



WGIA13

5 August 2015

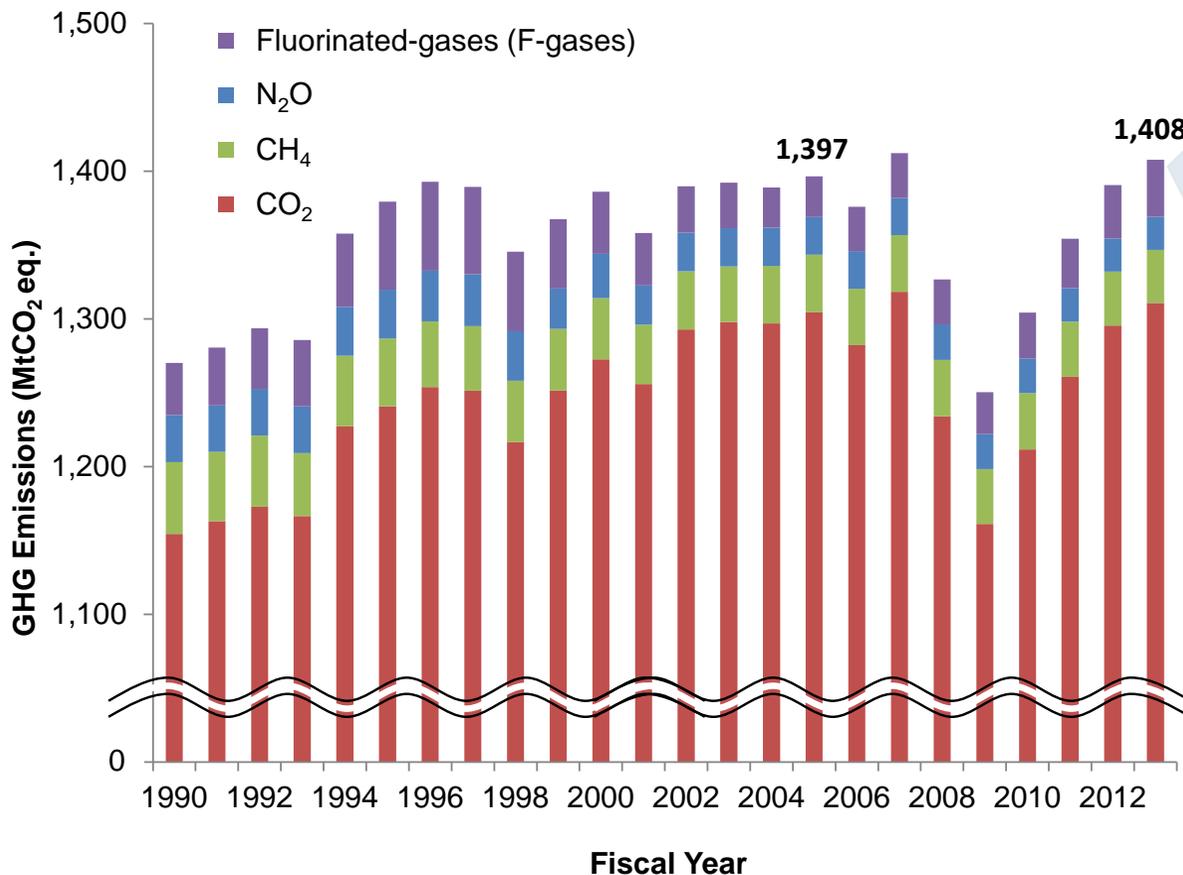
Bali, Indonesia

Japan's Climate Change Policies

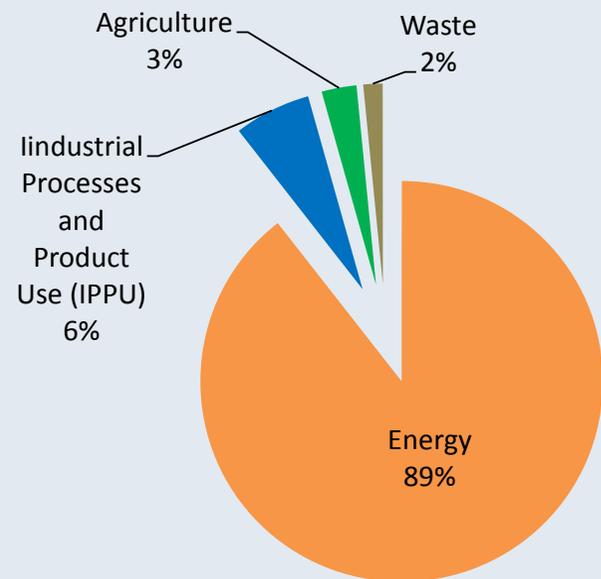
Shigeyoshi Sato

Ministry of the Environment, Japan (MOEJ)

GHG Emissions Trend (1990-2013)



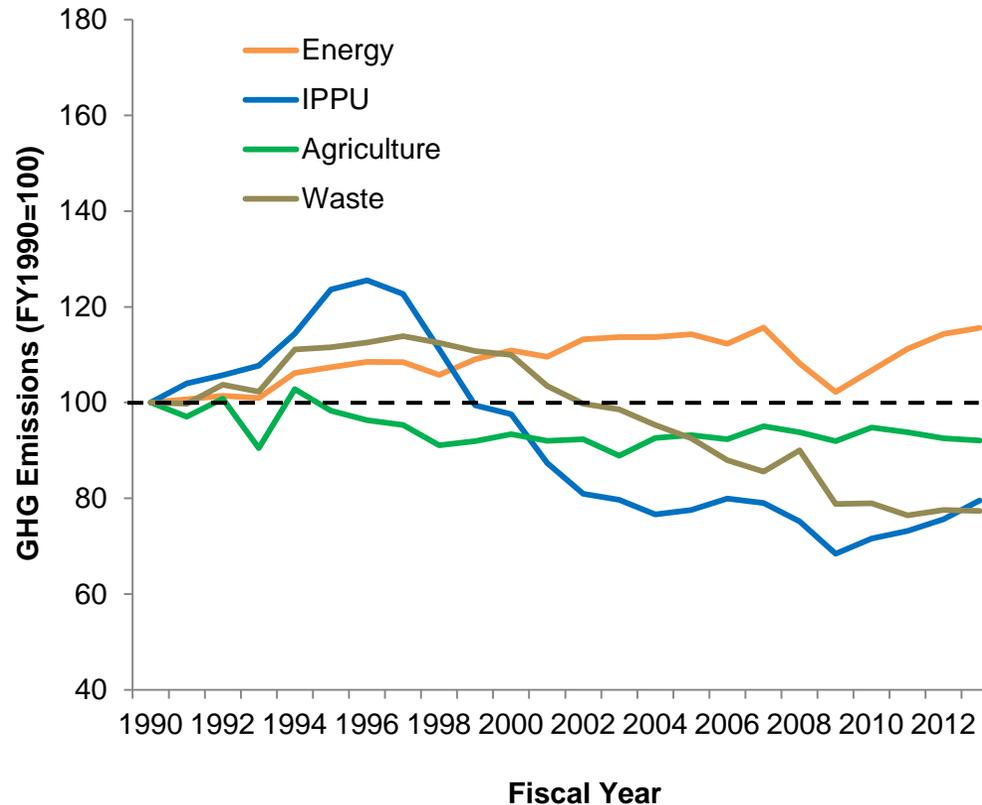
Emissions by sector in FY 2013 (excluding LULUCF)



