

NDCs, resource productivity and innovation: panel of analysts from different countries

Parallel session 1.2 at the 9th LCSRNet Annual Meeting

Session chair: Toshihiko Masui (NIES, Japan)

University of Warwick, UK

12:00-13:15, September 12, 2017

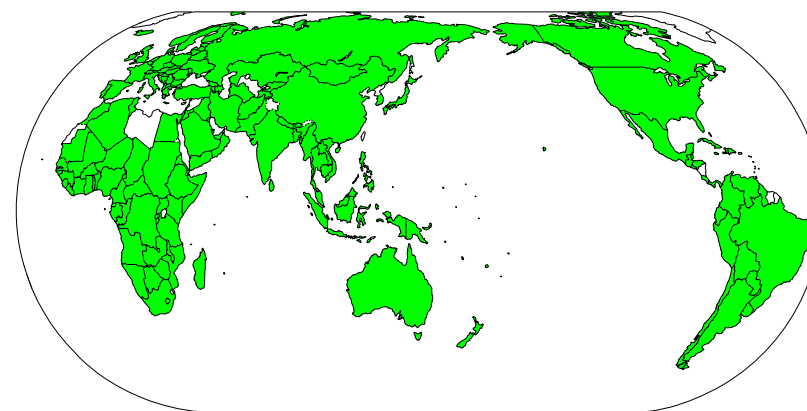
Purpose of this session

- In order to realize and strengthen the NDC in each country, the energy efficiency improvement, shift to renewable energy, electrification and so on are regarded as the necessary options for each country. In addition to those options related to energy, the various non-energy actions will also be introduced; sustainable development, productivity improvement, institution, policies, innovations and so on.
- In this parallel session, we will share the information and actions toward the achievement of NDC in both developed and developing countries, and discuss the collaborations toward the 2 degree target.

Paris Agreement

- Holding **the increase in the global average temperature to well below 2° C above pre-industrial levels** and pursuing efforts to **limit the temperature increase to 1.5° C above pre-industrial levels**, recognizing that this would significantly reduce the risks and impacts of climate change.
 - In order to achieve the long-term temperature goal set out in Article 2, Parties aim to reach **global peaking of greenhouse gas emissions as soon as possible**, recognizing that peaking will take longer for developing country Parties, and to undertake rapid reductions thereafter in accordance with best available science, so as to **achieve a balance between anthropogenic emissions by sources and removals by sinks of greenhouse gases in the second half of this century**, on the basis of equity, and in the context of sustainable development and efforts to eradicate poverty.
- How to realize the mitigation in each country consistent with the global goal?

Countries submitting INDCs



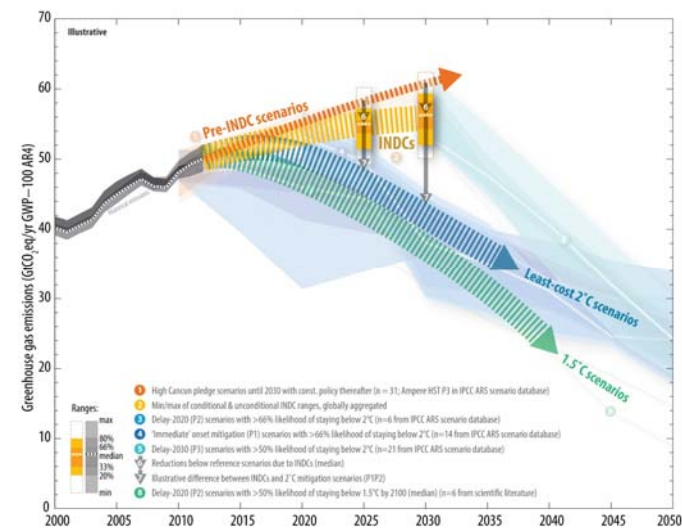
As of June 1, 2016

GHG emissions in 2010 from submitted countries cover more than 90% of the total emissions.

