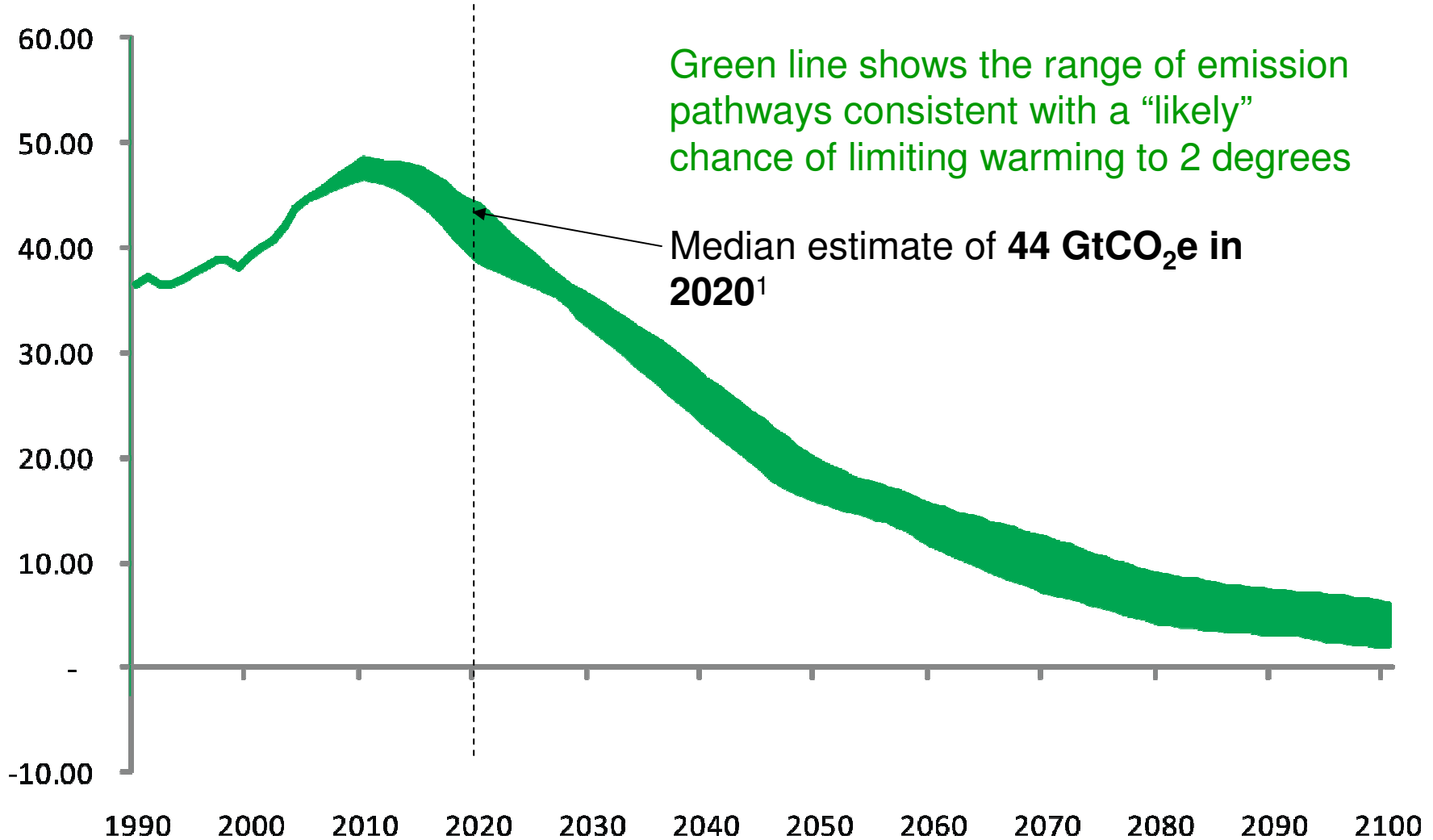
UNEP thanks Joeri Rogelj (ETHZ) and the European Climate Foundation for graphics