Source: National Greenhouse Gas Inventory Report of Japan (April, 2015)

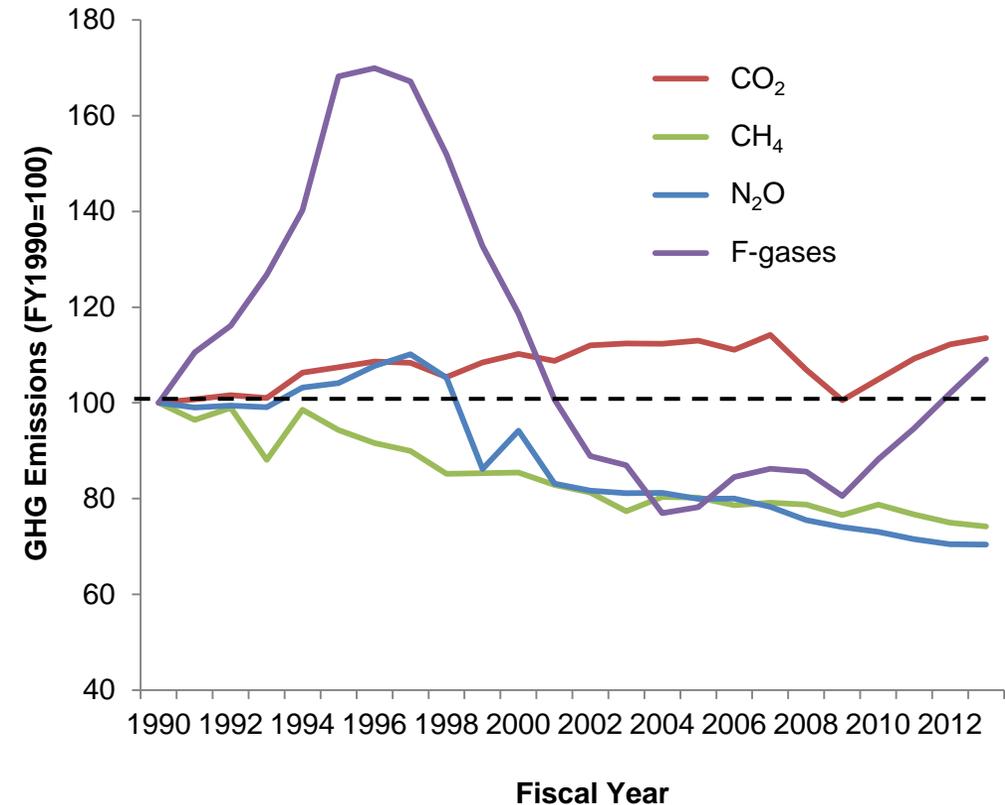
GHG Emissions Trend by Sector / by Gas (1990-2013)

Emissions trend by sector



Source : National Greenhouse Gas Inventory Report of Japan (April, 2015)

Emissions trend by gas

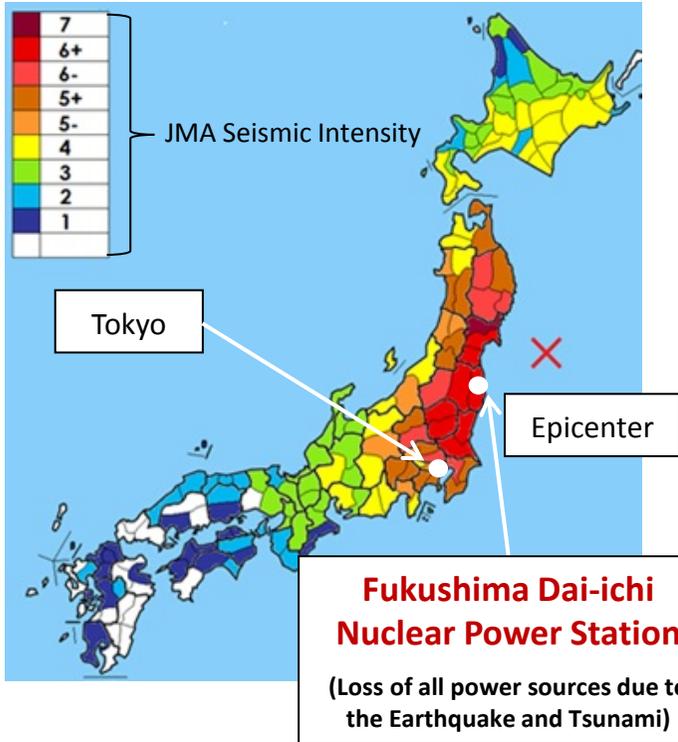


Source : National Greenhouse Gas Inventory Report of Japan (April, 2015)

Note: The values of GHG emissions are based on the 2015 GHG inventory submission, which were revised from the values reported in the BR1/NC6.

