



Highlights of [GAO-10-818](#), a report to congressional requesters

Why GAO Did This Study

Nations that are Parties to the United Nations Framework Convention on Climate Change periodically submit inventories estimating their greenhouse gas emissions. The Convention Secretariat runs a review process to evaluate inventories from 41 “Annex I” nations, which are mostly economically developed nations. The 153 “non-Annex I” nations are generally less economically developed and have less stringent inventory reporting guidelines. The Department of State (State) represents the United States in international climate change negotiations. GAO was asked to report on (1) what is known about the comparability and quality of inventories and barriers, if any, to improvement; (2) what is known about the strengths and limits of the inventory review process; and (3) views of experts on implications for current and future international agreements to reduce emissions. GAO analyzed inventory reviews and inventories from the seven highest-emitting Annex I nations and seven of the highest emitting non-Annex I nations. GAO also selected and interviewed experts.

What GAO Recommends

GAO recommends that the Secretary of State work with other Parties to the Convention to (1) continue encouraging non-Annex I Parties to improve their inventories and (2) strengthen the inventory review process’s quality assurance framework. State agreed with GAO’s findings and recommendations.

View [GAO-10-818](#) or [key components](#). For more information, contact John Stephenson at (202) 512-3841 or stephensonj@gao.gov.

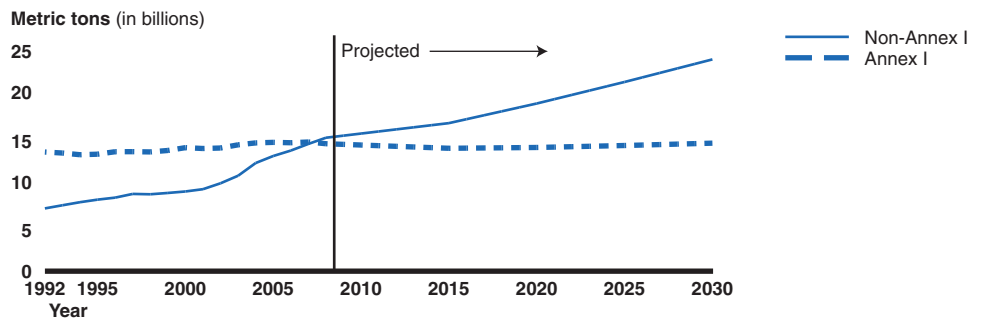
CLIMATE CHANGE

The Quality, Comparability, and Review of Emissions Inventories Vary Between Developed and Developing Nations

What GAO Found

Recent reviews by expert teams convened by the Secretariat found that the 2009 inventories from the selected Annex I nations—Australia, Canada, Germany, Japan, Russia, the United Kingdom, and the United States—were generally comparable and of high quality. For selected non-Annex I nations—Brazil, China, India, Indonesia, Malaysia, Mexico, and South Korea—GAO found most inventories were dated and of lower comparability and quality. Experts GAO interviewed said data availability, scientific uncertainties, limited incentives, and different guidelines for non-Annex I nations were barriers to improving their inventories. The lack of comparable, high quality inventories from non-Annex I nations is important because they are the largest and fastest growing source of emissions, as shown in the figure, and information about their emissions is important to efforts to address climate change. There are no inventory reviews for non-Annex I nations.

Energy-Related Carbon Dioxide Emissions in Annex I and Non-Annex I Nations, 1992-2030



Source: GAO analysis of Energy Information Administration data.

Experts said the inventory review process has notable strengths for Annex I nations as well as some limitations. The review process, which aims to ensure nations have accurate information on inventories, is rigorous, involves well-qualified reviewers, and provides feedback to improve inventories, according to experts. Among the limitations experts identified is a lack of independent verification of estimates due to the limited availability of independent statistics against which to compare inventories’ data. Also, GAO found that the review process’s quality assurance framework does not independently assess concerns about a limited supply of reviewers and inconsistent reviews, which could pose challenges in the future.

Experts said Annex I nations’ inventories and the inventory review process are generally sufficient for monitoring compliance with current agreements to reduce emissions. For non-Annex I nations, however, experts said the current system may be insufficient for monitoring compliance with future agreements, which may require more reporting. As part of ongoing negotiations to develop a new climate change agreement, State has emphasized the need for better information on emissions from high-emitting non-Annex I nations. While improving the inventory system is important to negotiations, some experts said disagreements about emissions limits for developed and developing nations pose a greater challenge.