



**International Forum for Sustainable Asia and the
Pacific 2012**

**Climate Change: The way forward for climate
regime after Durban**

気候変動:ダーバン後の気候変動枠組みの進展

**Emissions Gap
二酸化炭素の排出量ギャップ**

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**Keep temperature below 2°C or 1.5°C
気温上昇を2°C あるいは 1.5°C以下に抑える**

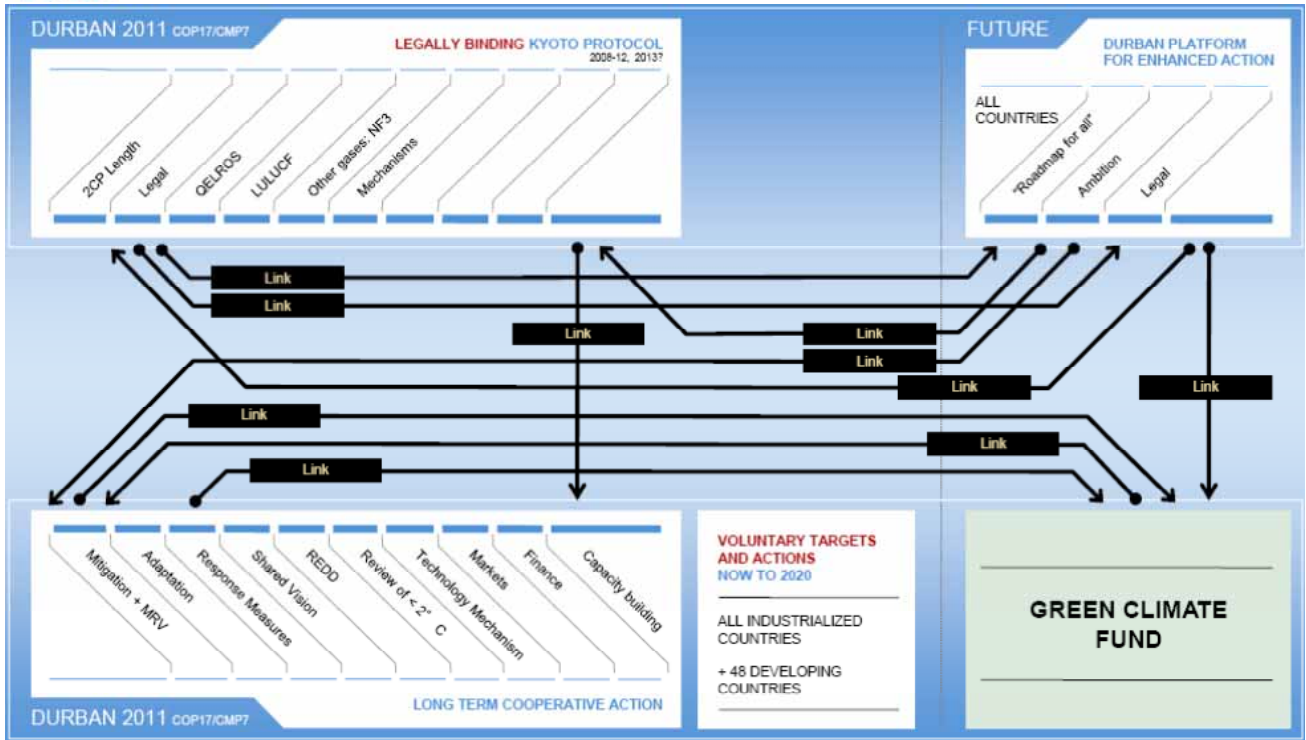
**Bali Action Plan and Copenhagen Accord recognized
need to keep temperate below 2°C**

**Cancun agreement further strengthen this and
Durban has decided and established process to raise
the level of ambition to keep temperature below 2°C**

**Durban has also launched a workplan on enhancing
mitigation ambition to identify and to explore options
for a range of actions that can close the ambition gap**