Change of National Circumstances after the Great East Japan Earthquake

- Date : 11 March 2011
- Magnitude : 9.0 (the largest magnitude recorded in Japan's history)



Casualties
(as of May , 2015)

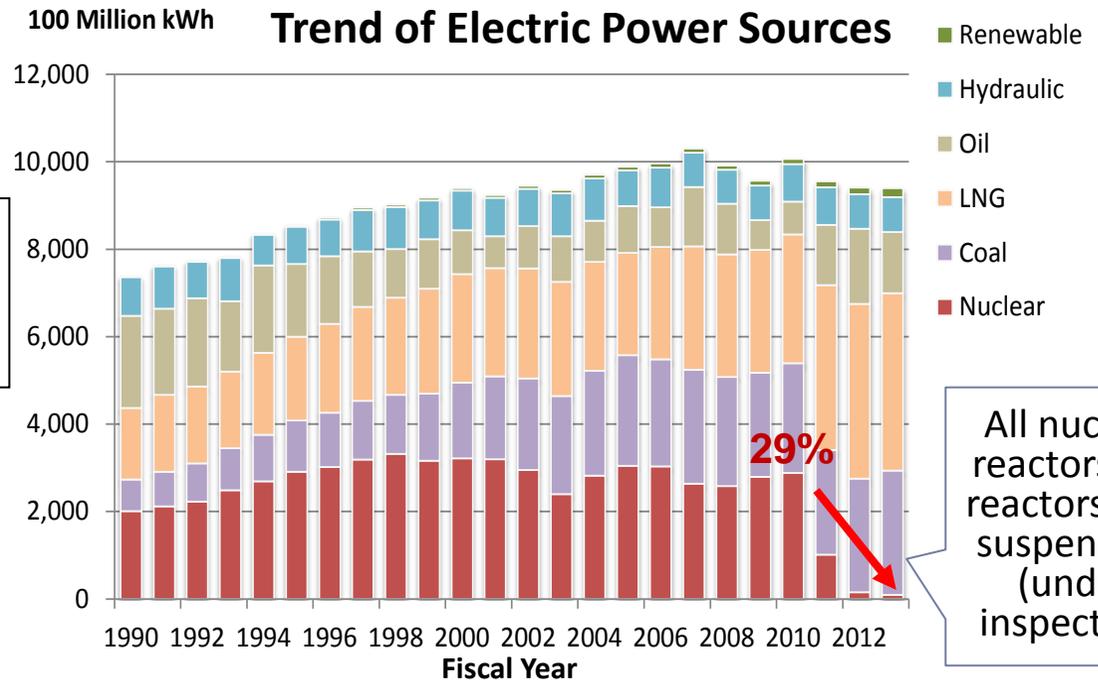
Dead: 15,891
Missing: 2,579

Building damage
(as of May , 2015)

Total collapse: **124,657**
Half collapse: **274,340**
Partial damage: **746,183**

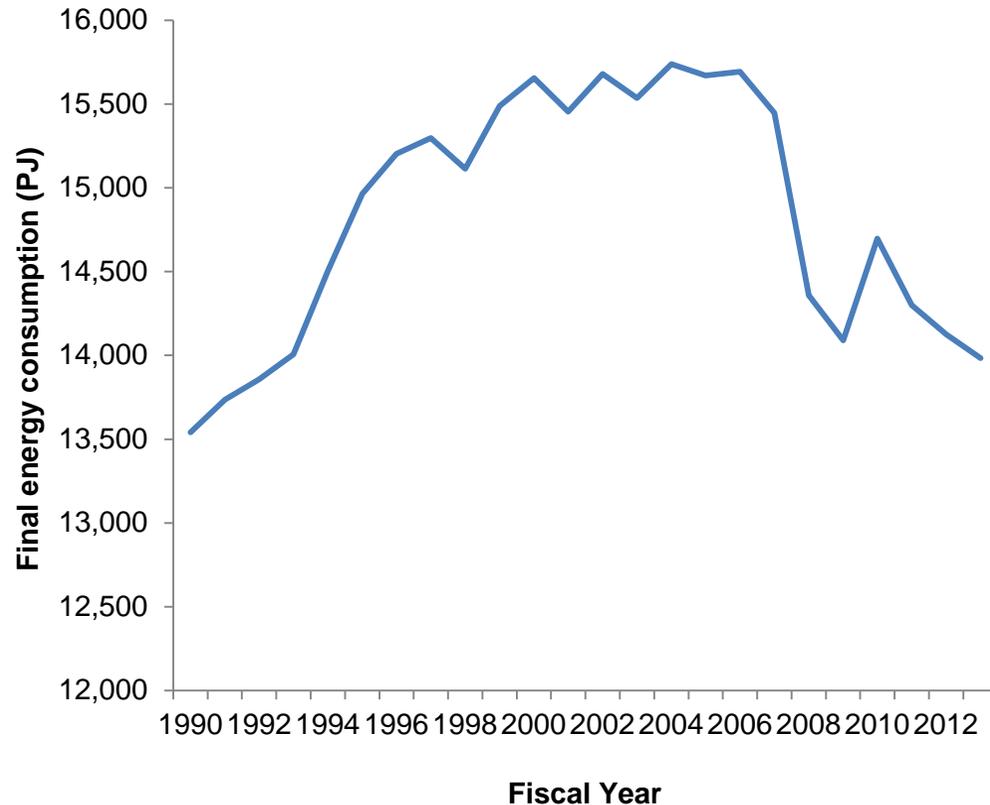
Estimated economic damage

JPY 16.9 trillion (**USD 170 billion**)



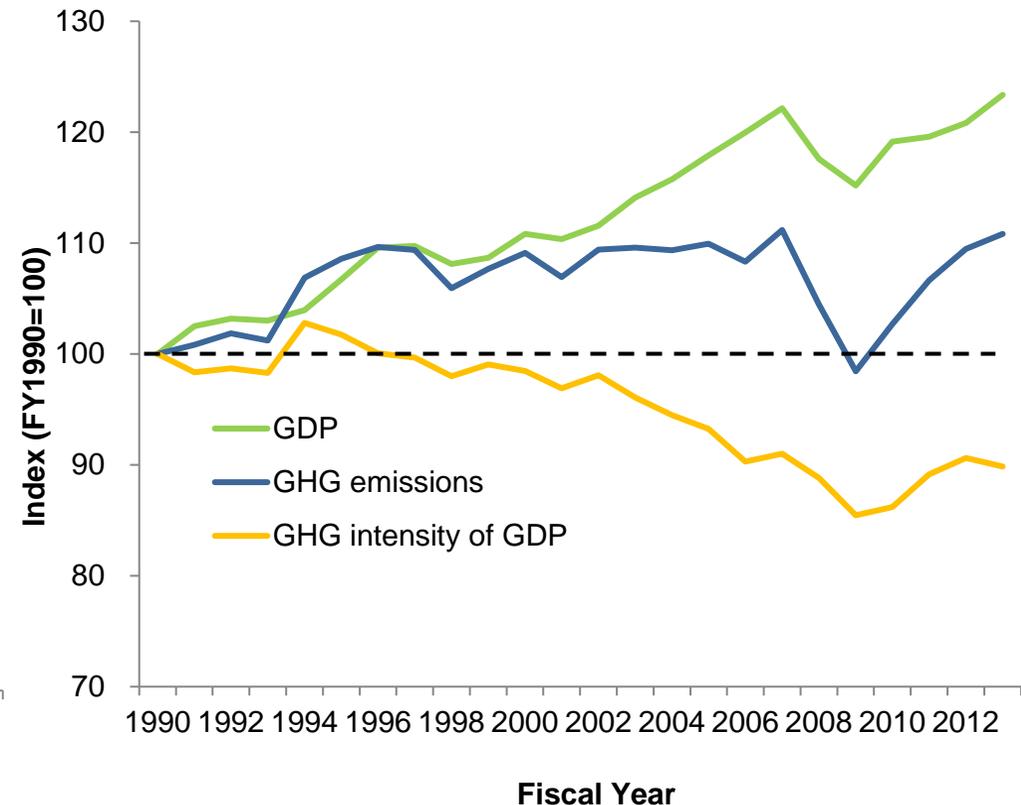
Trends of Energy Consumption and GHG Intensity