¹ Specifically, this shows the 20-80th percentile range of the integrated assessment model pathways that have a “likely” (>66%) chance of limiting average near surface temperature increase to 2 °C by 2100
Source: Adapted from *The Emissions Gap report*, UNEP, 2010



What are we aiming for? Findings from Chapter 2

Global emissions, GtCO₂e



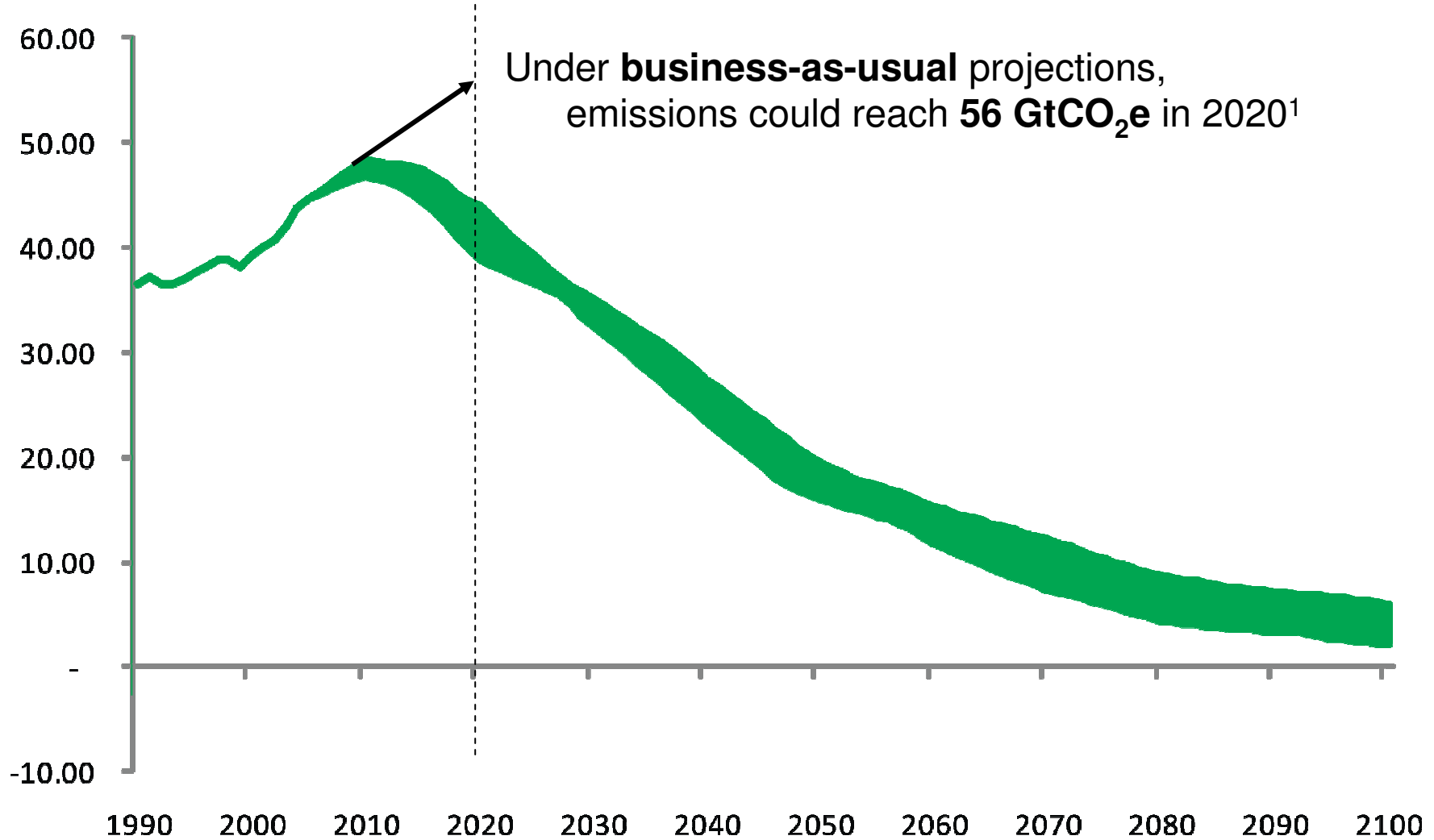
UNEP thanks Joeri Rogelj (ETHZ) and the European Climate Foundation for graphics