UNFCCC: Durban 2011 UNFCCC: ダーバン 2011



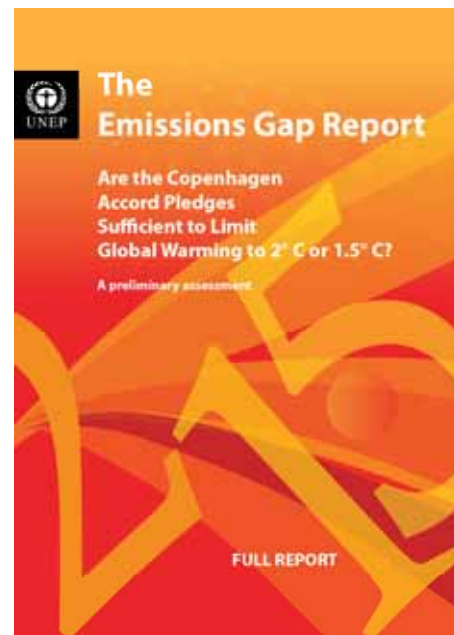
Source: UNFCCC, 2012



The Emissions Gap Report 二酸化炭素の排出量ギャップに関する報告書

30 leading scientists and
research centres

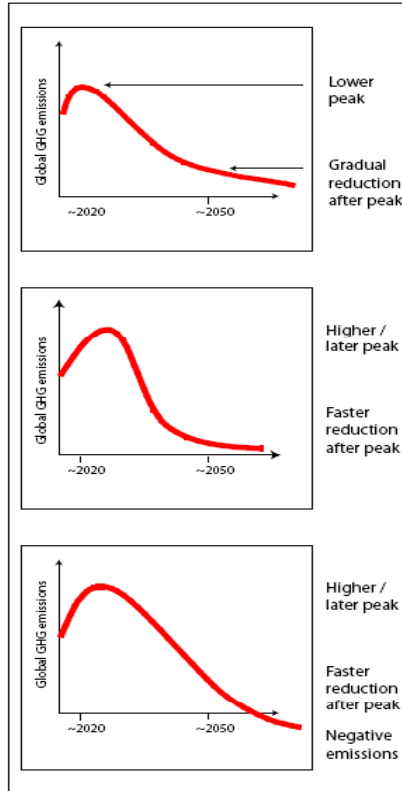
Convened by UNEP.



<http://www.unep.org/publications/ebooks/emissionsgapreport/>

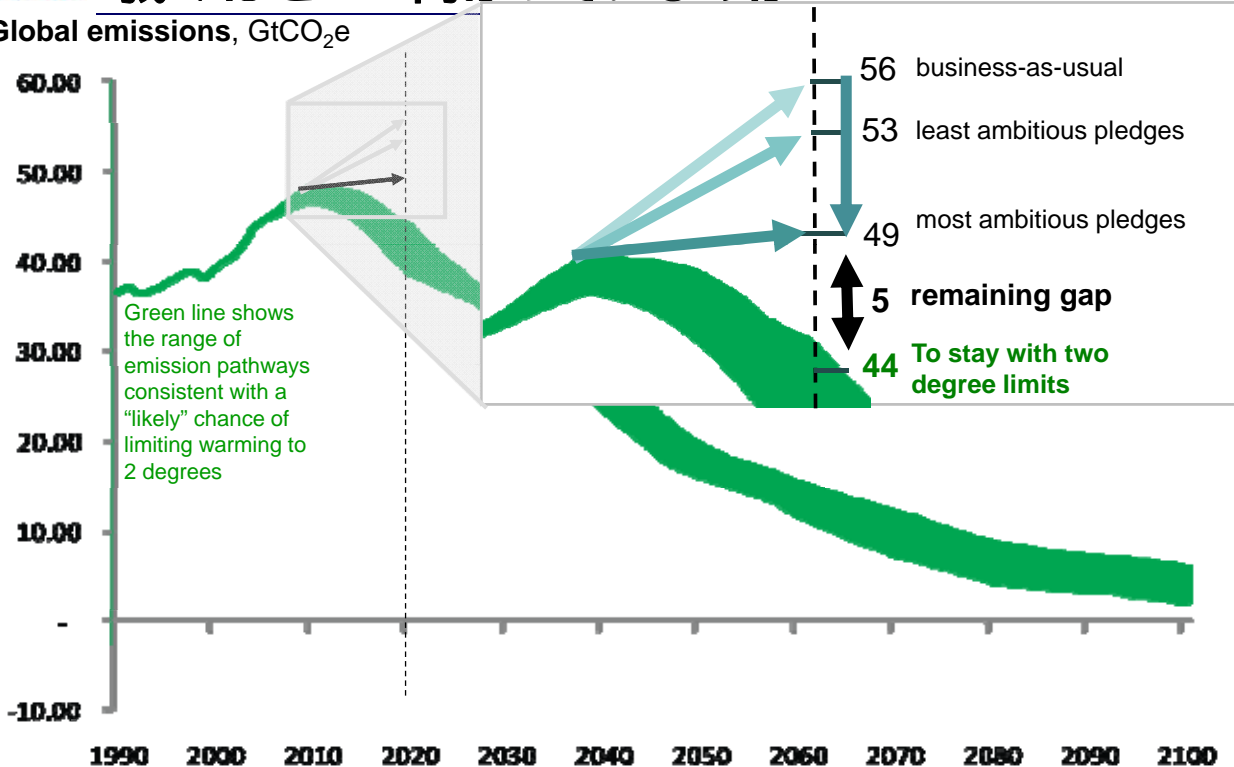
What are we aiming for? 我々が目指すものは?

