

### **3. Setting Targets in the Short, Medium, and Long Term**

#### **– Necessity of the Perspective Regarding the Timeframe -**

This section describes the discussions about setting long, medium and short term goals as a specific approach in seeking to achieve the ultimate objective of the UNFCCC.

In order to meet the ultimate objective of the UNFCCC, setting targets in the medium term (2030-2050) and long term (after 2100), in addition to short term (until around 2020), will promote effective global risk management.

#### **<Significance of Long and Medium Term Targets>**

- In order to meet the ultimate objective of the UNFCCC, setting targets in the medium term (2030-2050) and long term (after 2100), in addition to the short term (until around 2020), will promote effective global risk management.
- Although at present no international agreements have been reached on long or medium-term targets, the process of setting medium and long-term targets is expected to give various actors a chance to think about what they can and must do to deal with the risks of climate change faced by citizens, society, and the market. It should also promote consensus-building among actors.
- While the process of setting medium and long-term targets is significant for building agreements in the international community, it will also be important for Japan to make a proposal for some kind of targets. In doing so, Japan can increase its range of collaboration with other countries, and can contribute to progress in obtaining international agreements.

#### **<Long, Medium and Short-term Targets>**

- Long-term targets are the embodiment of the ultimate goal under the UNFCCC, and are exemplified by targets for the stabilization level of GHG concentrations, etc. These targets also serve to encourage the international community to recognize that some impacts of climate change are inevitable, and to undertake GHG reduction and impact adaptation measures. For example, they can serve as guidelines for human activity and decision-making about what ought to be done on what

kind of schedule, and for assessing the future risks of climate change and specifying measures for mitigation and adaptation.

- Medium-term targets are regarded as milestones on the road towards long-term target achievement. More specifically, one medium-term target could be a 60 percent cut in CO<sub>2</sub> emissions by 2050. Medium-term targets can be set in the context of specifying restrictions on carbon, checking the efficacy of various measures and strengthening efforts where necessary, materializing necessary actions (what to do now in view of how long it takes to develop and diffuse technology and to reform socio-economic structures) and promoting investment in technology and equipment to cope with climate change and providing the needed physical and institutional infrastructure..
  
- Medium and long-term targets can be set for any of the following five stages.
  - Stage 1: Human activity (energy production and consumption, etc.)
  - Stage 2: GHG emission
  - Stage 3: GHG concentrations
  - Stage 4: Average temperature rises
  - Stage 5: Climate change-induced impactsThere is a time lag between stages as well as differences in levels of uncertainty.
  
- Short-term targets are for specific commitments to which will be applied until around 2020. At present, the reduction commitments under the Kyoto Protocol correspond to the short-term targets although no such targets have been set beyond 2012 yet.
  
- The Kyoto Protocol aims to achieve the reduction of greenhouse gas emissions by developed countries to 5% less than 1990 levels between 2008 and 2012, and is of great significance as the first specific action taken by the international community towards reducing greenhouse gases. However, at the same time this is merely a first step towards reaching stabilization of greenhouse gas concentrations and realizing the ultimate objective of the UNFCCC, and the international community must work together to deal with the fact that further reductions on a global scale are an unavoidable necessity.

### **<Flexibility in Medium and Long-Term Targets>**

- One way to ensure flexibility in long-term targets would be to have the relevant language call for policy to be devised that will prevent major adverse effects, and on that basis, specific targets can be identified in view of current scientific knowledge This would also allow for modification of targets

in accordance with future changes in circumstances and improvements in scientific knowledge. Medium-term targets could be somewhat more specific than long-term targets.

- In relation to risk management that entails uncertainty, the following techniques could be used in setting medium and long-term targets:
  - Review targets after a certain period of time,
  - set targets on the safe side, and
  - set targets based on current scientific knowledge, while clearly stating the degree of uncertainty.

### **<Examples of Medium and Long-term Targets in European Countries>**

- Some examples exist of medium and long-term targets that have been set by major European countries (see Table 3.1). Many of the long-term targets take the form of atmospheric GHG concentrations, for example a target of stabilizing CO<sub>2</sub> concentrations at 450 / 550 ppm or less and concentrations of all GHG in the Kyoto Protocol at 550 ppm (equivalent to CO<sub>2</sub> concentrations of 500 ppm or less). Many of the medium-term targets that aim for 2050 deal with emissions, for example, a target of reducing national emissions by 60 percent, or of reducing global GHG emissions to 3 billion tons of carbon equivalent.
- In addition, the EU has reached agreements on the need to control rises in temperature at the surface of the Earth to within 2.0 degrees Celsius of the pre-Industrial Revolution level. This was also reaffirmed at the meeting of the Council of the European Union held in Luxembourg on the 14<sup>th</sup> of October, 2004.

Table 3.1 Examples of Long and Medium-term Targets set by European Countries

Country / Issued date	Agency	Long-term target	Medium-term target
Germany (Oct. 2003)	German Advisory Council on Global Change (WBGU; Wissenschaftliche Beirat der Bundesregierung Globale Umweltveränderungen)	<ul style="list-style-type: none"> <li>• Limit surface temperature rise to 2 degrees Celsius or less as compared to pre-industrial levels and to 0.2 degrees Celsius or less per decade.</li> <li>• Limit CO<sub>2</sub> concentrations to below 450 ppm.</li> </ul>	Reduce energy-related CO <sub>2</sub> emissions by 45-60 percent compared to 1990 levels by 2050.
UK (Jun.2000/ Feb. 2003)	Energy White Paper	Prevent atmospheric CO <sub>2</sub> concentrations from exceeding 550 ppm.	Reduce CO <sub>2</sub> emissions by 60 percent compared to current levels by 2050.
France (Mar. 2004)	Interministerial Task-Force on Climate Change (MIES; Mission Interministérielle de l'Effet de Serre)	Stabilize CO <sub>2</sub> concentrations at 450 ppm or less.	<ul style="list-style-type: none"> <li>• Limit per capita CO<sub>2</sub> emissions to 0.5 tC (by 2050).</li> <li>• Reduce global emissions to 3 billion tC (by 2050).</li> </ul>
Sweden (Nov. 2002)	Swedish Environmental Protection Agency	Stabilization of atmospheric concentrations of all GHGs at 550 ppm (CO <sub>2</sub> concentrations at 500 ppm or less) as stipulated in the Kyoto Protocol	Reduce per capita emissions of CO <sub>2</sub> and other GHGs of developed countries to below 4.5 tC by 2050, and increasingly reduce thereafter (8.3 tC currently).

Sources: German Advisory Council on Global Change (2003); UK Energy White Paper (2003), French Interministerial Task Force on Climate Change (2004); Swedish Environmental Protection Agency (2002)