Final energy consumption



Source: General Energy Statistics of Japan (April, 2015)

GHG intensity of GDP

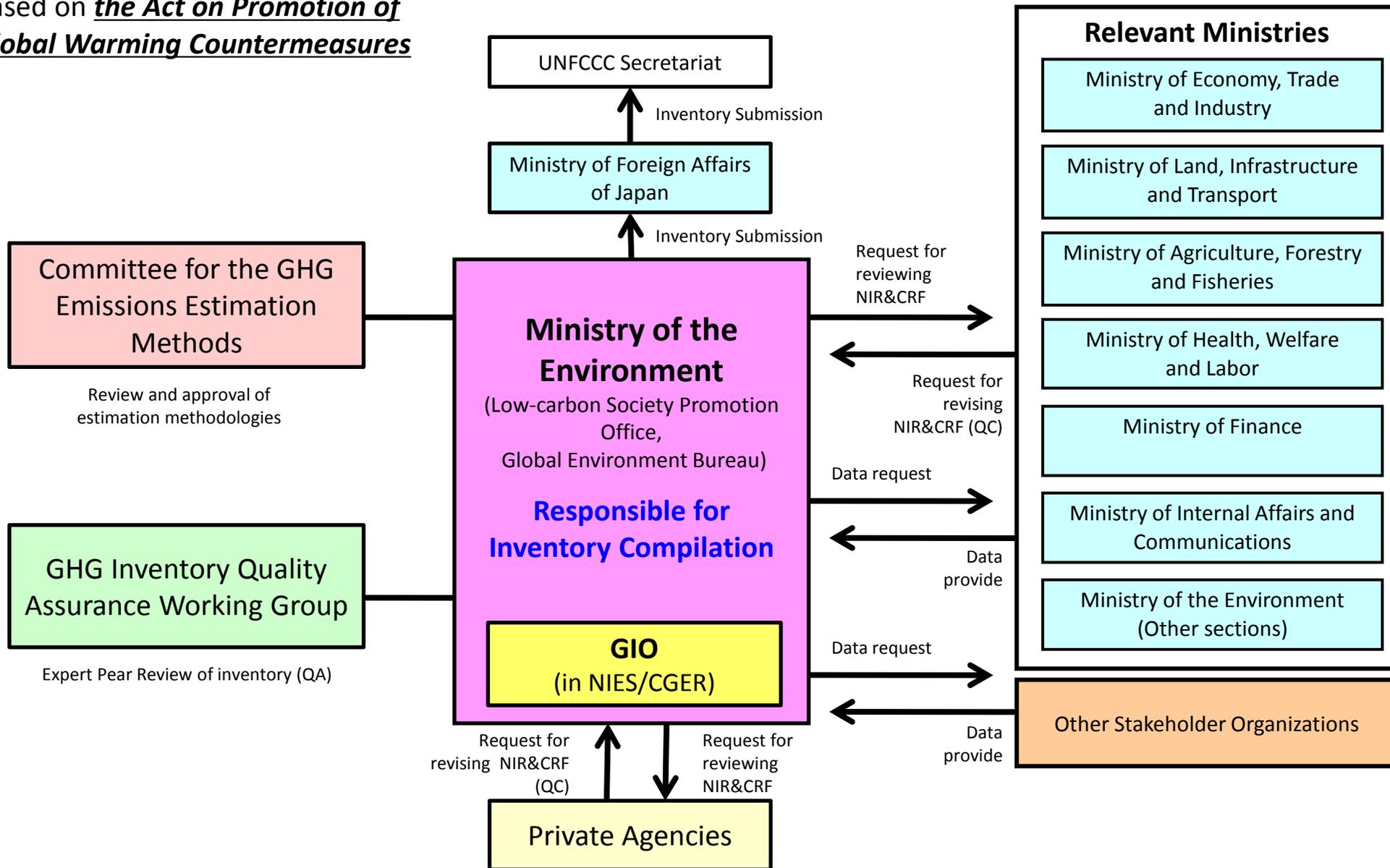


Source: National Greenhouse Gas Inventory Report of Japan, Annual Report on National Accounts

Note: The values of GHG emissions are based on the 2015 GHG inventory submission, which were revised from the values reported in the BR1/NC6.

Japan's National Inventory System (Institutional Arrangement)

Based on *the Act on Promotion of Global Warming Countermeasures*



2020 Emissions Reduction Target (Submitted in 2013)

Emissions reduction target	3.8 % below the base year
Base year	FY2005
Target year	FY2020
Covered gases	CO ₂ , CH ₄ , N ₂ O, HFCs, PFCs, SF ₆ and NF ₃
GWP	IPCC Fourth Assessment Report (AR4)
Covered sector	Energy, Transport, Industrial Processes, Agriculture, LULUCF and Waste
Removals from the LULUCF	Included (Activity-based approach)
Market based mechanisms	Joint Crediting Mechanism (JCM)
Nature of the target	<p>This is a target at this point, which has not yet taken into account the emission reduction effect resulting from nuclear power, given that the energy policy and energy mix, including the utilization of nuclear power, are still under consideration.</p> <p>A firm target, based on further review of the energy policy and energy mix, will eventually be set at a later stage.</p>
Plan for achieving the target	The Plan for Global Warming Prevention, as replacement of the Kyoto Protocol Target Achievement Plan, will be developed.