¹ The 2020 emissions consistent with the 20th to 80th percentile range of emission pathways with a “likely” chance of limiting warming to 2 degrees is 39 to 44 GtCO₂e, the median estimate is 44 GtCO₂e
Source: Adapted from *The Emissions Gap report*, UNEP, 2010



Where are we heading? Findings from Chapter 3

Global emissions, GtCO₂e



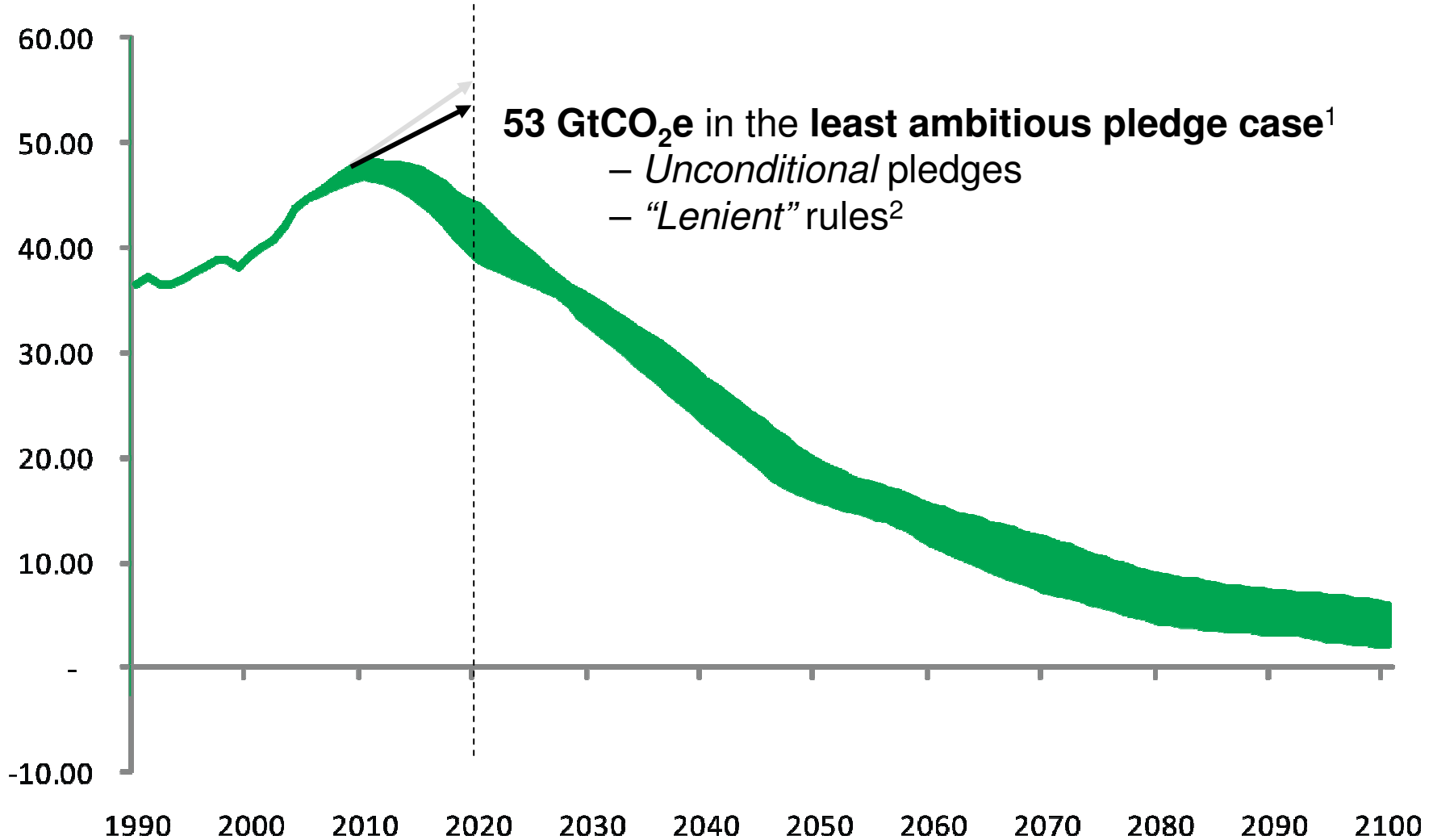
UNEP thanks Joeri Rogelj (ETHZ) and the European Climate Foundation for graphics

