

# COP21

From Kyoto to Paris,  
and toward Future  
of the Earth

**Keidanren**  
Japan Business Federation

Keidanren URL:<http://www.keidanren.or.jp/>

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**Keidanren**  
Policy & Action






# COP21

## From Kyoto to Paris, and toward Future of the Earth


### Passing down our Earth to future generations through continued global efforts

Everyone and every country on Earth must cooperate for addressing climate change issues. The Kyoto Protocol at COP3 in 1997 was seen as an important first step towards a global emission reduction framework by international community. Yet, the Kyoto Protocol also embraced many challenges for the future negotiation. The Protocol obligated only developed countries, including Japan, in a top-down manner to reduce emissions; and moreover, it was a legally-binding framework accompanied by penalties, which failed to incentivize the US - then the largest emitter - and developing countries to engage in efforts to reduce emissions. Japan's business community we believe that at COP21, which will be held in Paris in 2015, all parties should draw on the lessons learned from the experiences under the Kyoto Protocol and agree on a fair and effective international framework with the participation of all major emitters that is compatible with economic growth.




1

Ensuring the participation of all major emitters



2

Performing international reviews



3

Encouraging the global dissemination of low-carbon technologies





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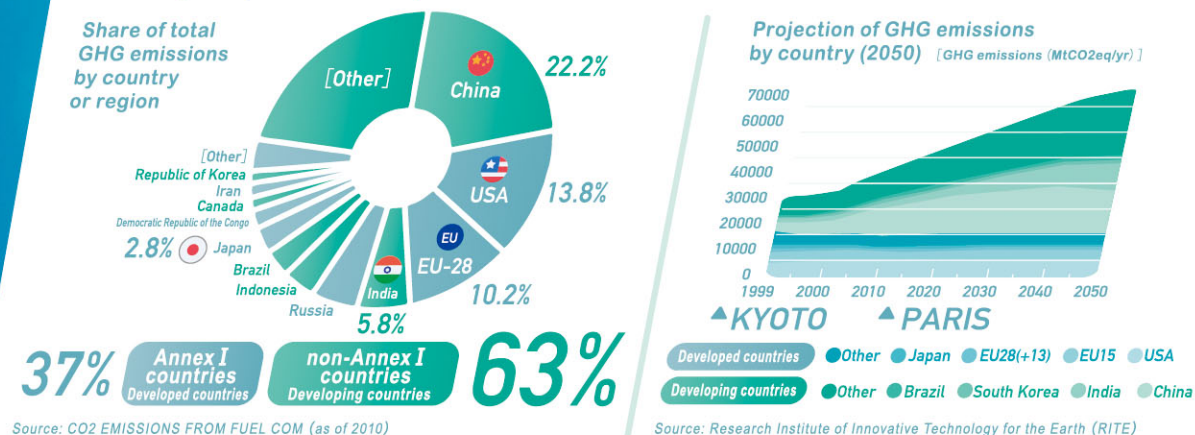
# Ensuring the participation of all major emitters

A new international framework should secure the participation of all major emitters.

Today, emerging and developing countries account for more than 60% of global emissions and their share is projected to continue to expand dramatically. Therefore, without the participation of all emitters, including emerging and developing countries, we cannot promote effective global mitigation measures. In order to invite all major emitters, including the US and China, to participate, we should ensure that all countries will responsibly set up their own INDCs and the status of them will be both flexible and non-legally binding. We hope that we can agree on an epoch-making framework that will unite the international community and enable the world to leap forward in its global efforts.