Toward Achievement of the 2020 Target

The target will be achieved by implementing the following measures, while attaining the economic growth goal set by the government:

- ◆ 20% improvement in energy intensity, which is at the world leading level
- ◆ Improvement of emission factor of electricity by introducing renewable energy
- ◆ Strengthening fluorocarbons countermeasures based on amended law on fluorocarbons
- ◆ Application of the “Joint Crediting Mechanism (JCM)”
- ◆ Enhancement of forest management and other sinks activities

Projections for 2020 (indirect emissions)

	BY (FY2005)	Estimated emissions in FY2020		
	A [Million t-CO ₂ eq.]	B [Million t-CO ₂ eq.]	(B-A)/A	Compared to BY
Energy-originated CO ₂	1,203	1,208		+0.4%
Industry	459	484		+5.4%
Commercial and others	236	263		+11.4%
Residential	174	176		+1.1%
Transport	254	190		-25.2%
Energy conversion	79	95		+20.3%
Non-energy-originated CO ₂	80	70		-12.5%
Methane	23	18		-21.7%
Nitrous oxide	24	22		-8.3%
Fluorinated gases	22	46		+109.1%
HFCs	11	41		+272.7%
PFCs	7	3		-57.1%
SF ₆	5	2		-60.0%
NF ₃	-	-		-

Note: The projection was prepared based on the 2013 GHG inventory submission. The coverage, methodologies and GWP used are different from the latest GHG inventory submission.

CO₂ emissions from electricity generation are allocated to each sector based on the amount of electricity consumption.

Content of Japan's INDC

Japan's INDC*

*Intended Nationally Determined Contributions

- Set the target of **26.0% reduction by FY2030 compared to FY2013 (25.4% reduction compared to FY2005)** (approximately 1.042 billion t-CO₂) based on the amount of domestic emission reductions and removals assumed to be obtained.
- Set as a feasible target, ensuring consistency with its energy mix, making bottom-up calculation with concrete policies and measures, and taking technological and cost constraints into adequate consideration.

Toward Submission of INDC

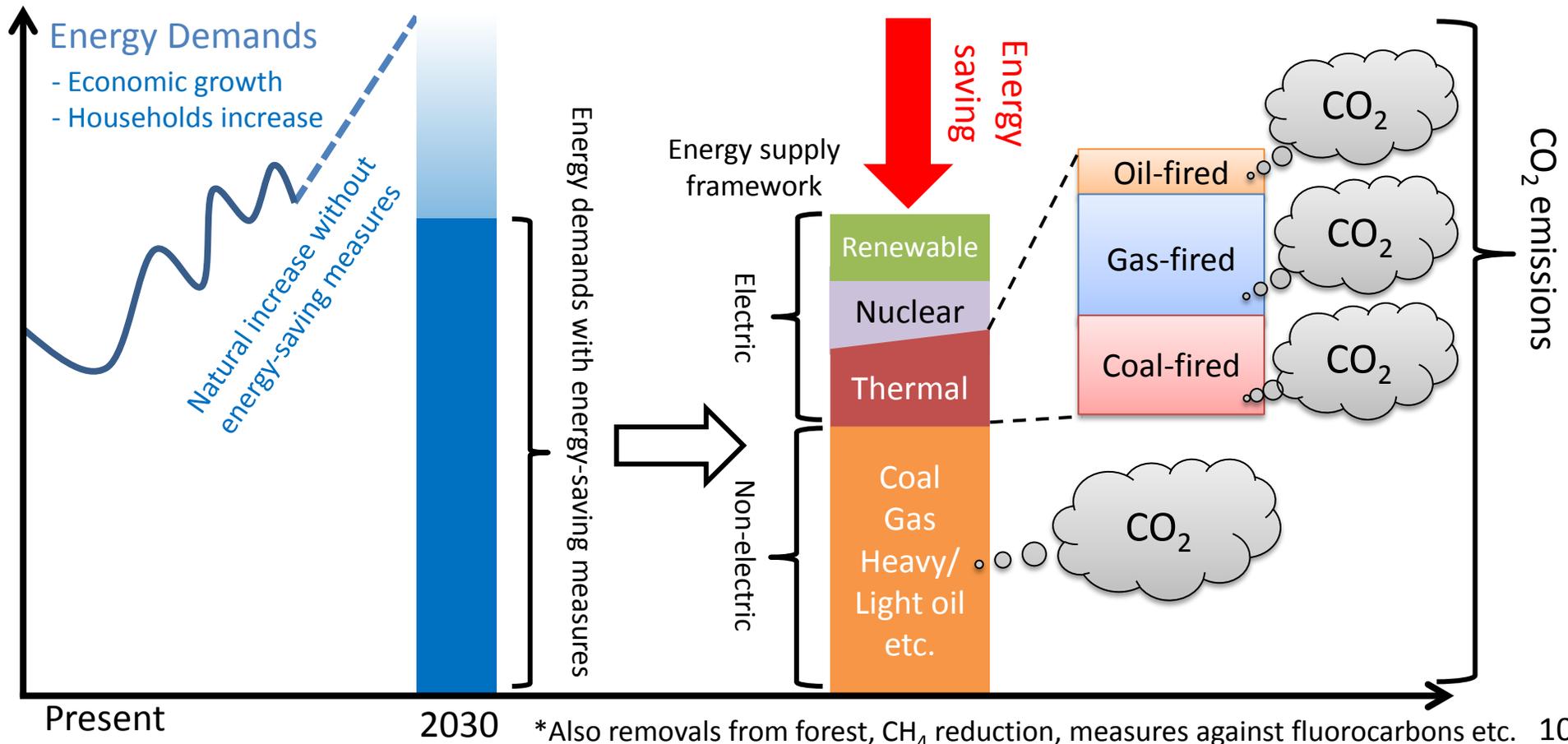
- On June 2, 2015 INDC was approved at Global Warming Prevention Headquarters, and public comment period was carried out.
- After hearing public comments, INDC was decided at Global Warming Prevention Headquarters, and submitted to UNFCCC Secretariat on July 17, 2015.

Framework of Emissions Reduction Target

○ First, **control of energy demands** by energy conservation

○ Second, use of zero-emission source and **less CO2 energy**

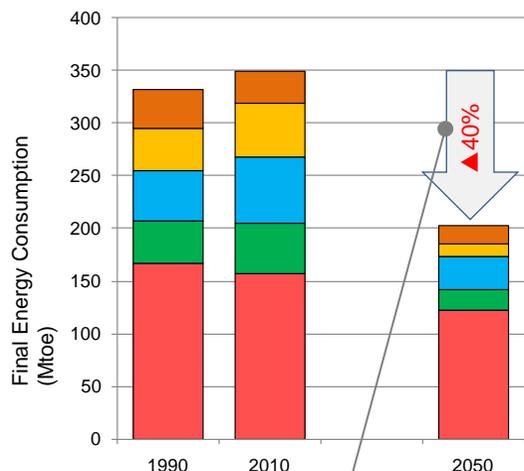
Prime Minister, Shinzo Abe to the 189th Session of the Diet: “We will mobilize all measures to promote thorough energy conservation and introduce renewable energies to the greatest possible extent.”



