

#### Fight Against Climate Change

#### The Threat We are Facing

- In January of 2002, 3250km² of Anartica's Larsen B Ice Shelf collapsed
- In the summer of 2007, the Arctic sea ice that had remained frozen for the past thousands of years started melting. Its surface area shrunk to a quarter of what it was before.
- Why is this happening?



#### 1. The Threat We are Facing – Climate Change



• Climate: The average of weather data over a long time in a place.



• Climate change: phenomenon in which the climate gradually changes over time

#### 2. How has the climate changed?

1 °



 Global warming, a dramatic change in the past 100 years

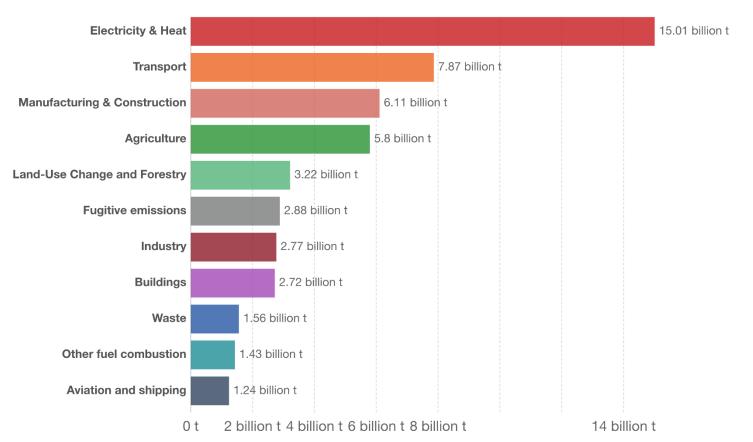
 Other changes that occur along with global warming

#### 3. Why has the climate changed?



Greenhouse gas emissions are measured in tonnes of carbon dioxide-equivalents (CO2e).





Greenhouse gases and greenhouse effect



Artificial factors due to human activity

### 4. Why did greenhouse gases increase? (1)

- Coal and oil, the historically most efficient energy source
- Material abundance and convenience of life achieved by the use of fossil fuels



#### 4. Why did greenhouse gases increase? (2)

 Methane emitted by livestock

 Excessive meat consumption by humans in modern day



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#### 4. Why did greenhouse gases increase? (3)

- Huge increase in the amount of garbage & production of greenhouse gases in breaking down the garbage
- Indiscriminate deforestation & reduction in the Earth's ability to self-purify through forests



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#### Climate change in our daily lives

 Have you experienced the impact of climate change in your life?

• Look for evidence of climate change in our surroundings.



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### 5. What problems does climate change cause? (1)



Due to accelerating global warming, ecosystems are changing around the world and genetic variations are occurring. The photo is of a mutated apple discovered Devon, England. ©Royal Horticultural Society

Affects 82% of the ecosystem

 Genetic variation, increase in mosquitoes, extinction of marine life

Threat to human survival

### 5. What problems does climate change cause? (2)



UN photo/Evan Schneider

Threat to humanity's health:
Germs and pests,
contamination of water
sources



Increase in natural disasters:

Floods, typhoons, droughts, landslides, forest fire

### 5. What problems does climate change cause? (3)



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Food crisis



Loss of arable land due to desertification, floods and forest fires: Extinction of species and decrease in crop yield

Water shortage

### 5. What problems does climate change cause? (4)



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Developing countries and those living in poverty are more vulnerable to the impacts of climate change such as natural disasters, food shortages, loss of home

#### It can no longer be neglected!

- Now is the time to take action!
- The Earth's temperature will rise 6°C at most by 2100!
- For every 1°C increase in temperature, mortality rate increases by 3% and the risk of malaria increases up by to 20%.

6°



#### 6. How can we stop climate change?



- Cut greenhouse gas emissions in half by 2030
- Eliminate greenhouse gas in the atmosphere by 2050!

Global cooperation is necessary

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### 7. National efforts to combat climate change



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• Paris Agreement on Climate Chan (2016)

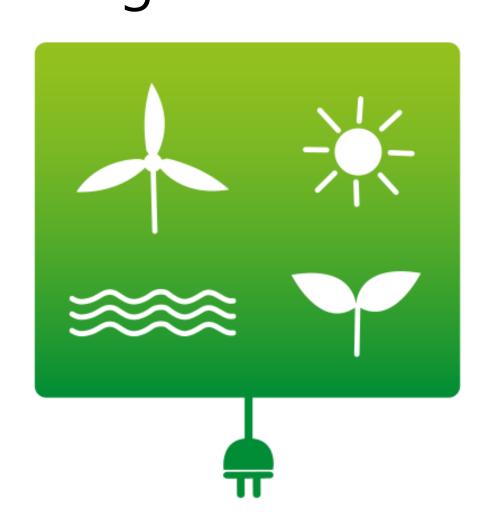
• Kyoto Protocol (2005)

• UNFCCC (1994)

# 7. National efforts to combat climate change

Kyoto Protocol		Paris Agreement
Reduction of greenhouse gas emission (1st: 5.2%, 2 <sup>nd</sup> : 18%)	Goal	Target of 2oC, efforts to reach 1.5oC
Focus on reduction of greenhouse gases	Breadth	Reduction of greenhouse gases as well as application, finance, technology transfer, capacity building, transparency, etc.
Mostly developed countries	Who	All signtory parties

#### 7. National efforts to combat climate change



- Policies and laws to minimize greenhouse gas emissions
- Development of clean energy
- Environmental certification marks: Encourage business and individuals to produce and consume environmentally friendly products

 Protection and support for those vulnerable to climate change

#### 7. Individual action for climate change



Greenpeace photo/Gordon Welters

- Conserve energy and resources
- Use public transportation and bicycles
- Use environmentally friendly products
- Plant trees

#### Action from everyone is needed!

 Climate change is a global issue. No one nation or person can stop it alone.

 Cooperation of all people from all nations is needed.



## 8. People fighting against climate change (1)

Greta Thunberg: Swedish-born environmental activist (born 2003)

- In August of 2018, she missed school and held a one-person protest calling for measures to address climate change
- In September of 2019, she sailed across the Atlantic Ocean on a solar yacht to attend the UN Climate Summit Action

"You have stolen my dreams and my childhood with your empty words."



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## 8. People fighting against climate change (2)

Anote Tong: Politician and the 5th president of the island country Kiribati in the South Pacific.

- Raised the international community's awareness of the threat faced by Pacific islands of being submerged underwater due to climate change
- Awarded the Sunhak Peace Prize in 2015 for his efforts for the Pacific Ocean environment and active response to ensure the survival of his nations citizens facing risk of rising sea levels



UN photo/Manuel Elias

## 8. Organizations fighting against climate change

• IPCC: Intergovernmental Panel on Climate Change, established in 1988 to assess comprehensive measures to mitigate climate change





• Greenpeace: International nongovernmental environmental protection organization formed in 1971, that campaigns to stop global warming and climate change and protect the humanity





"The world is waking up and change is coming, whether you like it or not."



- Environmental activist Greta Thunberg

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