

Formulate 1<sup>st</sup> adaptation plan as Japan's government in order to progress adaptation to climate change impacts systematically and comprehensively

- The IPCC's Fifth Assessment Report shows that global mean temperature will increase even if reduction of GHG is advanced.
- It is necessary to promote "adaptation" in order to address climate change impacts.
- "Report on Assessment of Impacts of Climate Change in Japan and Future Challenges (Comment Submission)" was formulated by the Central Environment Council on March 2015.
- Climate Change in Japan
  - 【Current situation】 Annual mean temperature has increased 1.14 °C per 100 years, the number of days with daily precipitation of over 100mm tends to increase.
  - 【Projection】 Average 1.1 °C (0.5-1.7°C) increase with stringent mitigation efforts  
Average 4.4 °C (3.4-5.4°C) increase with massive emissions of GHG

\* comparison of the end of 21<sup>st</sup> century with the end of 20<sup>th</sup> century

## < Basic concept (Part 1) >

### ■ Vision of society

- By promoting adaptation measures to climate change impacts, to build a secure, safe and sustainable society that is able to minimizing and avoiding damage for life of citizens, properties, economics, and natural environment due to its impacts, and to be resilient against damage.

### ■ Basic strategy

1. Mainstreaming adaptation into government policy
2. Enhancement of scientific findings
3. Promotion of understanding and cooperation through sharing and providing information about climate-related risks
4. Promotion of adaptation in region
5. Promotion of international cooperation and contribution

### ■ Period

- Considered with long-term perspective till the end of 21st century, showing the basic direction in about coming 10 years.

### ■ Basic approach

- Adaptation will be promoted by using an adaptive approach that involves a repeated cycle of conducting ongoing observation, monitoring, and projection of climate change and its impacts, implementing regular assessments of impacts, considering and implementing adaptation measures, monitoring the state of progress, and making revisions as required.
- An assessment of climate change impacts is to be implemented and formulated approximately every five years, and the Plan is to be revised as required.

## < Sectoral measures (Part 2) >

### ■ Agriculture, Forests/Forestry, Fisheries

○ **Impacts:** e.g. Declining ratio of first-class rice due to high temperature ; Poor coloring of apples and other fruits

○ **Adaptation:** e.g. Development and diffusion of high-temperature-resistant varieties of rice; Switch to superior colored varieties of fruit

### ■ Water Environment / Water Resources

○ **Impacts:** e.g. Changes in water temperatures, water quality; Increases in drought due to increases in the number of rainless days and decrease in the total amount of snowfall

○ **Adaptation:** e.g. To promote measures to reduce the loads flowing into lakes and marshes ; To promote efforts to formulate drought response timelines

### ■ Natural Ecosystems

○ **Impacts:** e.g. Changes in vegetation distribution and expansion of wildlife distribution due to increase in temperature and shift in days of snow-melting earlier

○ **Adaptation:** e.g. To ascertain the changes in ecosystems and species by using monitoring ; To conserve and restore healthy ecosystems with high climate change resilience

### ■ Natural Disasters / Coastal Areas

○ **Impacts:** e.g. Increasing frequency and intensity of water disasters, sediment-related disasters, and storm surge disasters due to increasing heavy rainfall and typhoons

○ **Adaptation:** e.g. Steady facility improvements and maintenance; Promotion of urban development with consideration of disaster risks; Formulation of hazard maps and evacuation plans

### ■ Human Health

○ **Impacts:** e.g. Increases in heat stroke; Expansion of the suitable habitat for vectors of infectious diseases

○ **Adaptation:** e.g. Awareness raising regarding prevention and treatment

### ■ Industrial / Economic Activity

○ **Impacts:** e.g. Impacts on business production activities and leisure; Increasing insured losses

○ **Adaptation:** e.g. To promote efforts by businesses in collaboration between public and private sectors ; Development of adaptation technologies

### ■ Life of Citizenry and Urban Life

○ **Impacts:** e.g. Damage to infrastructure and critical services

○ **Adaptation:** e.g. To enhance disaster prevention functions of distribution/logistics, ports and harbors, railways, airports, roads, water supply infrastructure, waste treatment facilities, and traffic safety facilities

## < Basic international measures (Part 3) >

### ■ Observation and Monitoring, Research and Studies

○ Enhancement of observation systems (e.g. ground observation, ships, aviation, and satellites)

○ Advancement of modeling technologies and simulation technologies

### ■ Sharing and providing information related to climate risk

○ e.g. Climate change adaptation information platform

### ■ Promotion of adaptation in region

○ e.g. Implementation of model projects that assist the formulation of adaptation plans in local governments; Development of obtained results to other local governments

### ■ International measures

○ Support for developing countries (e.g. assistance of climate change impact assessments and formulation of adaptation plans)

○ e.g. Contribution to human resource development through international networks such as the Asia Pacific Adaptation Network (APAN)