

The Paris Agreement: Climate Mission Sustainable?

The parties to the United Nations Framework Convention on Climate Change last year embarked on a collective long-term commitment to achieve a net zero CO₂ emission society. **Yamaguchi Mitsutsune**, special advisor for the Research Institute of Innovative Technology for the Earth (RITE), examines some of the challenges ahead.

The 21st session of the Conference of the Parties (COP21) to the United Nations Framework Convention on Climate Change (UNFCCC) held in Paris last December ended in success thanks partly to meticulous consensus building by the French government and cooperation between the United States and China. The Paris Agreement represents the pledge of all parties to make effort towards cutting or limiting greenhouse gases. It represents a groundbreaking effort to act on climate change measures in a number of ways. First, all parties have agreed to pursue cuts or limits to greenhouse gases and toward that end have pledged to make specific contributions toward 2025–2030 and beyond. Every five years, they will report the progress they’ve made on their

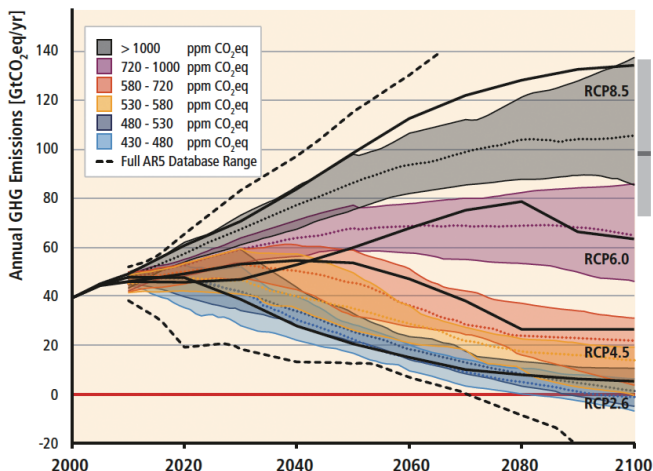
existing contributions while submitting enhanced ones, with their report then undergoing a technical expert review. Under the “global stocktake” provision, every five years the parties will assess the progress they’ve made collectively at the global level. Not only developed countries have agreed to provide financial resources to developing nations in order to support their efforts, but also developing nations themselves are encouraged to allocate funds on a voluntary basis.

In this way, the Paris Agreement represents a truly revolutionary step towards furthering climate change efforts. Moreover, parties will attempt to hold the increase in the global average temperature to well below 2°C above pre-industrial levels while pursuing efforts to limit the temperature increase to 1.5 °C above pre-industrial levels. They will

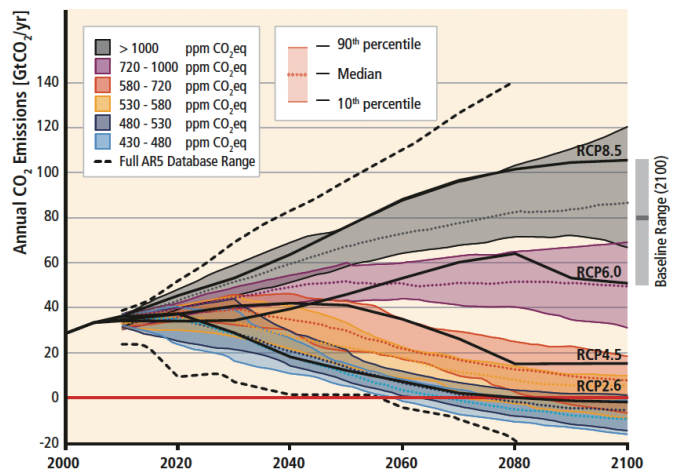
seek to achieve a balance between anthropogenic emissions from sources and the removal by sinks of greenhouse gases (GHGs) in the second half of this century. The Paris Agreement that represents a combination of the bottom-up approach involving pledges made by each country and the top-down approach involving targeted limits on temperature increases will be the best possible modality at the present time. Clearly another relevant fact is that carbon emissions over the past two years have remained unchanged despite economic growth. That said, it is clear from UNFCCC and International Energy Agency (IEA) analysis that, extrapolating from existing pledges, achieving a 2°C target will be nearly impossible, so achieving that target will require that countries make all the more enhanced efforts when upgrading

Figure 1: 2°C Target Scenario vs. Negative Emissions (left panel GHGs; right panel CO₂)

Total GHG Emissions in all AR5 Scenarios



Total CO₂ Emissions in all AR5 Scenarios



Source: Extract from Figure 6.7 in IPCC/AR5/WG3/Ch.6