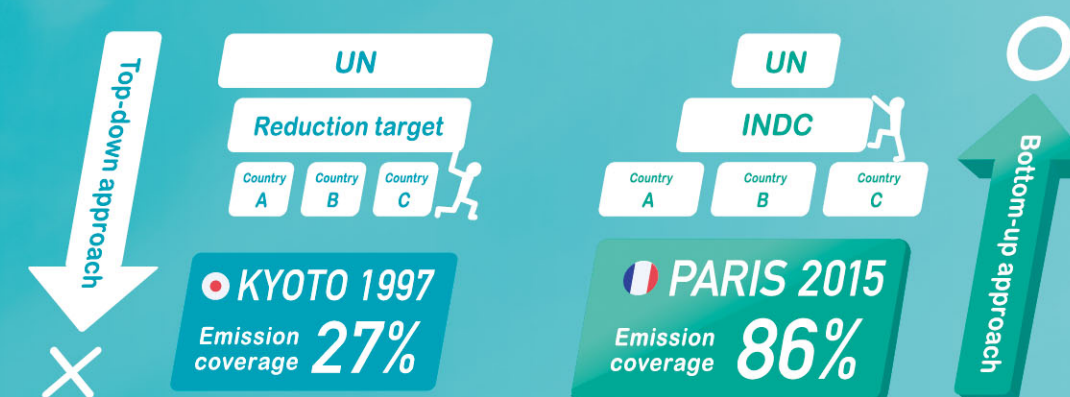
## Global GHG emission trends

Developing countries account for more than 60% of global greenhouse gas emissions. (as of 2010) Emissions are projected to increase dramatically in China, India and other developing countries. Therefore, there is a strong urge for agreement on a new fair and effective international framework with the participation of all major emitters.



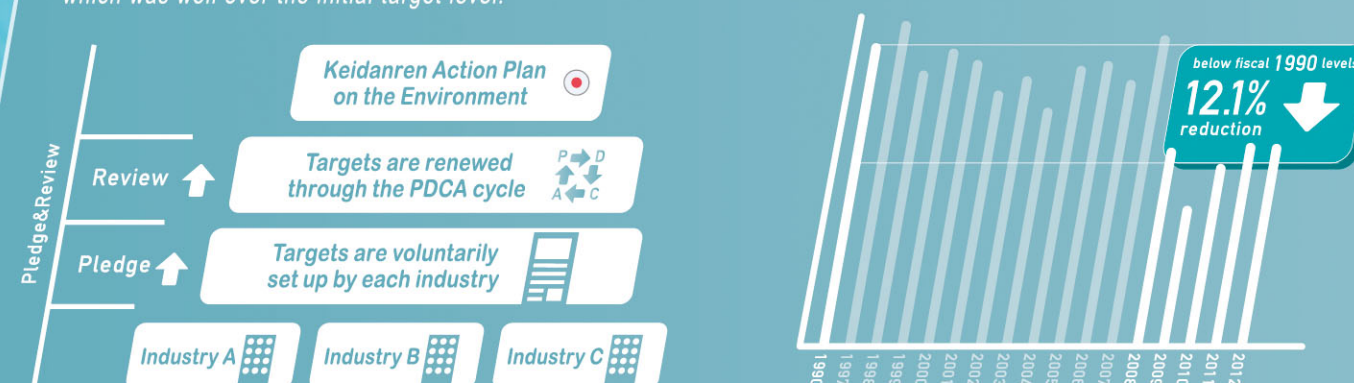
## A new international framework for agreement at COP21

The Kyoto Protocol embraced only a group of developed countries, and thus only covered 27% of global GHG emissions. As for the coming COP21, 146 countries collectively representing 86% of global emissions have already submitted INDCs to the UN as of October 1. Therefore, at COP21, we must shift away from a top-down Kyoto-type approach, and adopt a bottom-up approach where countries can self-defined and pledge targets and the status of achievement is internationally reviewed.



## Achievements of the Keidanren Action Plan on the Environment and its implications for COP21

The "pledge & review" approach has proved to be significantly successful in the Keidanren Action Plan on the Environment. In the 34 industrial and energy-conversion sectors shared the common target of reducing average CO<sub>2</sub> emissions during fiscal 2008-2012 to "below fiscal 1990 levels". Their proactive reduction efforts led to "a 12.1% reduction from fiscal 1990 levels," which was well over the initial target level.





# Performing international reviews

## International reviews for enhancing effectiveness, based on the participation of all major emitters.

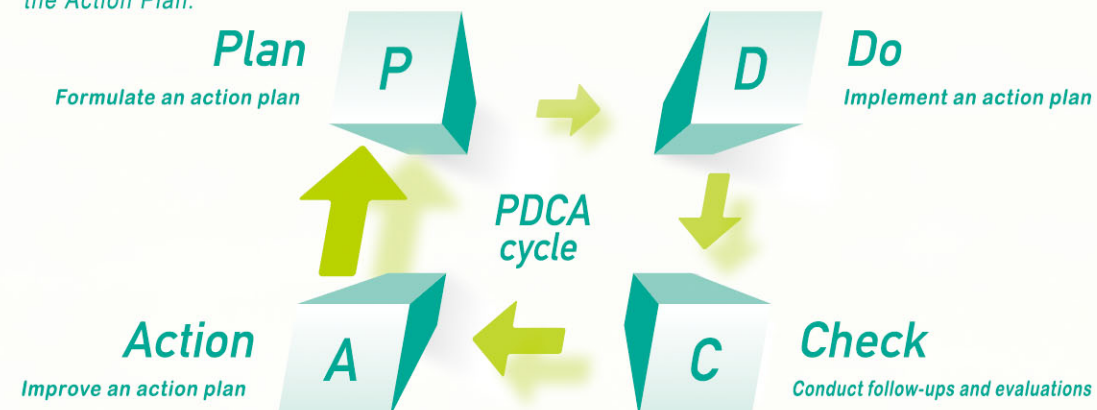
At the international negotiation, we tend to focus on how much each national reduction rate is compared to a certain baseline year. However, a truly effective climate change measure should not allow countries to “play with numbers” but encourage untiring efforts on the part of each country through multidimensional reviews based on objective mitigation technology-oriented indices, such as sector-specific energy efficiency indicators.