¹ This is the median estimate of the 11 studies assessed, estimates range from 54-60 GtCO₂e (20th to 80th percentile)
Source: Adapted from The Emissions Gap report, UNEP, 2010



Where are we heading? Findings from Chapter 3

Global emissions, GtCO₂e



¹ This is the median estimate of modelling groups, estimates range from 52-57 GtCO₂e (20th to 80th percentile)

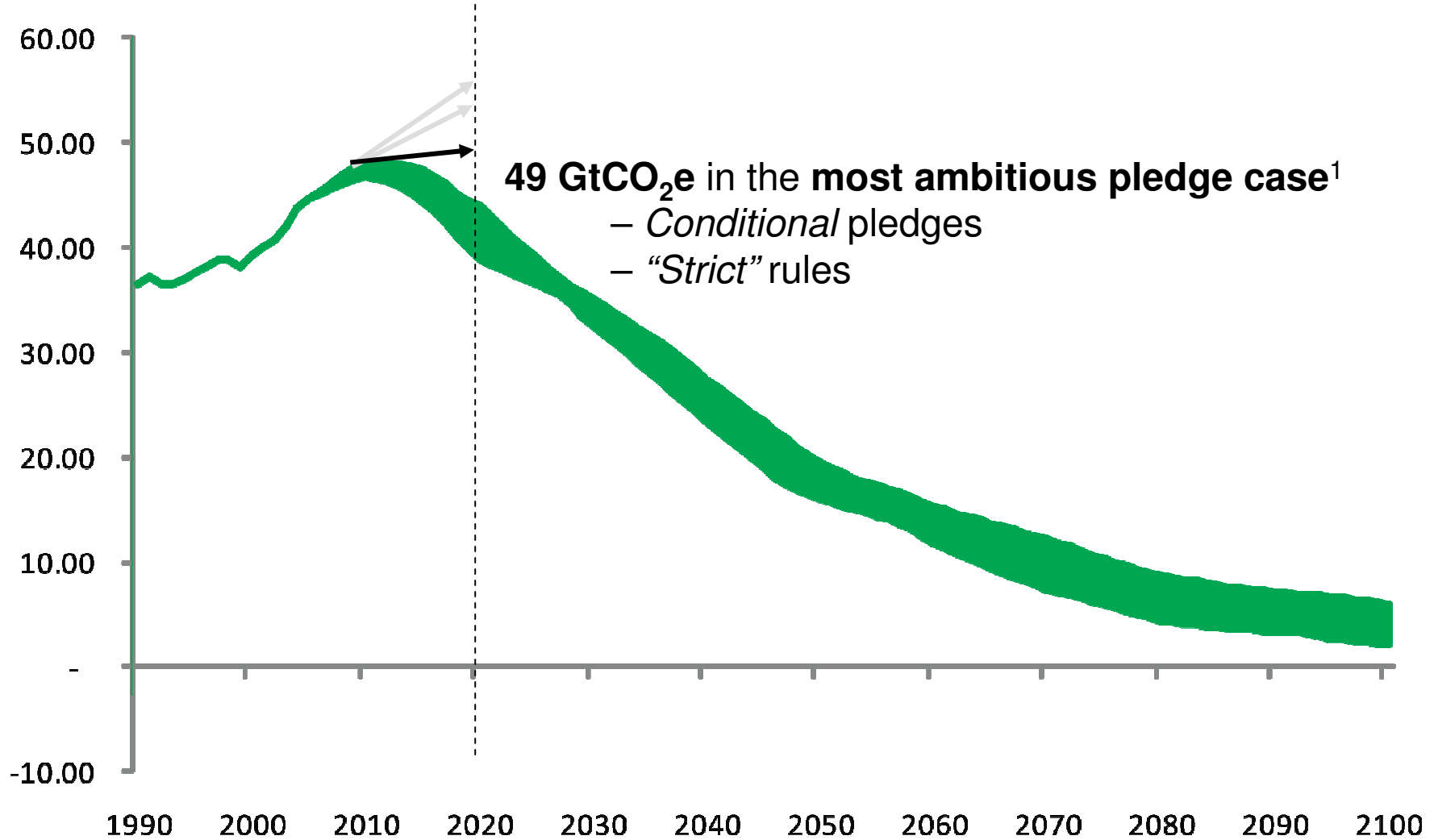
² This relates to rules surrounding the use of surplus emission units (particularly those carried over from this commitment period of the Kyoto Protocol) and LULUCF accounting