Japan's GHG reduction goal in 2050

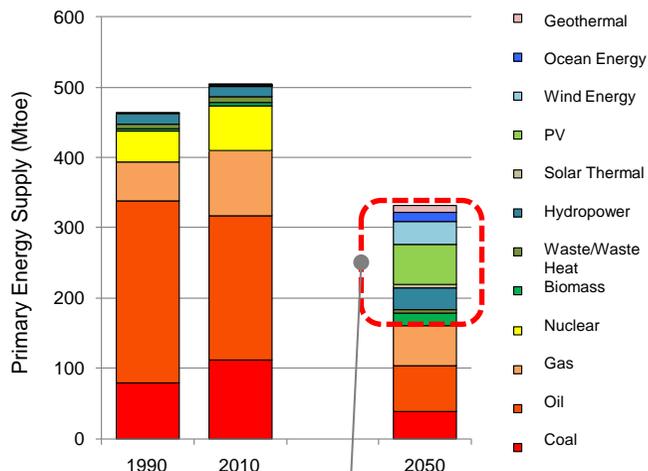
- Japan will pursue the goal of **80% reduction in GHG emission by 2050** in order to fulfill the responsibility as an industrialized country, as is stated **in the fourth Basic Environmental Plan** (revised in April 2012)
- Global Environment Committee presented the picture of 80% GHG reduction in 2050 as follows:
 - In the end-use sector, large-scale energy saving and electrification would be realized particularly in Building and Transportation sectors, which leads to approx. 40% reduction in final energy consumption.
 - Energy would be decarbonized, which leads to renewable energy deployment accounting for approx. half of primary energy supply.
 - 200 Mt-CO₂ would be captured and stored per year.

Final Energy Consumption



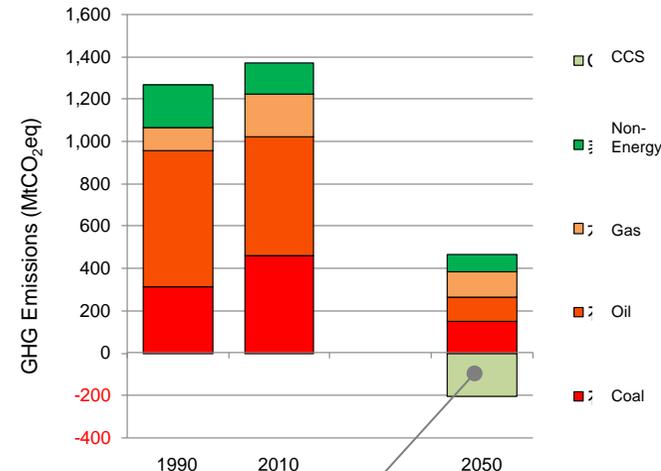
Innovative Energy Saving

Primary Energy Supply



Thorough Deployment of Renewable Energy

GHG Emissions



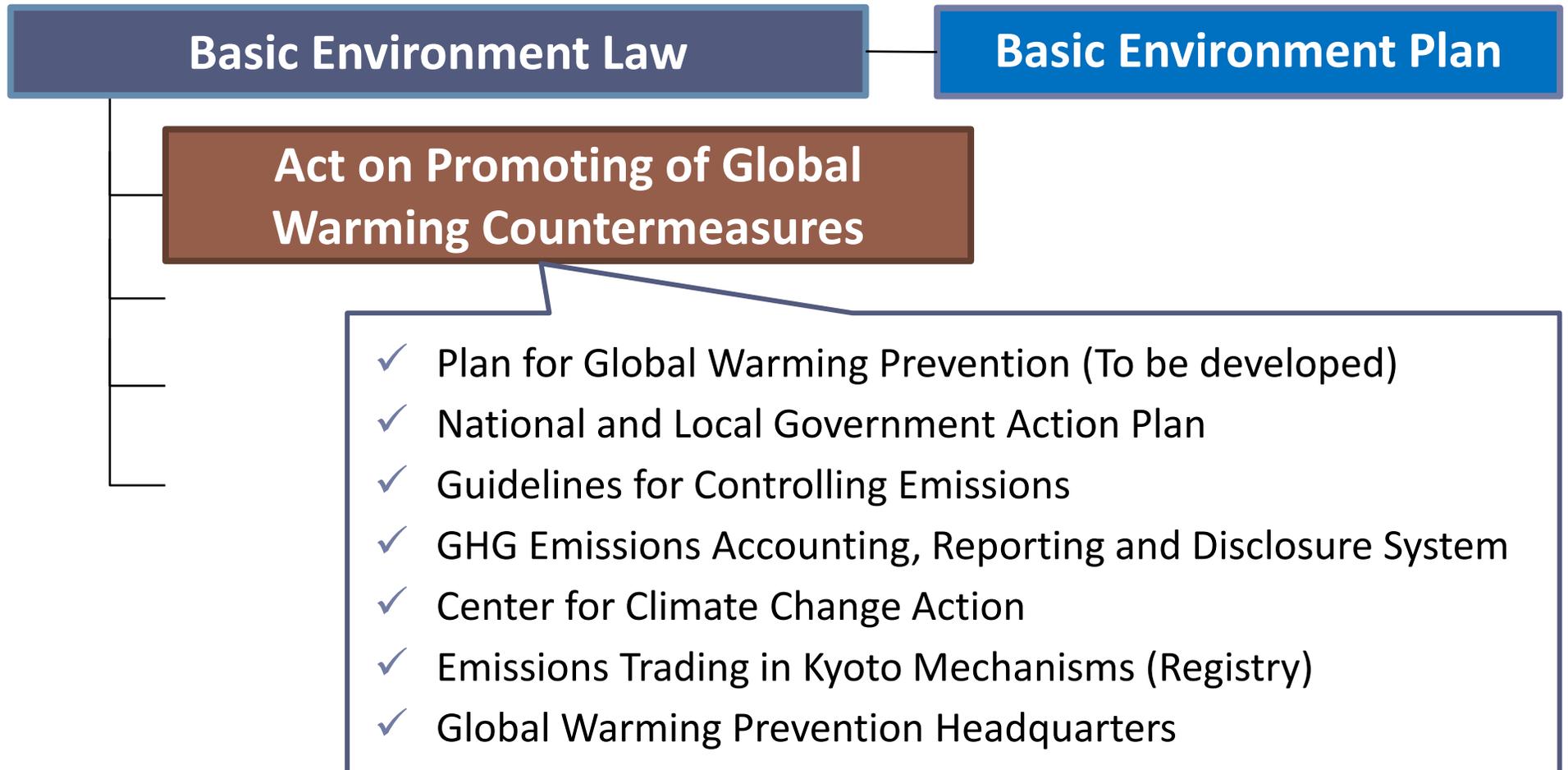
Capture and Storage of CO₂

Cited from: "Report on Policies and Measures beyond 2013"

by Global Environment Committee under the Central Environment Council (June 2012)