1. Meeting a temperature target depends largely on *cumulative* emissions
2. Different pathways correspond to same cumulative emissions



Where are we heading? 我々はどこへ向かっているのか?

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



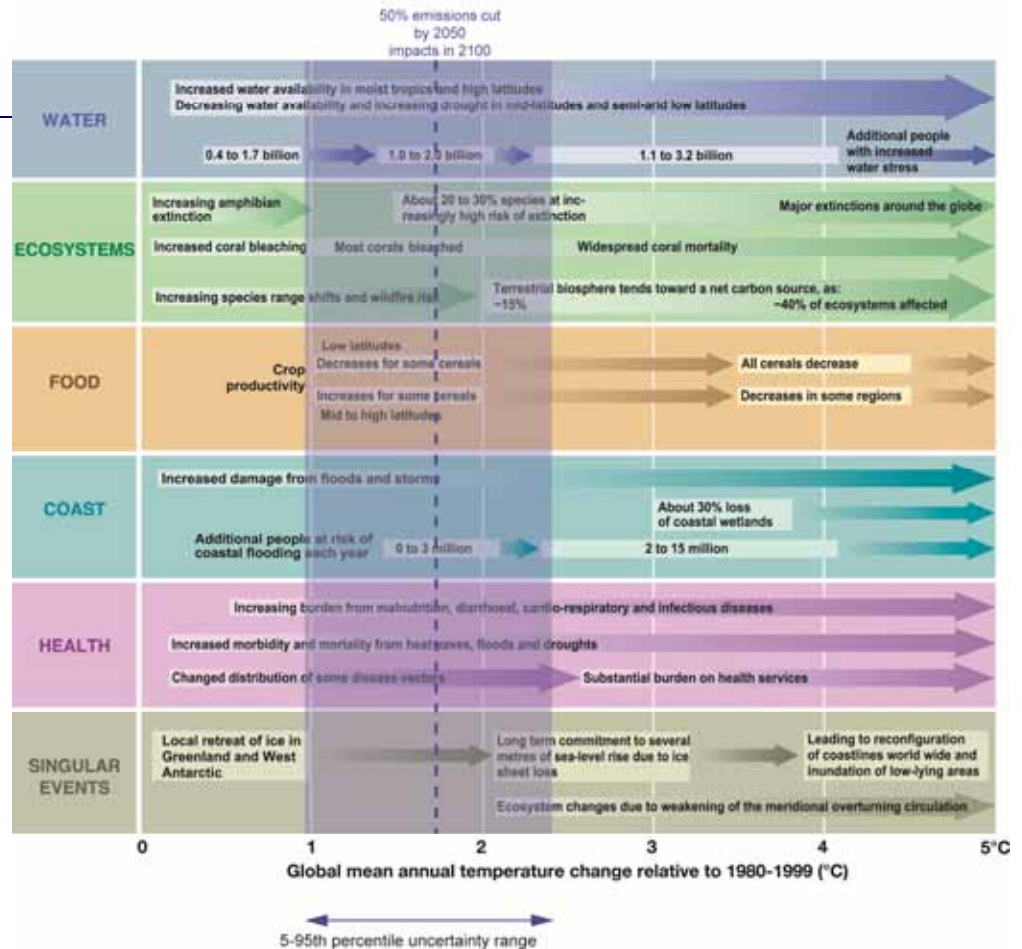
What does the gap consist of? ギャップの要因は?