Source: Adapted from *The Emissions Gap report*, UNEP, 2010



Where are we heading? Findings from Chapter 3

Global emissions, GtCO₂e



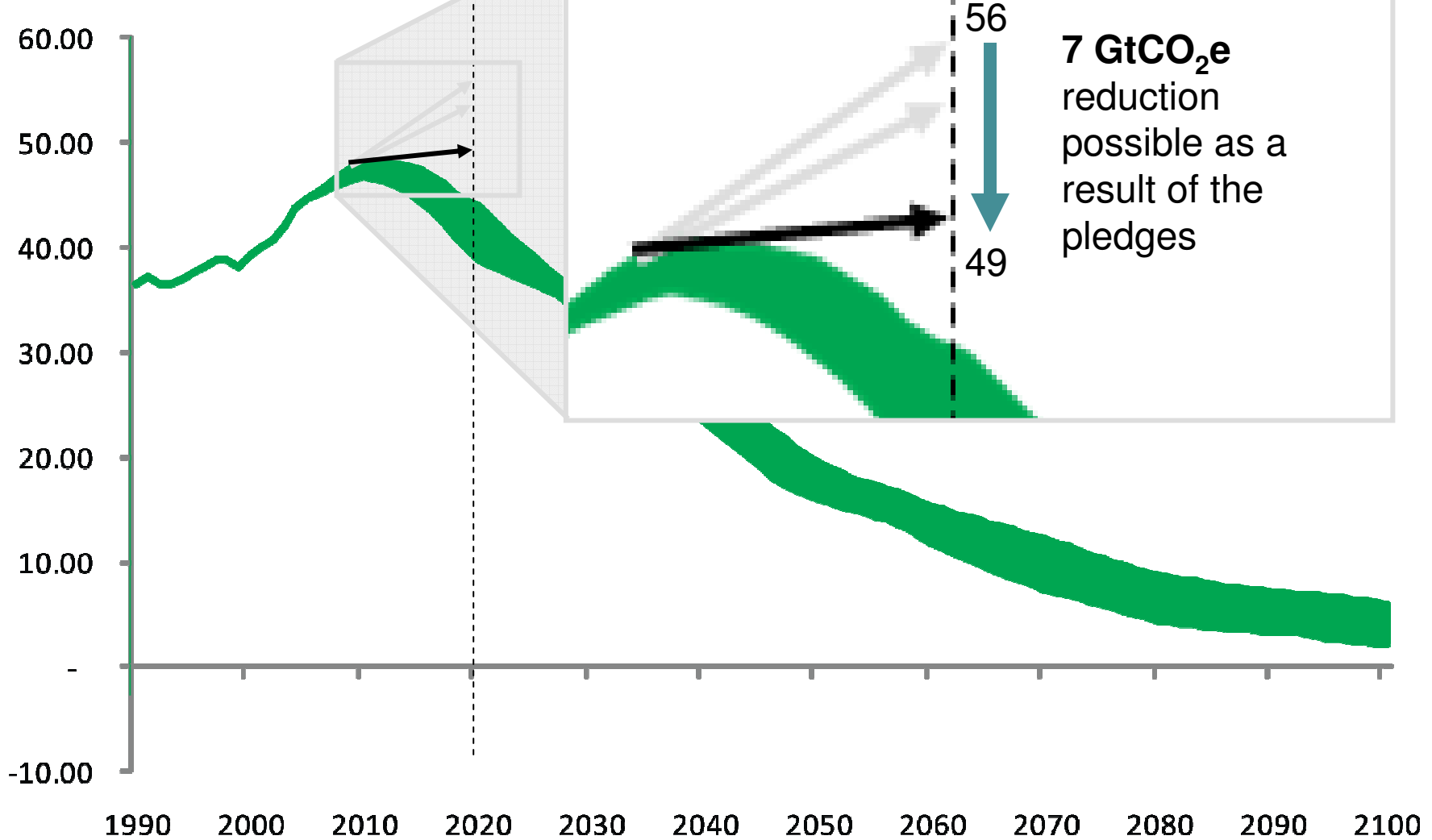
UNEP thanks Joeri Rogelj (ETHZ) and the European Climate Foundation for graphics