Some Asian countries' INDCs

- Bhutan: To remain carbon neutral.
- Cambodia: 27% reduction in the year 2030 compared to the baseline.
- China: To reduce carbon intensity by 60% to 65% by 2030 below 2005 levels;
- India: To lower the emissions intensity of GDP by 33% to 35% by 2030 below 2005 levels.
- Indonesia: An unconditional 2030 GHG emissions reduction target of 29% below BAU including LULUCF emissions and a conditional 41% reduction below BAU by 2030 (with sufficient international support)
- Japan: To reduce emissions by 26% below 2013 emission levels by 2030.
- Korea: To reduce greenhouse gas emissions by 37% below BAU by 2030.
- Malaysia: To reduce GHG emissions intensity of GDP by 45% by 2030 relative to the emissions intensity of GDP in 2005.
- Nepal: 50% reduction in dependency to fossil fuels by 2050.
- Thailand: An unconditional 20% reduction in emissions by 2030, compared to BaU levels. This could increase to 25%, conditional upon the provision of international support.
- Vietnam: An 8% reduction in emissions by 2030, compared to BaU. This could be increased to 25% conditional upon international support.
- USA: To reduce economy wide emissions by 26% to 28% below 2005 domestically.
- EU: To reduce greenhouse gases emissions by at least 40% domestic below 1990 by 2030.

NDC can achieve the 2 degree target?



Long-term low GHG emission development strategy

- Following countries have already submitted the long-term strategies to UNFCCC.

Country	Date submitted	GHG reduction target
USA	Nov. 16, 2016	80% reduction of GHG in 2050 compared to 2005 level
Mexico	Nov. 16, 2016	50% reduction of GHG in 2050 compared to 2000 level
Canada	Nov. 17, 2016	80% reduction of GHG in 2050 compared to 2005 level
Germany	Nov. 17, 2016	80-95% reduction of GHG in 2050 compared to 1990 level
Benin	Dec. 12, 2016	
France	Dec. 28, 2016	75% reduction of GHG in 2050 compared to 1990 level

- Other countries will also submit the long-term strategy by 2020.

Sustainable Development Goals

How to show pathways to realize Sustainable Development:



Not only environment, but also economic development.

Speakers in this session

- Prof. Bundit Limmeechokchai (SIIT-TU, Thailand)
- Mr. Steve Pye (UCL and UKERC, UK)
 - ✓ Actions related to energy in order to realize NDC in each country,
 - ✓ Actions related to non-energy in order to realize NDC,
 - ✓ Proposals and expectations of innovations to strengthen NDC, and
 - ✓ Collaboration among the countries toward the 2 degree target.

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Case of Japan

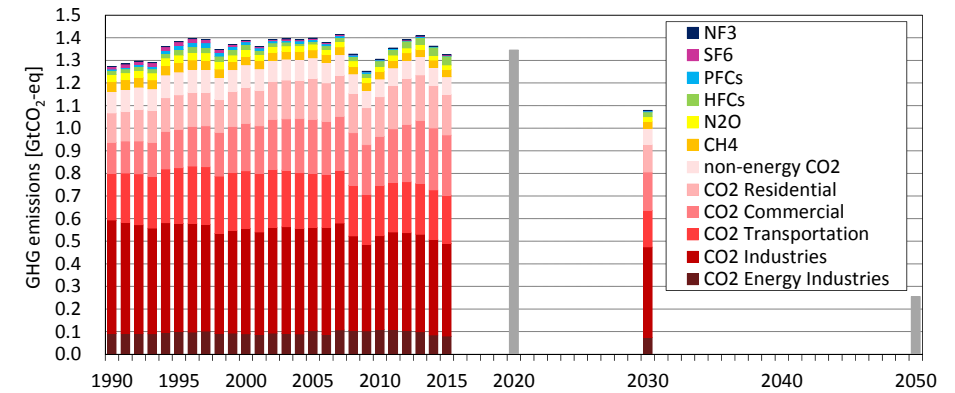
Toshihiko Masui
National Institute for Environmental Studies

the 9th LCSRNet Annual Meeting
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Activities in Japan