The Keidanren Action Plan on the Environment, launched in 1997, takes a “pledge & review” approach under which multidimensional reviews are performed to enhance the effectiveness of the targets set up by each industry. 34 industries from the industrial and energy-conversion sectors have already successfully reduced CO<sub>2</sub> emissions during the Kyoto Protocol's first commitment period (fiscal 2008-2012) as mentioned in the previous page.

We believe that a new international framework based on the “pledge & review” approach should be explored at the coming COP21.

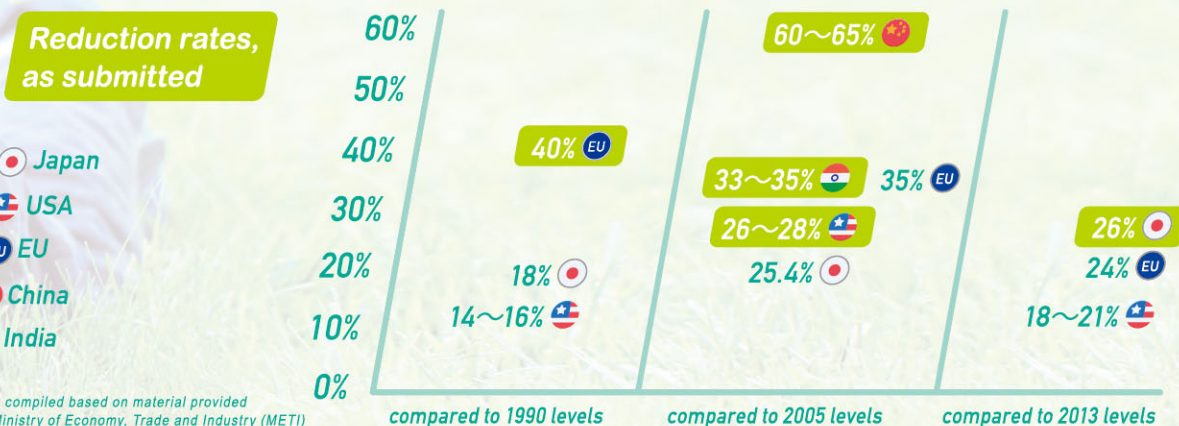
## Structure of the Keidanren Action Plan on the Environment / Commitment to a Low Carbon Society

Keidanren will contribute to the effective implementation of the “pledge and review” approach under a new international framework by providing knowledge on the PDCA cycle that it has pursued under the Action Plan.



## Reductions rates in the INDCs compared by different three baseline years

Countries have sought the maximum possible nominal reductions by choosing diverse baseline years and carefully considering compatibility with economic growth. Therefore, we may have various impressions of a reduction rate when it is set against a different baseline year. The important thing is that the fairness of national efforts is ensured and that the reductions are surely achieved.



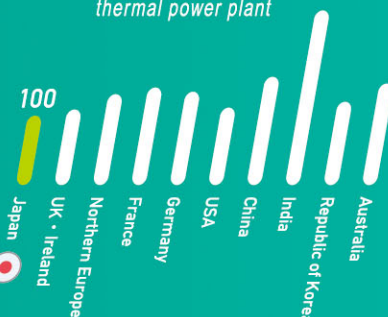
Source: compiled based on material provided by the Ministry of Economy, Trade and Industry (METI)

## Cross-country comparison of energy efficiency by sector

(indexed with 100 representing the energy efficiency of Japan's industries)

