



**1.5°C**

**Climate Emergency  
Action**



**Greener is Cleaner**

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# It is YOU

Keeping the temperature below 1.5°C by the end of the 21st century is the only way to future for mankind and the planet.

The possibility for climate-ecological peace where humans and nature will coexist is in our hands.

We need your participation to save our common future from the climate crisis.



**Greener is Cleaner**

# Global Warming

## Burning Earth



In the summer of 2019, we experienced a catastrophe of global warming that caused abnormal events. Europe suffered heat waves of over 40°C throughout the summer, recording 45.1°C in southern France. The highest temperature record of over 32°C in Alaska was renewed with more than 100 wildfires.



The extreme speed of thawing is also occurring at the fastest rate in history. In July, glaciers of South Korea's size melted daily in the Arctic. Globalization of unusually high temperatures has resulted in 1440 heatwave-related deaths in Korea over the past 11 years, with 2946 heatwave deaths in Europe alone in the summer of 2019. These are the effects brought by only a 1°C increase after the Industrial Revolution.

The 1°C rise in temperature has accelerated the 'extinction of humans' life,' and the rising sea level of 25cm is submerging many islands worldwide.



Simultaneous forest fires in the Siberian coniferous zone. The average temperature in June in Siberia was more than 10°C higher than the average temperature between 1981 and 2010. More than 100 Arctic forest fires produced 100 megatons of carbon between June 1 and July 21.  
@Pierre Markuse CC



Polar ice snow is melting at the fastest rate since observation. This is because abnormal high temperature phenomenon persists to reveal the background of the Far Eastern Region.

What would happen if global warming continues in a greater extent? Once the Antarctic ice caps have all melted, the sea level will rise by more than 1 meter, and the harvest productivity will drop, causing humanity to starve. Then, the era of climate catastrophe, fraught with heat waves, cold weather, droughts, and floods, will come.



Global warming is caused by increased greenhouse gases such as carbon from fossil fuel abuse. If current carbon emissions continue, current temperatures are expected to rise by  $4^{\circ}\text{C}$  at the end of the 21st century. What have humans done so far to prevent the foreseeable climate crisis?



**'Constitution' to stop climate catastrophe but no 'execution!'**



Students in South Korea protested in response to the government's ignorance of the seriousness and urgency of the climate crisis.

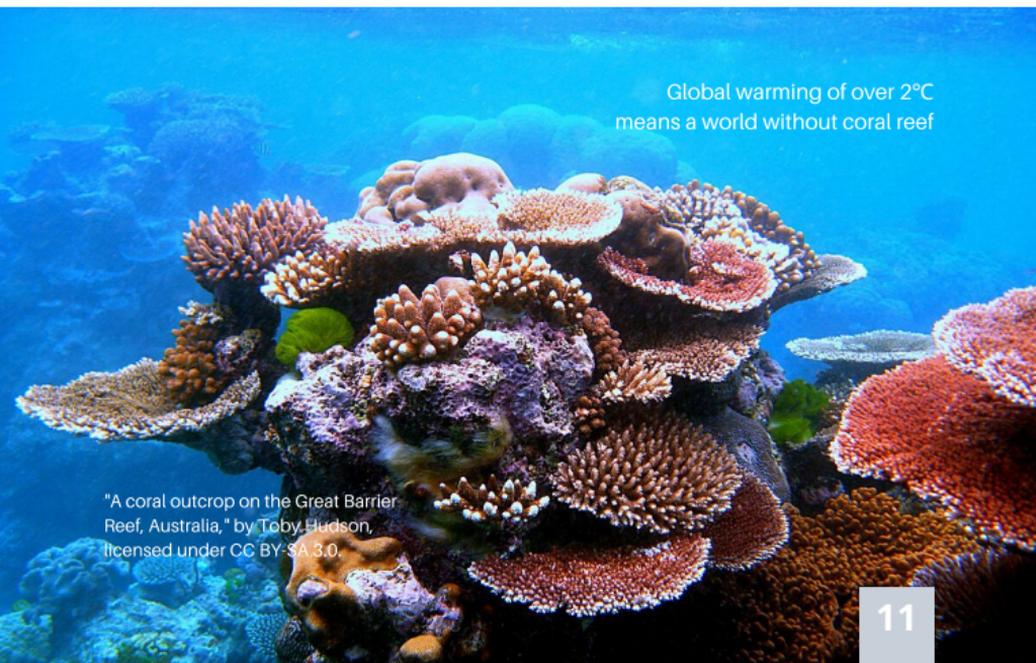
In 1992, mankind endorsed an agreement in Rio, Brazil, in response to climate change. Since then, the parties of the Convention have endeavored to create a carbon emissions management system with global participation. As a result, countries around the world submitted their plans for carbon reduction (INDCs) and the ratified the Paris Agreement, a 'constitution' in controlling global warming to within 2 °C and below 1.5 °C by the end of the 21st century, at the 2015 UN Conference on Climate Change in Paris.