¹ This is the median estimate of modelling groups, estimates range from 47-51 GtCO₂e (20th to 80th percentile)
Source: Adapted from The Emissions Gap report, UNEP, 2010



Where are we heading? Findings from Chapter 3

Global emissions, GtCO₂e



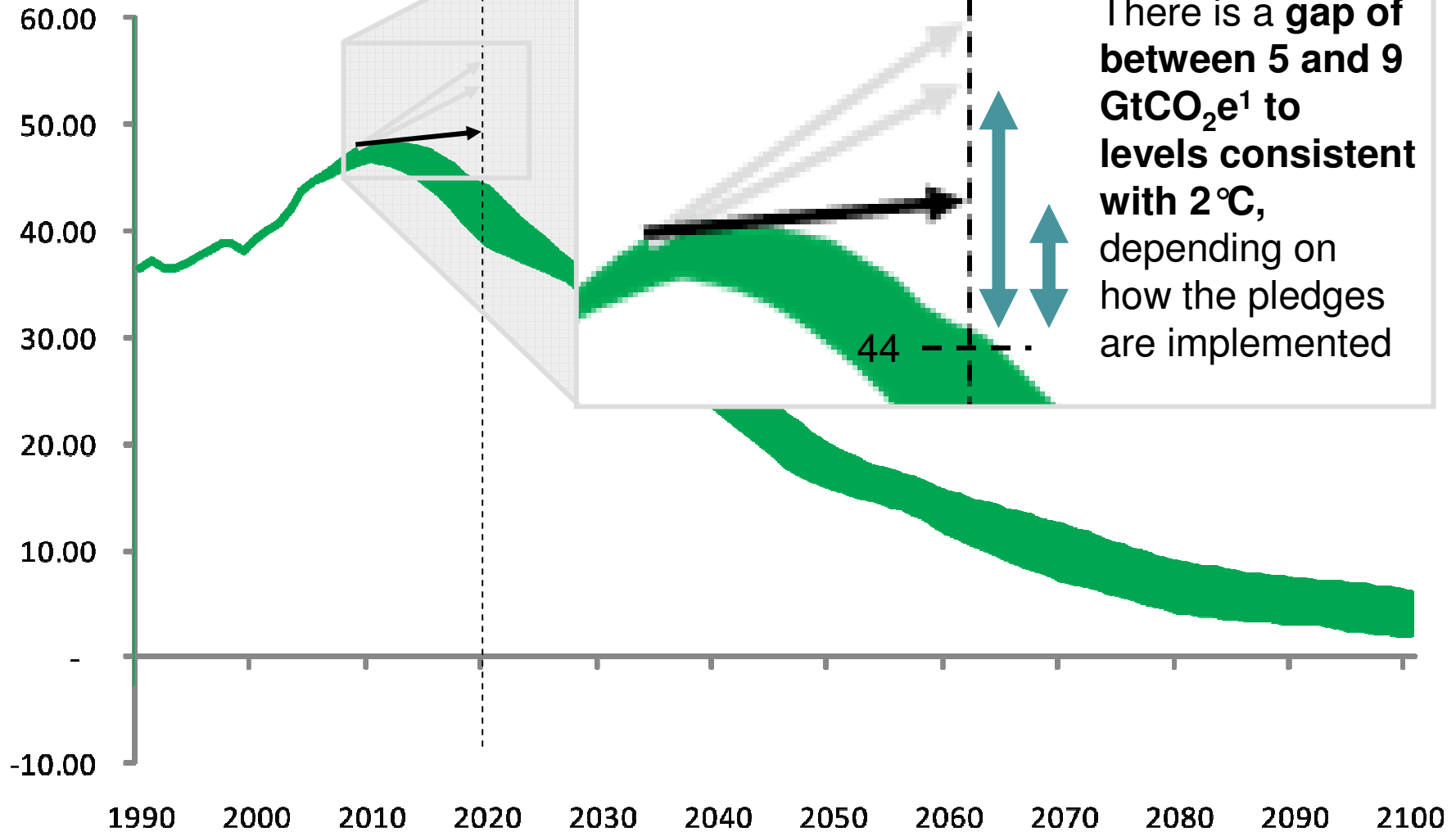
UNEP thanks Joeri Rogelj (ETHZ) and the European Climate Foundation for graphics