- INDC (Intended Nationally Determined Contributions; Cabinet approval on July 17, 2015): In 2030, 26% reduction of GHG emissions compared to 2013 level.
http://www4.unfccc.int/Submissions/INDC/Published%20Documents/Japan/1/20150717_Japan's%20INDC.pdf
- Climate Action Plan (Cabinet approval on May 13, 2016): In 2050, 80% reduction of GHG in Japan.
<http://www.kantei.go.jp/jp/singi/ondanka/kaisai/dai35/pdf/honbun.pdf>
 (in Japanese)

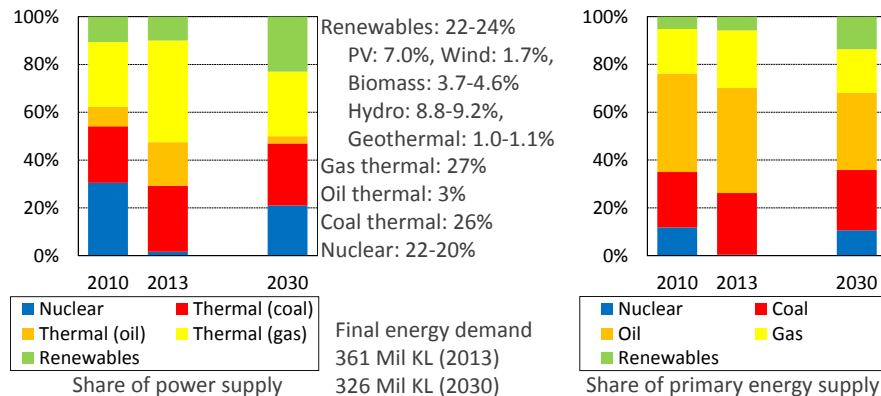
GHG emissions in Japan; trend and future target



Source: GIO, NIES <http://www-gio.nies.go.jp/aboutghg/nir/nir-j.html>

GHG mitigation target in Japan in 2030

- In Japan, the energy mix in 2030 was also approved by the Cabinet.



- The new energy plan is now discussed by METI.

Discussion toward long-term low carbon strategy in Japan

- Discussion on long-term low carbon development strategy in Japan was started at Sub-committee on Long-term Low-Carbon Vision, Central Environment Council in July 2016.
 In March 2017, The long-term Low-Carbon Vision was reported.
 English summary <http://www.env.go.jp/press/103822/713.pdf>
 Japanese full report <http://www.env.go.jp/press/103822/105478.pdf>
- In parallel, METI organized long-term climate change measures platform in 2016, and reported in April 2017.
<http://www.meti.go.jp/press/2017/04/20170414006/20170414006.html>
- The directions of argument between two meetings are opposite;
 - Domestic actions to achieve 80% reduction: Positive (MOEJ) - Not stated (METI)
 - Carbon pricing: Need (MOEJ) - No need (METI)

Long-term Low-carbon Vision by MOEJ

- Background: "Simultaneous solution" of economic and social problems such as population decrease and aging issue etc., and climate change
- Actions to reduce GHG by 80% by 2050
 - Energy efficiency,
 - Low-carbon energy supply, and
 - Switch to low-carbon energies in end-use
- Taking into account "Carbon budget"
- Avoiding "Lock-in" effects
- Introducing "Carbon Pricing" as a policy to strengthen market competitiveness

Research collaboration toward low carbon society in Asian Communication and feedbacks of LCS study to real world



Capacity development in Asia by AIM (Asia-Pacific Integrated Model) team, NIES

- Photos: Jan. 30-Feb. 1 2017, SIIT-TU, Thailand
- Introduction of AIM
- Now the Asian researchers visit NIES to develop CGE and assess NDC in each country.