The problem is that the INDCs submitted by countries predict the total greenhouse gas emission of 2030 to be between 52 billion and 58 billion CO<sub>2</sub> tons. This indicates global warming at 3°C, not 1.5°C, the target for global warming control. To achieve the 1.5 °C target, emissions in 2030 must be reduced from 25 billion to 35 billion CO<sub>2</sub> tons.

To this end, the COP called on the UN's Climate Scientists Group, the Intergovernmental Panel on Climate Change, to prepare a special report on the 1.5°C target.

The IPCC unanimously approved the 「Special Report on Global Warming of 1.5 °C」 (hereinafter referred to as the 1.5 °C Special Report) at the 48th IPCC General Assembly held in October 2018 in Incheon.

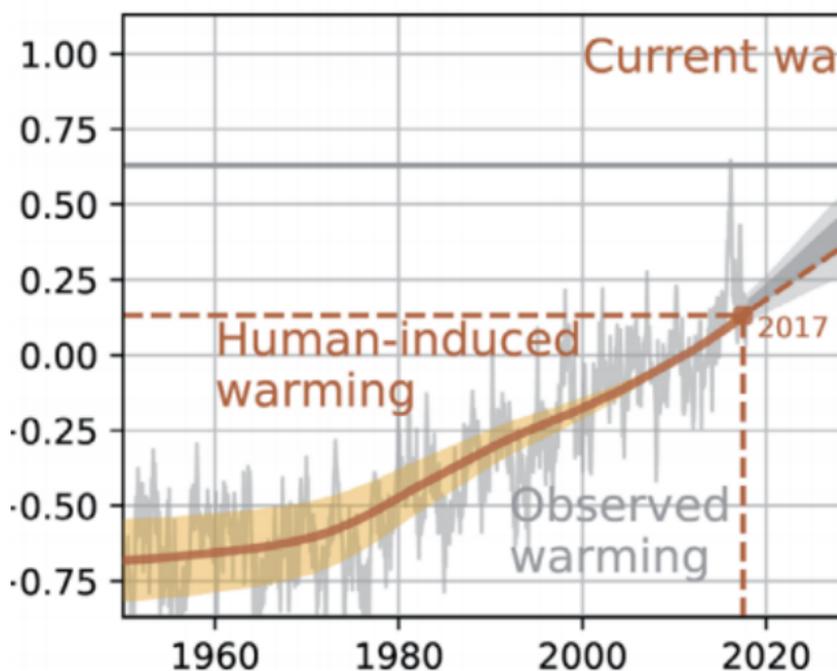
The 「Special Report on Global Warming of 1.5 °C」 emphasized that if we prevent climate change by 1.5°C, 1) we can reduce sea level rise by more than 10cm above sea level compared to the that caused by 2°C change, protecting tens of millions of lives and their shelter, 2) increase the survival rate of corals from 99% extinction to 30%, 3) protect three times more insect habitats, more than twice as many plants and vertebrate habitats compared to the that caused by 2°C change, and 4) that global warming should be kept within 1.5°C, the acceptable temperature for the global ecosystem.