Framework of Policies and Measures

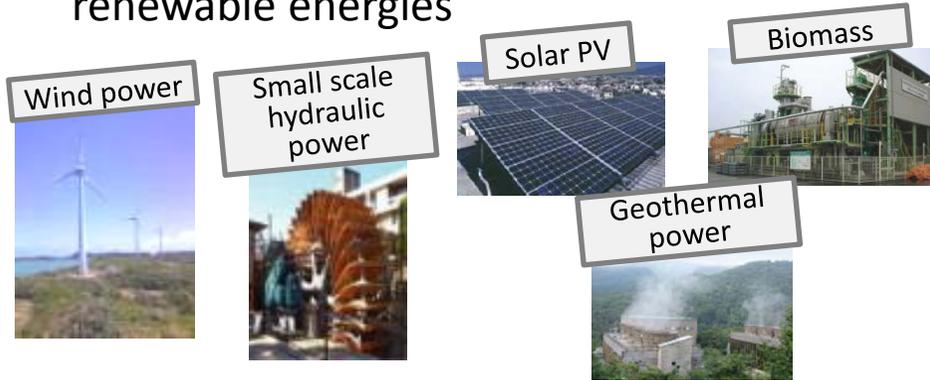
Japan is implementing a variety of policies and measures and strictly reviewing their progress.



Key Policies and Measures (Energy Conversion & Industry)

Feed-in Tariff

- Operation of a feed-in-tariff scheme for renewable energies



Industry's Action Plans

- GHG emissions reduction plans including 2020 targets by 95 industry groups, covering 80% of energy related CO₂
- Being strictly assessed and verified by the government in a transparent way
- Challenging aggressive targets is encouraged

Low-Carbonization of Electricity

- To call on the power sector to develop a sector-wide framework for reducing CO₂ emissions
- To require new fossil fuel-fired power plants to adopt best available technologies

Energy Conservation Law

- Measurement and reporting of energy consumption by business operators
- Energy efficiency standards for buildings and houses
- “Top Runner program” applied to household appliances, equipment and automobiles

Key Policies and Measures (Transport, Commercial & Residential)

Highly Energy-Efficient Vehicles

- To increase highly energy-efficient next-generation vehicles in new car sales by creating initial demand, supporting R&D, etc.



Hybrid vehicles (HEV)



Electric vehicles (EV)



Fuel cell vehicles (FCV)

Share of next-generation vehicles

50 ~ 70 % (by FY2030)

Top Runner Program

- Mandatory program for manufacturers and importers to fulfill energy efficiency targets within 3 to 10 years, encouraging competition and innovation

Improvement of energy efficiency



Air-conditioners

32.3 % (FY1997→FY2007)



Electric refrigerators

43.0 % (FY2005→FY2010)

Low-Carbonization of Houses and Buildings

- To comply with energy efficiency standards for newly constructed houses and buildings by 2020

National Campaign for Low-Carbon Society

- A variety of initiatives and activities to involve citizens for GHG reductions

COOLBIZ

WARMBIZ



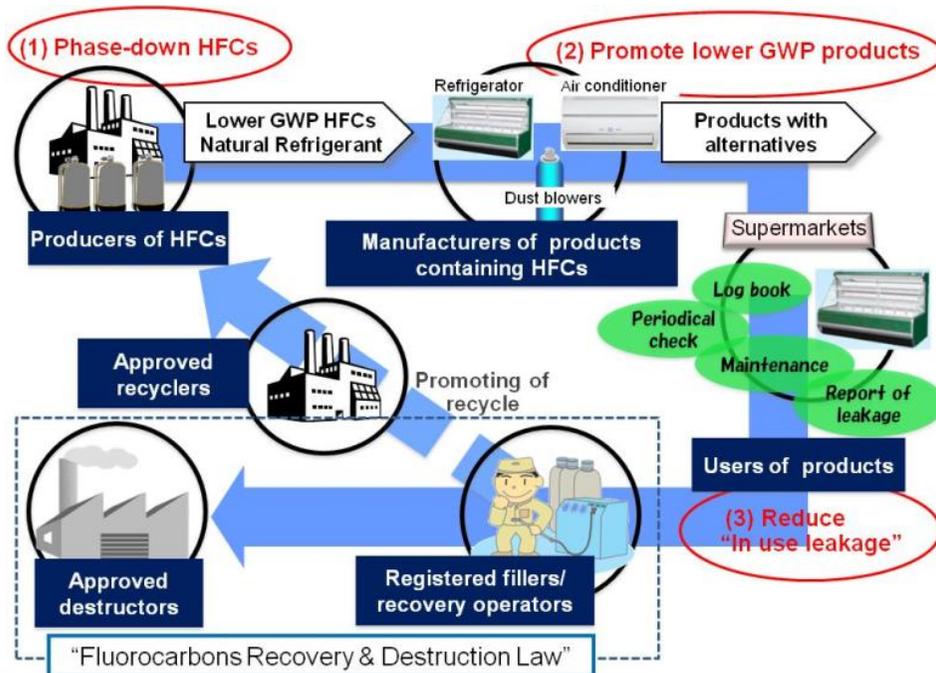
smart
move

ECO
DRIVER.

Other Key Policies and Measures

Act on Rational Use & Proper Management of Fluorocarbons

- To promote low-GWP/non-fluorocarbons in refrigeration and air-conditioning
- To prevent leakage during operation
- To promote recovery and destruction



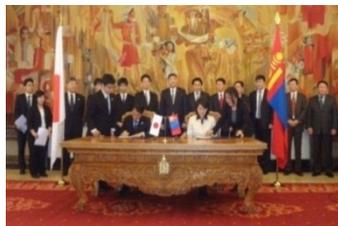
Actions in the Waste Management Sector

- To promoting waste reduction and recycling
- To reduce direct landfill disposal of organic waste
- To upgrade combustion technology at waste and sewage sludge incineration facilities

Tax for Climate Change Mitigation

- Tax rate corresponding to the amount of CO₂ emissions for all fossil fuels
- Enforced from Oct. 2012 and increases in the tax rate gradually over 3 and a half years
- All the tax revenue are allocated for curbing energy-originated CO₂ emissions