Source: Adapted from *The Emissions Gap report*, UNEP, 2010



What is the “gap”? Findings from Chapter 4

Global emissions, GtCO₂e



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¹ Note that, given the range in estimates from different modelling groups, and range of potential emission pathways that are consistent with the 2 degree limit, the gap can be between 2 and 21 GtCO₂e depending on which estimates are compared.

Source: Adapted from *The Emissions Gap report*, UNEP, 2010

- **Moving from unconditional (lower ambition) pledges to conditional (higher ambition)**

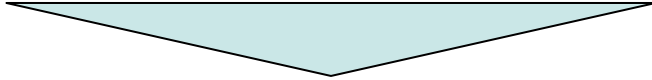
- Ambitious action from other countries
- Provision of climate finance
- Passing of domestic legislation

2-3 GtCO₂e

- **Ensuring ‘strict’ rules** surrounding:

- LULUCF accounting
- Surplus emissions units
- Offset ‘double-counting’

1-2 GtCO₂e

- 
- **This would still leave a gap of ~5 GtCO₂e**
 - **It is feasible to close the gap**
 - More ambitious actions
 - Climate finance



Backup

- Backup>>>



So what? Takeaway messages

- There is a gap between where we would like to be and where we are heading
- The size of the gap depends on what happens in the negotiations
- The options on the table now in the negotiations have the potential to reduce emissions by 7 GtCO₂e versus what would have happened otherwise (business-as-usual)
- This can be achieved by realising countries' highest ambitions and ensuring “strict” rules result from the negotiations
- It is feasible to bridge the remaining gap through more ambitious domestic actions, some of which could be supported by international climate finance
- With or without a gap, current studies indicate that steep emission reductions are needed post-2020 to meet temperature targets