Global warming of over 2°C  
means a world without coral reef

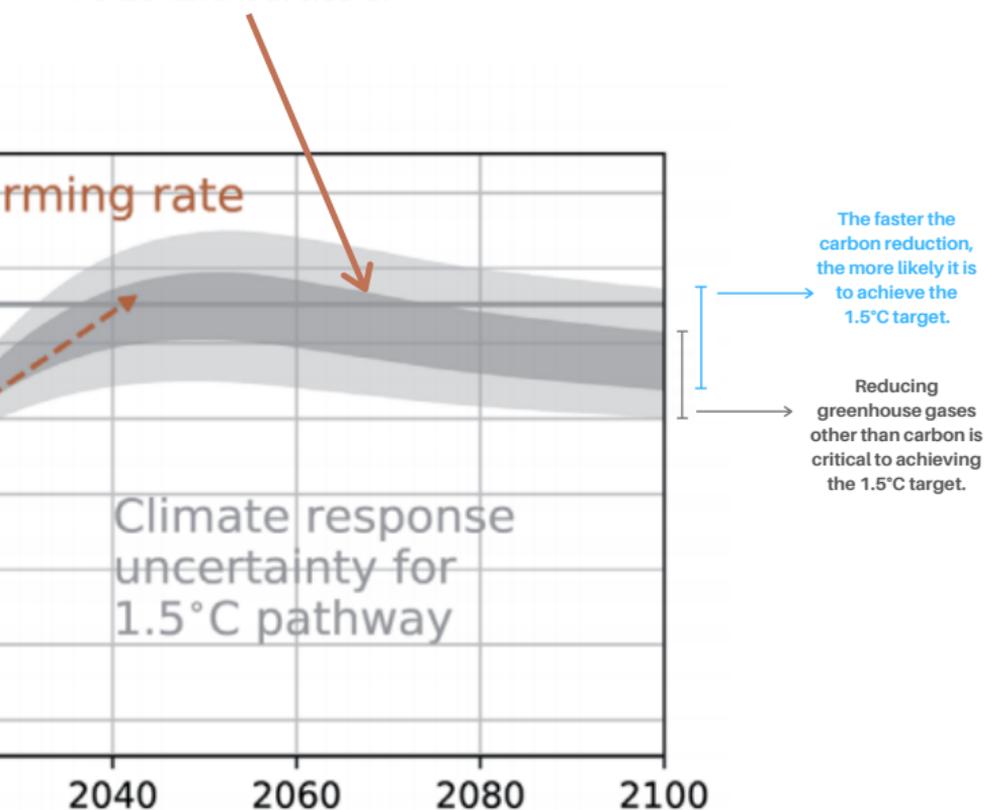
"A coral outcrop on the Great Barrier Reef, Australia," by Toby Hudson, licensed under CC BY-SA 3.0.

## Warming relative to 2006-2015 ( $^{\circ}\text{C}$ )



Greenhouse gases other than carbon, such as methane, nitrous oxide, sulfur hexafluoride, and aerosols, generate warming effects from tens to thousands times of more carbon than those generated by carbon.

The level of warming corresponding to 1.5°C relative to pre-industrial, given the central estimate of observed warming of 0.87°C from 1850–1900 to 2006–2015, is demonstrated by the horizontal line at 0.63°C.



Allen, M.R., O.P. Dube, W. Solecki, F. Aragón-Durand, W. Cramer, S. Humphreys, M. Kainuma, J. Kala, N. Mahowald, Y. Mulugetta, R. Perez, M. Wairiu, and K. Zickfeld, 2018: Framing and Context Supplementary Material. In: Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty [Masson-Delmotte, V., P. Zhai, H.-O. Pörtner, D. Roberts, J. Skea, P.R. Shukla, A. Pirani, W. Moufouma-Okia, C. Péan, R. Pidcock, S. Connors, J.B.R. Matthews, Y. Chen, X. Zhou, M.I. Gomis, E. Lonnoy, T. Maycock, M. Tignor, and T. Waterfield (eds.)]. Available from <https://www.ipcc.ch/sr15>

# Until when and how much should we **reduce carbon?**



How long and how much do we have to reduce our carbon footprint to meet our goals?

The 「Special Report on Global Warming of 1.5 °C」 briefly answered as follows:

**Δ After global carbon emissions peak in 2020, we must reduce carbon emissions afterwards.**

**Δ We should enter year 2050 with a zero net emissions state with no carbon emissions.**

**Δ Reduce carbon emissions by 45% since to 2010 by 2030.**

**Δ 45% carbon reduction plan and implementation rules for 2030 should be formalized.**

## Carbon emission reduction deadlines and challenges to achieve 1.5°C

Time Limit	Task	Implications and Intentions
2020	Reach carbon emission peak	Establish binding guidelines for COP 25, 26 (2020) and implement them immediately
2030	Reach 55% of 2010 carbon emissions	Reduction of global carbon emissions by 45% of 2010 carbon emissions
2050	Reach zero net emissions	Non-carbon greenhouse gas emissions are also significantly reduced, but zero emissions of non-carbon greenhouse gases are expected to be unlikely to be achieved by 2050.
2050 ~2100	Keep levels below zero net emissions	Need continuous reinforcement to keep emission levels below 2050 carbon emissions
after 2100	Continue to keep climate change effect below 1.5°C	It would take over 1000 years to reach the carbon emission levels of pre-Industrial Revolution.

