

# Japan's "Plan for Global Warming Counter- measures"

**Director-General Kenji Yamaji  
of the Research Institute of  
Innovative Technology for the  
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Photo: Yuichi Itabashi

**I**N May 2016, the Japanese government made a Cabinet decision on the Plan for Global Warming Countermeasures that aims to significantly reduce greenhouse gas (GHG) emissions. We asked Director-General Kenji Yamaji of the Research Institute of Innovative Technology for the Earth (RITE), who worked on developing the plan as a member of the advisory board for the Ministry of Economy, Trade and Industry, about Japan's measures for preventing global warming and its international contributions.

**How do you evaluate the Paris Agreement, which was adopted at COP21 in December last year?**

The Paris Agreement was a very historic agreement that most countries in the world, including the main emitters, participated in as an international framework for 2020 and beyond to reduce GHG emissions. The COP21 also agreed on the Pledge and Review of each country's targets for the reduction and control of GHG emissions, which Japan had insisted upon for the past twenty years.

In addition, they also agreed on holding the increase in the global temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C as long-term goals. They also aimed to achieve an equal balance between GHG emissions by human beings and the amount of their absorption in the latter half of the twenty-first century. The overall progress for the achievement of these long-term goals will be evaluated at five-year intervals starting in 2023. I rate highly the fact that the Paris Agreement includes both each country's voluntary targets for the reduction and control of GHG emissions and the long-term goal to be achieved by the whole world.

**The Japanese government made a Cabinet decision on the Plan for Global Warming Countermeasures in May, in accordance with the signing of the Paris Agreement. What are the key countermeasures?**

In July 2015, Japan submitted the Intended Nationally Determined Contribution declaring that the country would reduce GHG emissions in 2030 by 26%, from the levels of 2013, to the United Nations Framework Convention on Climate Change (UNFCCC) Secretariat as a target for the reduction of GHG emissions. The Plan for Global Warming Countermeasures declares a committed effort to achieve this as a mid-term goal. In addition, the Plan for Global Warming Countermeasures also aims to reduce GHG emissions by 80% by 2050, as a long-term goal. The Plan for Global Warming Countermeasures involves measures for a broad range of areas with a focus on these goals.

Energy conservation will play an important role in the future for Japan's measures for global warming. Japan saw a significant improvement in national energy efficiency as a result of the total efforts to save energy in business circles after the oil crises in the 1970s. Going forward, it will be necessary to make a comprehensive effort to save energy in areas that are closely connected to people's lives, such as homes, transportation, and buildings, as well as business circles.

In addition, people continue to be concerned about nuclear power stations due to the Fukushima Daiichi Nuclear Power Station accident caused by the Great East Japan Earthquake in March 2011. But nuclear power stations that have stopped operations must be restarted gradually to address these anxieties and secure a sufficient level of security in order to further advocate measures to prevent global warming. It is also important to promote renewable energy sources and make coal-generated power more efficient.

**What kind of technological development do you think will be important from now on for measures to prevent global warming?**

The National Energy and Environment Strategy for Technological Innovation towards 2050 (NESTI 2050), which the government formulated in April

of this year as an innovative technological strategy for 2050, identified technological fields of priority to be developed from now on. For example, it includes energy system integration technologies intended to maximize energy consumption efficiency by utilizing artificial intelligence (AI) and big data throughout the entire society. The list also includes ultra-light heat-resistant materials that improve energy efficiency, next-generation batteries that go beyond the limits of lithium ion cells, next-generation solar power generation with new materials, and technologies to effectively utilize carbon dioxide captured from exhaust gases.

**What contribution do you think Japan will be able to make to the global measures for global warming?**

Currently, Japan's GHG emissions make up 2.8% of the world's percentage of emissions. Even if Japan alone reduces GHG emissions, it will have a limited effect on the prevention of global warming. Japan's role is to create various innovations toward preventing global warming and promote them to the entire world.

Japan has already implemented Joint Crediting Mechanism (JCM) with developing countries. It has also hosted the Innovation for Cool Earth Forum (ICEF) since 2014. The discussion of innovations that will require considerable time to commercialize but that are expected to be highly effective, such as nuclear fusion power generation and space solar power generation, is also significant at such international conferences.

People point out the scientific uncertainty surrounding the mechanism of temperature increase and its impact on the earth. However, global warming is really occurring although there is scientific uncertainty. There is no need to be excessively pessimistic because humanity has always adjusted itself to changes in the earth's environment, but now we have to take action for our futures. ■

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Inverview by OSAMU SAWAJI

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