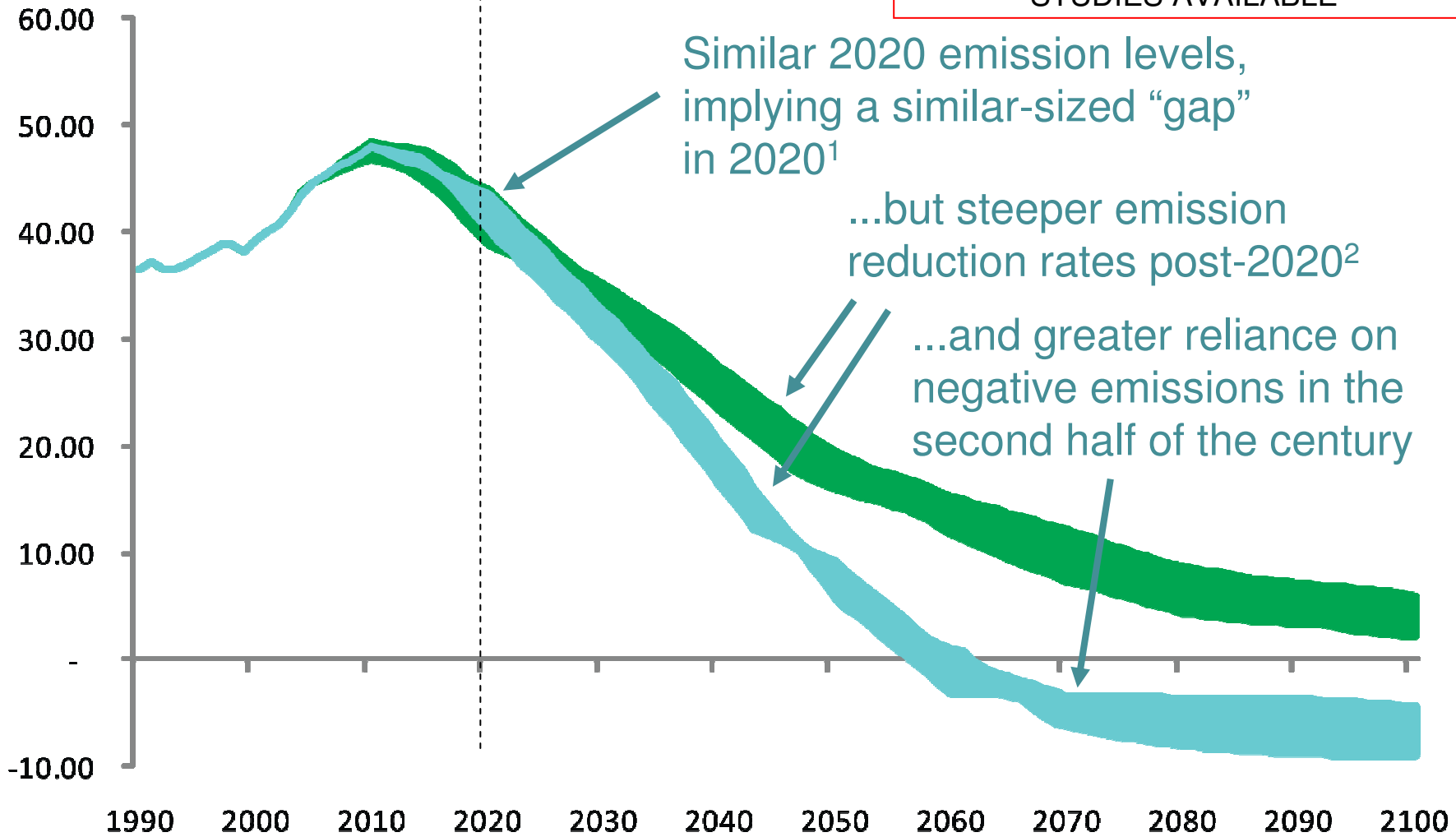


What about 1.5 degrees? Findings from Chapter 2

Global emissions, GtCO₂e

PRELIMINARY RESULTS – FEW STUDIES AVAILABLE

UNEP thanks Joeri Rogelj (ETHZ) and the European Climate Foundation for graphics



¹ Specifically, this shows the 20-80th percentile range of the “stylized” pathways that have a “likely” (>66%) chance of limiting temperature increase to 1.5°C by 2100
² Specifically, energy and industry CO₂ reduction rates of 3-5% per year compared with 2-3% for a “likely” chance of 2 degrees
Source: Adapted from The Emissions Gap report, UNEP, 2010



What is a gigatonne?

1 GtCO₂e = 1 billion metric tonnes of carbon dioxide equivalent¹

=~ the annual emissions of a country like Germany or Japan

=~ the annual emissions from international shipping and aviation

5 GtCO₂e = the size of the “gap” in the most ambitious case assessed in this report

=~ the annual emissions of the European Union

=~ the annual emissions from all the world's road transport in 2005 (all the cars, vans, buses and trucks in the world)

¹ For the purpose of this report, greenhouse gas emissions are the sum of the basket of greenhouse gases listed in Annex A of the Kyoto Protocol, expressed as carbon dioxide equivalent. The carbon dioxide equivalent of the various gases is computed by using the global warming potentials published in the Second IPCC Assessment Report