Joint Crediting Mechanism (JCM) 14 partner countries as of May 2015



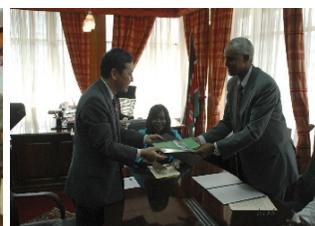
Mongolia
Jan. 8, 2013
(Ulaanbaatar)



Bangladesh
Mar. 19, 2013
(Dhaka)



Ethiopia
May 27, 2013
(Addis Ababa)



Kenya
Jun. 12, 2013
(Nairobi)



Maldives
Jun. 29, 2013
(Okinawa)



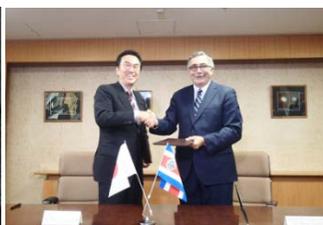
Viet Nam
Jul. 2, 2013
(Hanoi)



Lao PDR
Aug. 7, 2013
(Vientiane)



Indonesia
Aug. 26, 2013
(Jakarta)



Costa Rica
Dec. 9, 2013
(Tokyo)



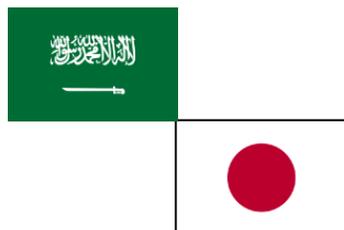
Palau
Jan. 13, 2014
(Ngerulmud)



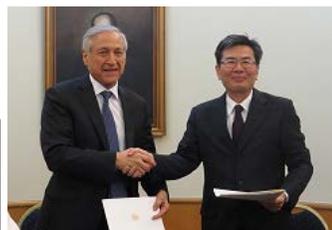
Cambodia
Apr. 11, 2014
(Phnom Penh)



Mexico
Jul. 25, 2014
(Mexico City)



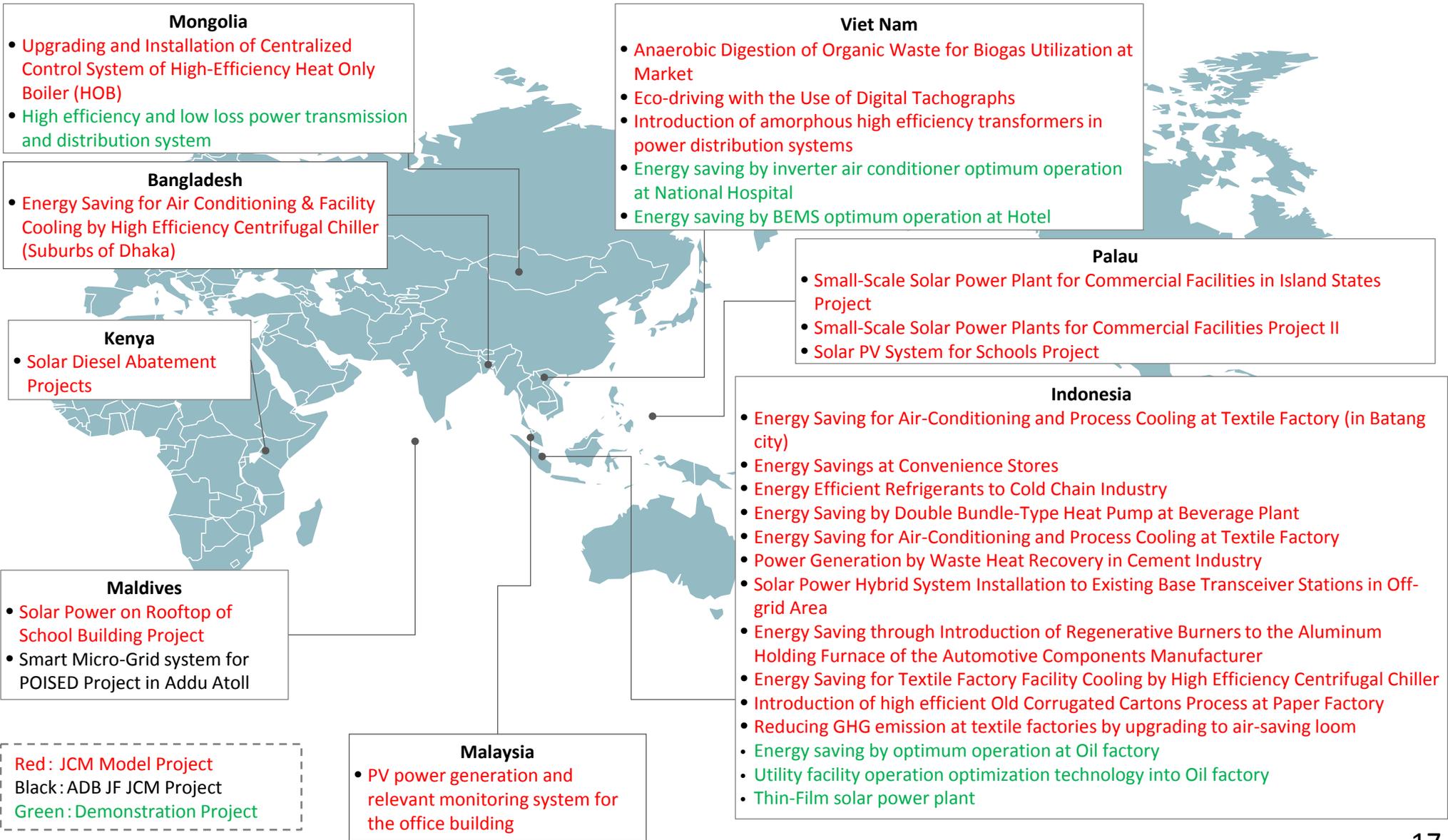
Saudi Arabia
May 13, 2015
(Riyadh)



Chile
May 26, 2015
(Santiago)

JCM project pipelines

(Selected projects under Financing Programme and Demonstration Projects)



Summary

- ◆ Japan's total GHG emissions in FY2013 were 1,408 Mt CO₂ eq.
- ◆ Japan's FY2020 target is 3.8% reduction below FY2005 level.
- ◆ Japan's FY2030 target is 26% reduction below FY2013 level (INDC).
- ◆ The Plan for Global Warming Prevention will be developed.
- ◆ Japan is promoting the establishment and implementation of the Joint Crediting Mechanism.
- ◆ Japan is implementing a variety of policies and measures, reviewing their progress continuously.

Thank you for your attention