### Organized the main points of the IPCC Fifth Assessment Report

IPCC, 2014: Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)]. IPCC, Geneva, Switzerland, 151 pp.

# The future is decided **9 months** from now



Although the Paris climate agreement is a constitution, it is not an enforcement law that forces implementation. Rulebooks, or the law of implementation, should be adopted to actually cut global carbon emissions. 「Special Report on Global Warming of 1.5 °C」 contains suggestions from climate science to formulate the implementation guideline.

Has the 「Special Report on Global Warming of 1.5 °C」 been ratified at the Climate Change Conference? Unfortunately, the UN Climate Change Conference (COP24) held in December 2018 stranded opposition from climate villains such as the United States, Russia, Saudi Arabia, and Kuwait, resulting in a failure to ratify.

The only remaining opportunity to adopt the proposal of climate science is the Climate Change Conference planned to be held in UK in December 2020. That meeting must break through the climate villains.



Youth activist Greta Thunberg attended the UN Climate Action Summit in New York on September 23 at the invitation of the Secretary-General. Greta crossed the Atlantic from Plymouth in southern England on August 14th, aboard a 18-meter yacht that runs on wind and sunlight instead of a high-carbon flight. © Greta Thunberg Facebook

Sweden's 16-year-old Greta Thunberg, who launched a protest against climate change, triggered climate action by young people around the world. She crossed the Atlantic in August on wind-driven yachts instead of carbon-rich planes to participate in the Climate Action Summit in New York. There, she asked the world leaders to come up with a guideline for achieving a 1.5°C vote.

South Korean youths came to the streets on March 15 and May 24 instead of schools and shouted, 'Don't gamble with our future!' Despite their cries, the government and parliament remain silent. How dare you?



Korea is vulnerable to energy and food security with a 6% energy self-sufficiency rate and a 23% grain self-sufficiency rate. As such, it is the world's seventh largest carbon emitter, and among the OECD's largest member countries, the largest growth rate of carbon emissions. Korea also needs to change to avoid the climate catastrophe future in order to achieve its 1.5 °C target.



# Remaining 1.5 °C carbon budget

## Truth about the global community

The 「Special Report on Global Warming of 1.5 °C」 estimates with 66% accuracy that the remaining carbon budget to be 420 billion CO<sub>2</sub> tons (IPCC, 2018). If global emissions of 32.5 billion CO<sub>2</sub> tons (IEA) in 2017 continue, the carbon budget will be depleted in 2032.

2018



**2100**

### **Truth about Korea**

The 2030 National Greenhouse Gas Reduction Roadmap, announced by the government in September 2018, set the national reduction target for 2030 to 5.36 billion CO<sub>2</sub> tons- a 37% reduction from the business-as-usual (BAU) 8.55 million. Ironically, this is an excess of emissions that cannot meet the 1.5-degree target. Reduction targets should be reestablished for the carbon budget.

# Citizens' Climate Emergency Actions



It is the last golden time to save the planet from the climate catastrophe before the 26th Climate Change Convention (COP26) will be held in December 2020. During this time of less than nine months, there is a need for emergent civil action for the climate to escape the danger. A global climate strike was undertaken by young people and adults from all over the world from the 20th to 27th of September 2019. In Korea, the climate strikes happened on the 21th and 27th of September across the country.

What should Korea, the world's 7th largest carbon emitter, do to protect the climate? The three proposals and demands for climate crisis emergencies are as follows:

## Three proposals for 'climate crisis'

### 01

#### **Government should proclaim the climate and ecological crisis**

Responding to the climate crisis should be a top priority of the government, and opposing policies should be abolished.

### 02

#### **Adopt a binding policy for zero carbon emissions**

A policy for 50% carbon emissions by 2030 and zero emissions before 2050 should be in place by June 2020.

### 03

#### **Set up a social discussion body to deal with the climate crisis**

The climate crisis is a broad, complex, and urgent issue that is difficult to cope with under the current government policies and the representatives of the National Assembly. Social institutions will let us discuss alternative policies adhering to climate justice.



Temperature that  
protects “us”



South Korean civil society also took part in an emergency climate action by participating in a week-long rally of global climate action, which began on September 20. The photo shows people sitting in a frame of '1.5 °C,' the temperature to protect the planet and us, urging the government's prospective response to climate change on May 20, 2018. Human Lettering © Korean Federation For Environmental Movement



# Greener is Cleaner

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This small book  
is a non-profit book created to show  
that democracy and the natural environment  
of Korea can be revived.

**Please join our journey by taking action.**