### Electric power

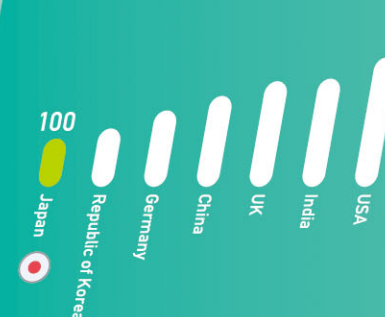
Comparison of energy required to generate 1kWh of electricity at a thermal power plant



Source: International Comparison of Fossil Power Efficiency and CO<sub>2</sub> Intensity (ECOFYS, 2014)

### Iron

Comparison of energy required to produce 1 ton



Source: Research Institute of Innovative Technology for the Earth (RITE)

### Electrolytic caustic soda (a chemical raw material)

Comparison of energy required to produce 1 ton



Source: CMAI "Capacity Database" (2000) and Japan Soda Industry Association "Soda Handbook" (2009)

Japan is the most energy-efficient country in the world in major sectors.



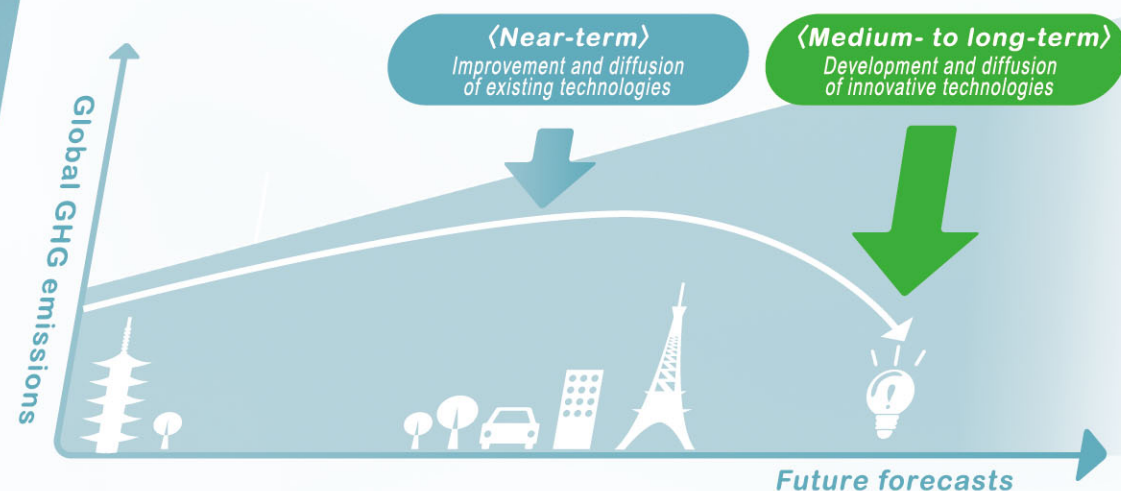


# Encouraging the global dissemination of low-carbon technologies

Establish an international framework that encourages the development and dissemination of energy-saving and low-carbon technologies for the ultimate resolution of climate change issues

## Image of achieving dramatic reductions in the long-term.

Japan will contribute to reductions in the long-term through the development and diffusion of low-carbon technologies.



## JCM partner countries

Since 2011, Japan has launched consultations for the JCM\* with developing countries and established JCMs with many countries.



\*JCM (Joint Crediting Mechanism): a scheme that aims to count GHG (CO2) emission reductions, achieved by Japanese overseas business activities (infrastructure exports, etc.) harnessing energy and environmental technologies.

The key to achieving economic growth in each country, while pursuing dramatic greenhouse gas emission reductions at a global level, lies in the improvement and diffusion of existing technologies in the near-term and the development of innovative technologies in the medium- to long-term.

In order to accelerate the overseas transfer and dissemination of energy-saving and low-carbon technologies, in particular to developing countries with higher emission reduction potential, as well as the development and diffusion of innovative technologies, these efforts should also be included in the evaluation of contributions under the new international framework.

## Reduction potential of Japan's low-carbon technology and products

Disseminating Japan's green technology and products can help achieve large reductions globally in the industrial and household sectors.

### Iron

If we improved iron and steel plants worldwide to Japanese efficiency levels...

Approx.  
**0.4** Bil. tons  
in emission reductions

Equivalent to over 30% of total emissions in Japan

### Coal-fired thermal

If we improved thermal power plants in the US, China and India to Japanese efficiency levels...