- Gap without action (business-as-usual) 12 GtCO₂e
 - Move from business-as-usual to unconditional pledges (lower ambition) - 3 GtCO₂e
 - Moving from unconditional (lower ambition) pledges to conditional (higher ambition) - 2 to -3 GtCO₂e
 - Ambitious action from other countries
 - Provision of climate finance
 - Passing of domestic legislation
 - Ensuring 'strict' rules surrounding: - 1 to -2 GtCO₂e
 - Land use/forest accounting
 - Surplus emissions units
- Remaining gap of ~5 GtCO₂e
- Total reduction approx. -7 GtCO₂e**



Impacts under 50% emissions cut by 2050 [3% per year] [Parry et al., Nature Reports Climate Change, June 2008]

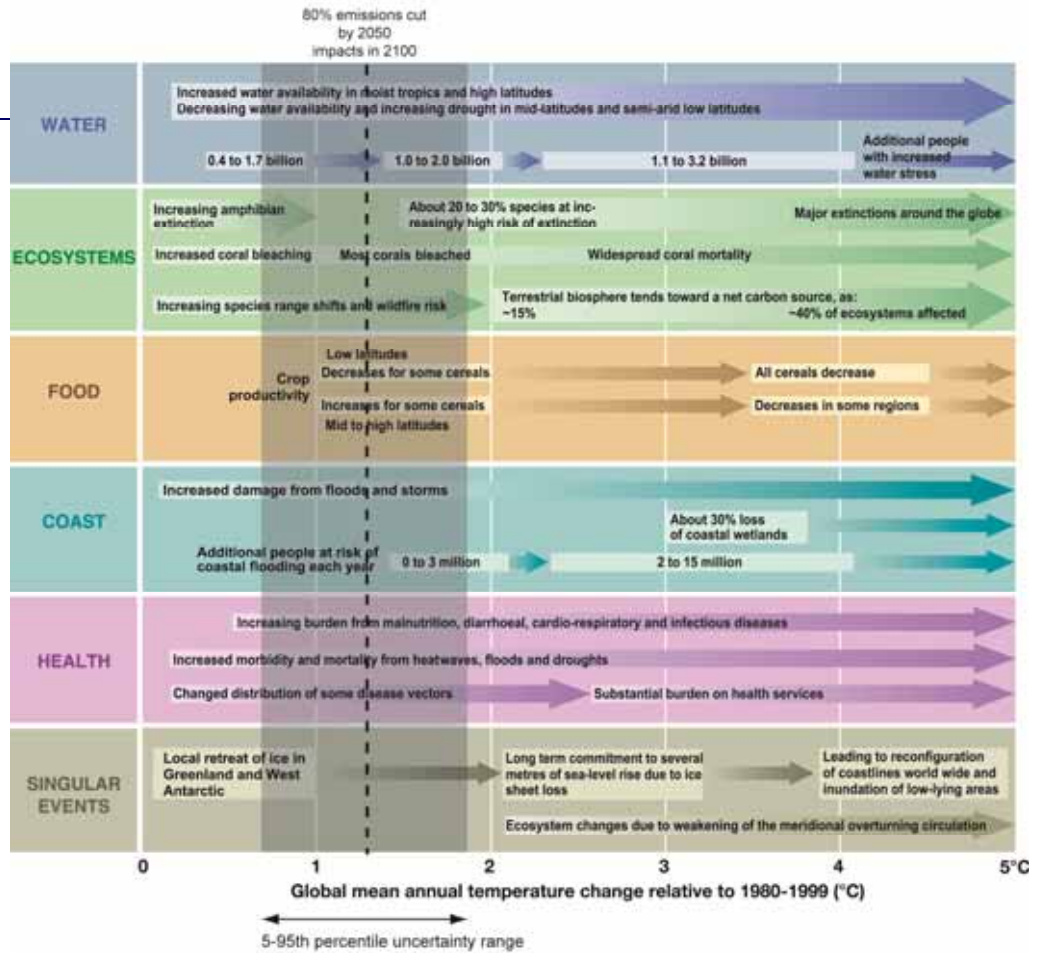
2050年までに50%の排出削減を実現した場合の影響 [3%/年]





