

## Global Warming and Pollution, and the Ministry of Foreign Affairs

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The emission of carbon dioxide (CO<sub>2</sub>), methane, and other greenhouse gases (GHG) through human activities such as the burning of fossil fuels is causing global climate change, and the impact from these emissions is expected to expand in the future. The average temperature of the earth as a whole has increased 0.6° C over the past century. In Japan the average temperature rose 1° C during the same period.

Most GHG emissions, which cause global warming, are the result of the socioeconomic activities of developed countries, and the emissions have risen sharply in recent years due to the economic growth of such emerging developing countries as China and India. It is expected that the total amount of GHG emissions from developing countries could exceed that from developed countries. Therefore, reducing these emissions effectively will require efforts not only by developed countries, but by developing countries as well.

In addition, with the rise of average temperature in the world, it is expected that several phenomena such as the following will occur: a rise in sea level and resulting submersion of lowland and seaboard regions; a change of climate pattern such as heavy rainfall, flood, drought, and revolving storms (cyclone); an acceleration of desertification; influence on agriculture (such as the shift of the grain belt towards a higher latitude); and an effect on health and welfare (the expansion of tropical epidemics such as malaria and breakbone fever [dengue]). Especially in the least developed countries in Africa and vulnerable states like island countries, serious damage has been of concern. In order to secure sustainable development and human security in these countries, it is important to give assistance to adaptation measures, which counter the harmful effects and damage caused by global warming. It is also important to improve energy efficiency and introduce renewable energy sources so as to accomplish the simultaneous pursuit of attaining economic growth and poverty reduction and reducing the GHG emissions. Furthermore, it is necessary to have adaptation measures such as the protection of coastal forests and rehabilitation of the coast, farming reforms, and ensuring water resources. These efforts against global warming could bring benefits such as the prevention of air pollution, protection of the natural environment, and improvement of agricultural productivity.

Japan's ODA has been provided with a principle of pursuing environmental conservation and development in tandem, and has long placed emphasis on cooperation in the environmental sector. Indeed, Japan's ODA in general environmental protection is the largest of all DAC countries. Although Japan is moving forward with efforts to fulfill commitments under the Kyoto Protocol,<sup>16</sup> Japan's ODA is also playing an important role in encouraging developing countries to carry out their measures against global warming. This cooperation by Japan serves as an important platform for demonstrating its initiative with respect to the environment in the international arena. Support provided through international organizations is effective in this respect, and Japan provides support through international organizations in conjunction with bilateral support.