Approx.  
**1.3** Bil. tons  
in emission reductions

Equivalent to total CO2 emissions in Japan

### Household appliances (air conditioners)

If we improved air conditioners throughout the world to efficiency levels in Japan, where air conditioners are 100% inverter-equipped...

Approx.  
**0.1** Bil. tons  
in emission reductions

### Cement

If we improved cement plants in the US, China and India to Japanese efficiency levels...

Approx.  
**0.2** Bil. tons  
in emission reductions

Source: Ministry of Economy, Trade and Industry

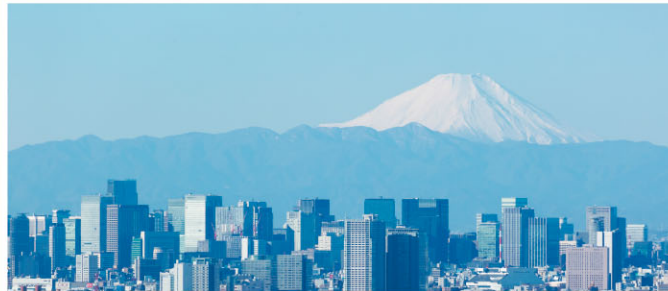


# The Japanese business community's contribution with four pillars —to the world, and to the future

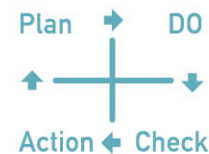
## Keidanren Commitment to a Low Carbon Society

Japan's business community has kept its reins on climate change measures tight, even after the first commitment period of the Kyoto Protocol. Its pioneer efforts have presented a model for other economies to follow. In January 2013, Keidanren formulated and announced "the Commitment to a Low Carbon Society (Phase 1)" to succeed its "Action Plan on the Environment" formulated in 1997. Moreover, in April 2015, it launched "the Commitment to a Low Carbon Society (Phase II)," which extends to 2030. Participating industries pursue the PDCA cycle to promote long-term global climate change measures, in accordance with four key elements, which include "domestic emission reductions", "strengthening cooperation with stakeholders (product-based contribution)", "international contribution (promotion of international technology support)" and "innovative technology development". Moreover, the program covers more than half of total emissions in Japan, implying the important role the business community plays in reducing emissions in Japan. We hope that the voluntary and proactive efforts led by the Japanese private sector will serve as a world's advanced model and thus encourage similar efforts on a global scale.

### Pillar 1 Emission reductions from domestic business activity



#### PDCA cycle of the Commitment to a Low Carbon Society

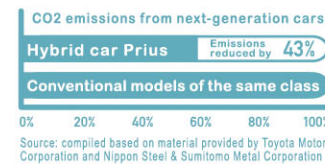


Under past global warming countermeasures, Japan's industrial sector achieved dramatic CO<sub>2</sub> emission reductions by ensuring the implementation of the PDCA cycle. Future domestic measures will continue to involve PDCA cycles and follow-ups.

### Pillar 2 Strengthening cooperation with stakeholders



#### 【Case Study】 Emission reductions through hybrid cars



Hybrid cars require special additional components, and thus emit more CO<sub>2</sub> during the manufacturing process, but run on half the amount of fuel required by conventional models. Therefore, the CO<sub>2</sub> emission reduction potential of hybrid cars amounts to -43% from a life cycle perspective.

### Pillar 3 Promotion of international contribution



#### 【Case Study】 Globally spreading energy-saving technologies from iron and steel manufacturing processes



Given projections of increased iron and steel demand supported by the strong economic growth in emerging economies, the global dissemination of state-of-the-art energy-saving technologies, such as enhanced waste heat recovery and reusing by-product gas will lead to CO<sub>2</sub> emission reductions from iron and steel manufacturing processes.

### Pillar 4 Innovative technology development



#### Seeking a greener future through innovative technology development



Japan will continue to endeavor to develop state-of-the-art technologies based on public-private collaboration and contribute to the achievement of a global low-carbon society.

### The Japanese business community's views regarding regulatory approaches

Proactive approaches taken by the Japanese business community have proven to be successful measures of countering global warming. Moreover, Japan's Intended Nationally Determined Contribution (INDC), which was submitted to the UN in July 2015, is based on our Commitment to a Low Carbon Society. Therefore, we believe that regulatory measures that will impede the achievement of a vital economy – for example, emissions trading schemes that lack LCA-based perspectives and undermine fair corporate competition – should not be introduced in Japan.

The coming Paris Agreement is not our goal in climate change measures. It is essential for us to continue endeavors on global scale for future generations