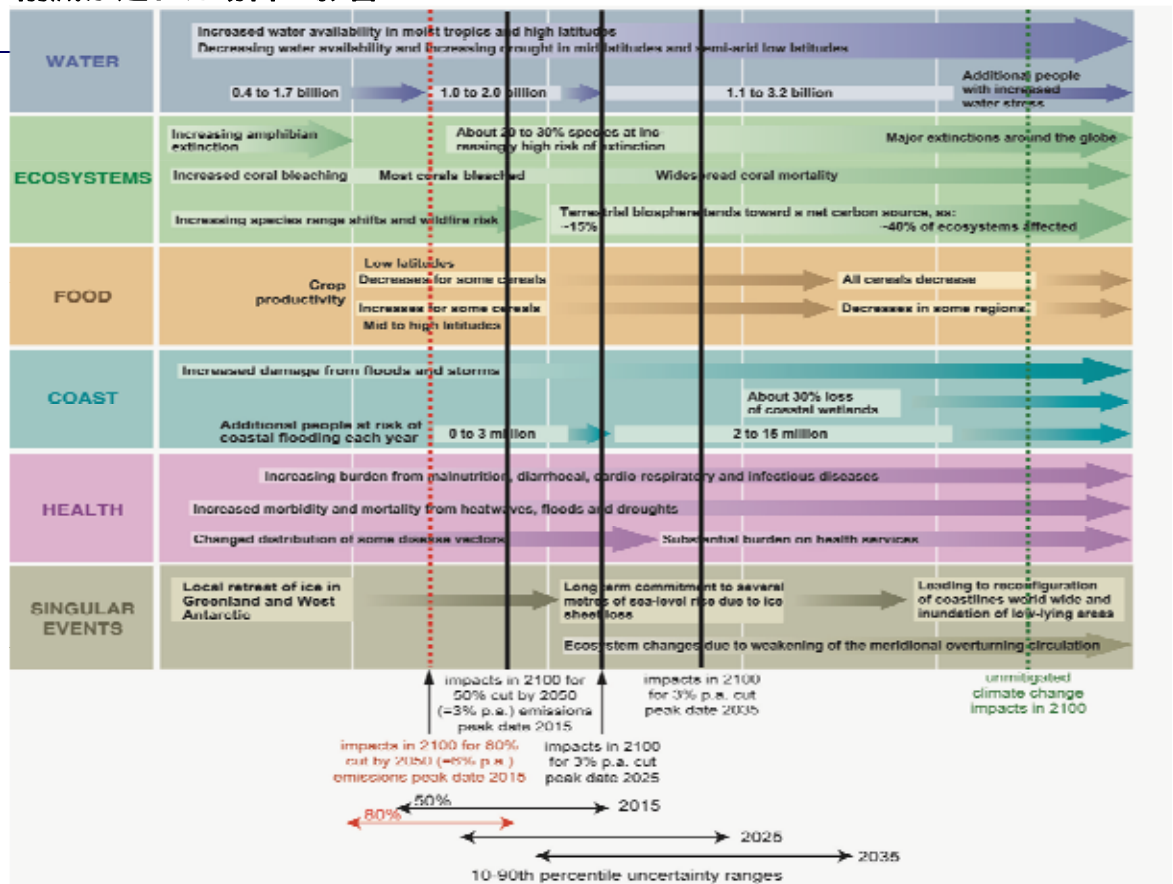
Impacts under 80% emissions cut by 2050 [6% per year] [Parry, et al., 2008]

