

Summary of Global Greenhouse Gas Inventory Databases

*Richao Cong¹, Makoto Saito¹, Masako Senda¹, Akihiko Ito¹, Shamil Maksyutov¹, Ryuichi Hirata¹

1. Center for Global Environmental Research, National Institute for Environmental Studies

Greenhouse gas (GHG) inventory is a national inventory made to represent the annual GHG emissions or removals by sources. The main purpose of that is helping human to make plans on GHG mitigation so as to control the future national GHG concentrations in the atmosphere at a level that would not destroy the current climate system. After the 1996 Intergovernmental Panel on Climate Change (IPCC) guidelines for national GHG inventories, 2006 IPCC guidelines for national GHG inventories was published. However, many versions of national GHG inventory databases in the world have come out recently. In this paper, the national GHG inventory databases made by Carbon Dioxide Information Analysis Center (CDIAC), Emissions Database for Global Atmospheric Research (EDGAR), Energy Information Administration (EIA), International Energy Agency (IEA), Global Carbon Budget (GCB) and United Nations Framework Convention on Climate Change (UNFCCC) are characterized and compared. The analysis between them is also conducted on distinct and the usability aspects. According to the analysis results, the usability of these versions could be ranked as, EDGAR, CDIAC, IEA, UNFCCC, GCB and EIA. Finally, some suggestions are provided.

Keywords: GHG inventory, Carbon dioxide emissions, Energy consumption, Global warming, IPCC