2050年までに80%の排出削減を実現した場合の影響 [6%/年]



Impacts under 80% and 50% and delayed emissions cuts 削減が遅れた場合の影響 [Parry, Lowe, Hansen: December, 2008]

[Parry, Lowe, Hansen: December, 2008]





Main Options for Reducing the Gap ギャップの縮小のための主な選択肢

- **Increase in ambition** of country targets from those with targets
- **National emissions outperforming targets** due to policies not reflected in national targets, international finance beyond that required to deliver the existing pledge
- **Mitigation in sectors not covered by national targets** –e.g. international aviation and maritime

And essential complimentary actions

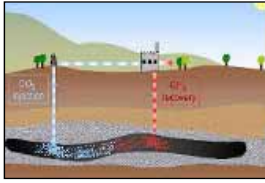
- **Addressing short lived climate forcers**, e.g. black carbon, tropospheric ozone and other gases such as HCFCs, HFCs

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短寿命気候汚染物質削減のための気候と大気浄化のコアリション



What are the measures? 方策は?



Methane

- Degasification, recovery and use
- Recovery from municipal waste & wastewater treatment
- Reduce emissions from agriculture



Black carbon

- Improve stoves (biomass to LPG/biogas, wood to pellet)
- Upgrade brick kilns
- Use particle filters for diesel vehicles



HFCs

- Non-HFC technologies for refrigeration
- Low-GWP, high energy-efficient foam blowing technologies
- Efficacy for cooling technologies

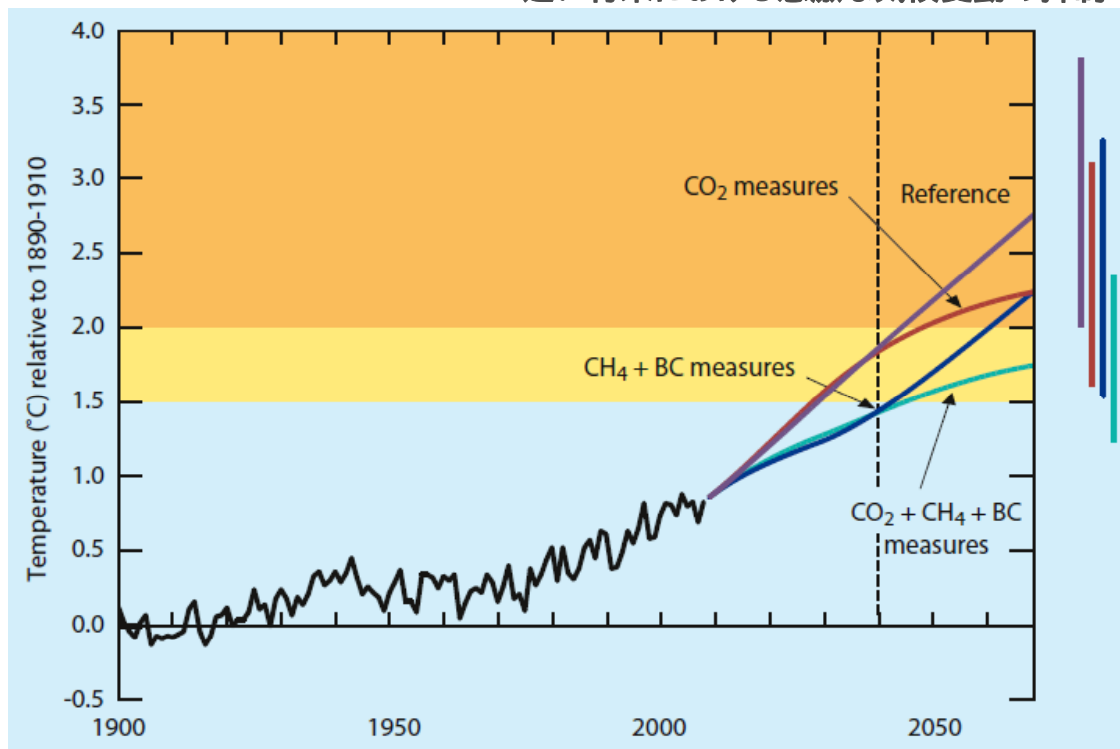
16 measures:

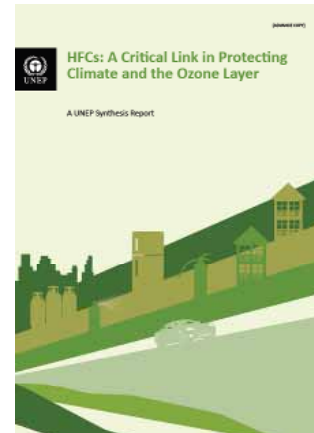
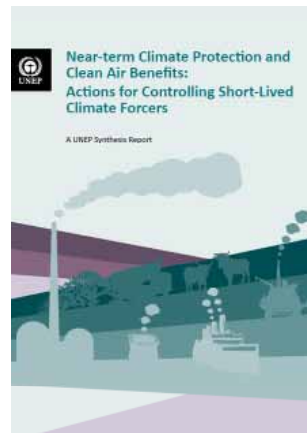
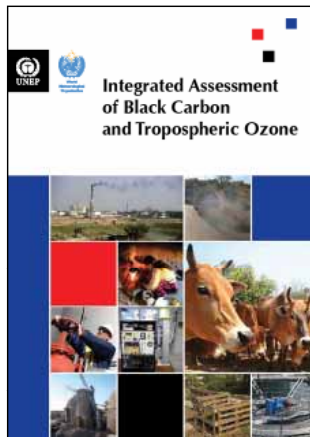
- ~- 40% methane, ~- 80% BC in 2030 (rel. to BAU)
- No technical breakthroughs
- Already implemented in many countries
- Half reductions at low cost or cost-neutral

- No 'one-size-fits-all' solution
- Further R&D for effective and affordable alternatives and relevant infrastructure

What will be the climate benefit? Slowing down near term climate change

気候変動対策の実施により得られるメリットは？
近い将来における急激な気候変動の抑制





⇒ **Combating short-lived climate pollutants: A powerful link between climate protection and sustainable development**

www.unep.org/ccac
Email: ccac_secretariat@unep.org

CCAC
CLIMATE AND CLEAN AIR COALITION
TO REDUCE SHORT-LIVED CLIMATE POLLUTANTS

Home About Short-Lived Climate Pollutants Focal Areas Actors Related Initiatives Publications Media How to join

Welcome

Pollutants that are short-lived in the atmosphere, such as black carbon (or soot), methane and some hydrofluorocarbons (HFCs), can have significant harmful health and environmental impacts and are responsible for a substantial fraction of current global warming. Recognizing that mitigating these short-lived climate pollutants is critical to addressing climate change in the near-term, a number of countries and the United Nations Environment Programme have formed the Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants, the first effort to treat these pollutants as a collective challenge. Its work is complementary to global action to reduce carbon dioxide, in particular efforts under the UNFCCC.

Ghana has recognized the potential adverse impact of short lived climate pollutants, especially the human health implications and impacts on agricultural productivity - *Minister of Environment, Science & Technology Sherry Ayitley, Ghana*

First Actions of the Coalition **Actors** **Short-Lived Climate Pollutants** **Key Publications**

News Highlights

UN Environment Programme

Integrated Assessment of Black Carbon and Tropospheric Ozone Summary for Decision Makers