



# **The Development of Japan's National System**

**Elsa Hatanaka**

*Greenhouse Gas Inventory Office of Japan (GIO)  
Center for Global Environmental Research (CGER)  
National Institute for Environmental Studies (NIES)*

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# Requirements for a national system

- **Kyoto Protocol** required each Annex I Party to have its **National System for GHG inventory preparation** in place by the end of 2006 (Article 5). (Decision 19/CMP.1 - Guidelines for National Systems)
- A “**National System**” includes everything relevant to national GHG inventory preparation.
  - ✓ Legal basis
  - ✓ Institutional Arrangements
  - ✓ Flow of the Inventory Compilation Process
  - ✓ Quality Assurance and Quality Control (QA/QC) of the Inventory
  - ✓ Inventory Improvement Plan
- This information is included in the NIR (National Inventory Report), as well as in the QA/QC plan.

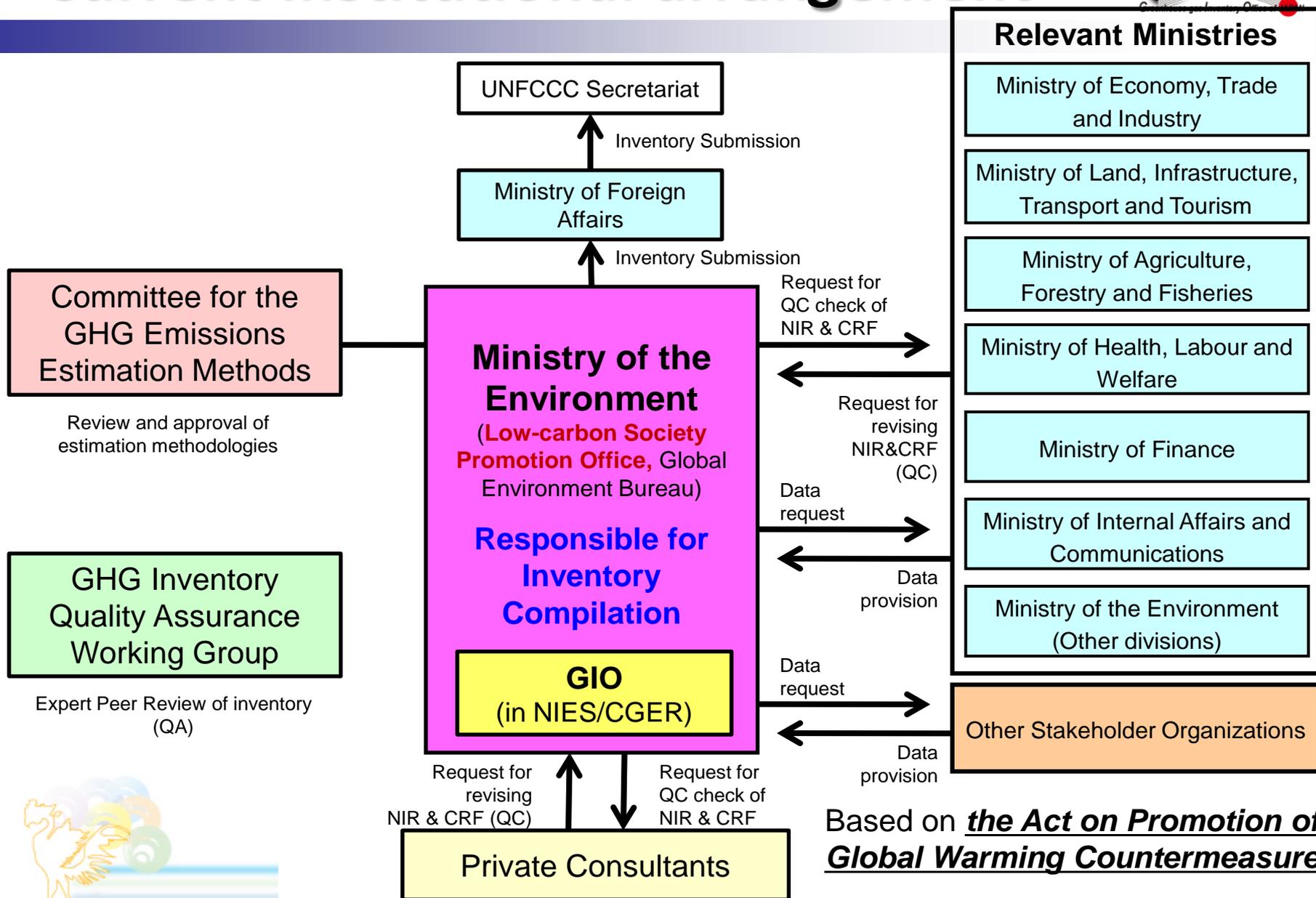


# Japan's legal basis for inventory preparation

- Article 7 of the Act on Promotion of Global Warming Countermeasures
  - In order to prepare the inventory prescribed in Article 4, paragraph 1 (a) of the United Nations Framework Convention on Climate Change and the annual inventory prescribed in Article 7, paragraph 1 of the Kyoto Protocol, the national government shall calculate greenhouse gas emissions and removals in Japan each year, and the results shall be published as prescribed by an Ordinance of the Ministry of the Environment.



# Current Institutional arrangement



Based on the Act on Promotion of Global Warming Countermeasures



# GIO's tasks in relation to the inventory

- Compile Japan's GHG inventory
  - ✓ Planning and management
  - ✓ Data collection for estimation
  - ✓ Estimation of emissions/removals
  - ✓ Compilation of CRF and NIR
  - ✓ QC check in inventory compilation
  - ✓ Archiving information and data
- Arrange for QA to be conducted
- Respond to UNFCCC inventory review
- Request the Committee for the GHG Emissions Estimation Methods to consider issues raised in the process of QA and inventory review

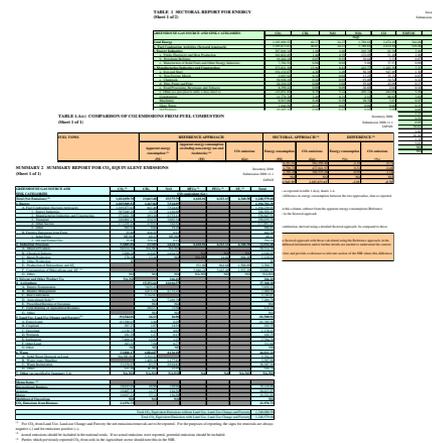
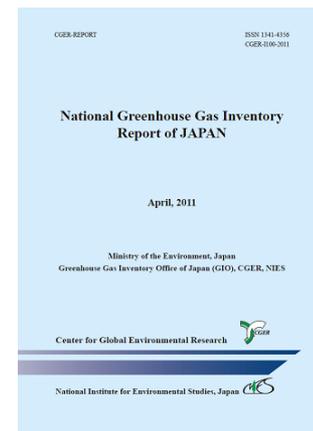


TABLE 1. NATIONAL REPORT FOR ENERGY

TABLE 2. BASIC COMPARISON OF CO2 EMISSIONS FROM FUEL COMBUSTION

TABLE 3.1. NATIONAL REPORT FROM ANS, LIGHT-GAS AND OTHERS

Common Reporting Format (CRF)



National Inventory Report (NIR)

*All tasks are carried out upon consultation with MOE as needed.*

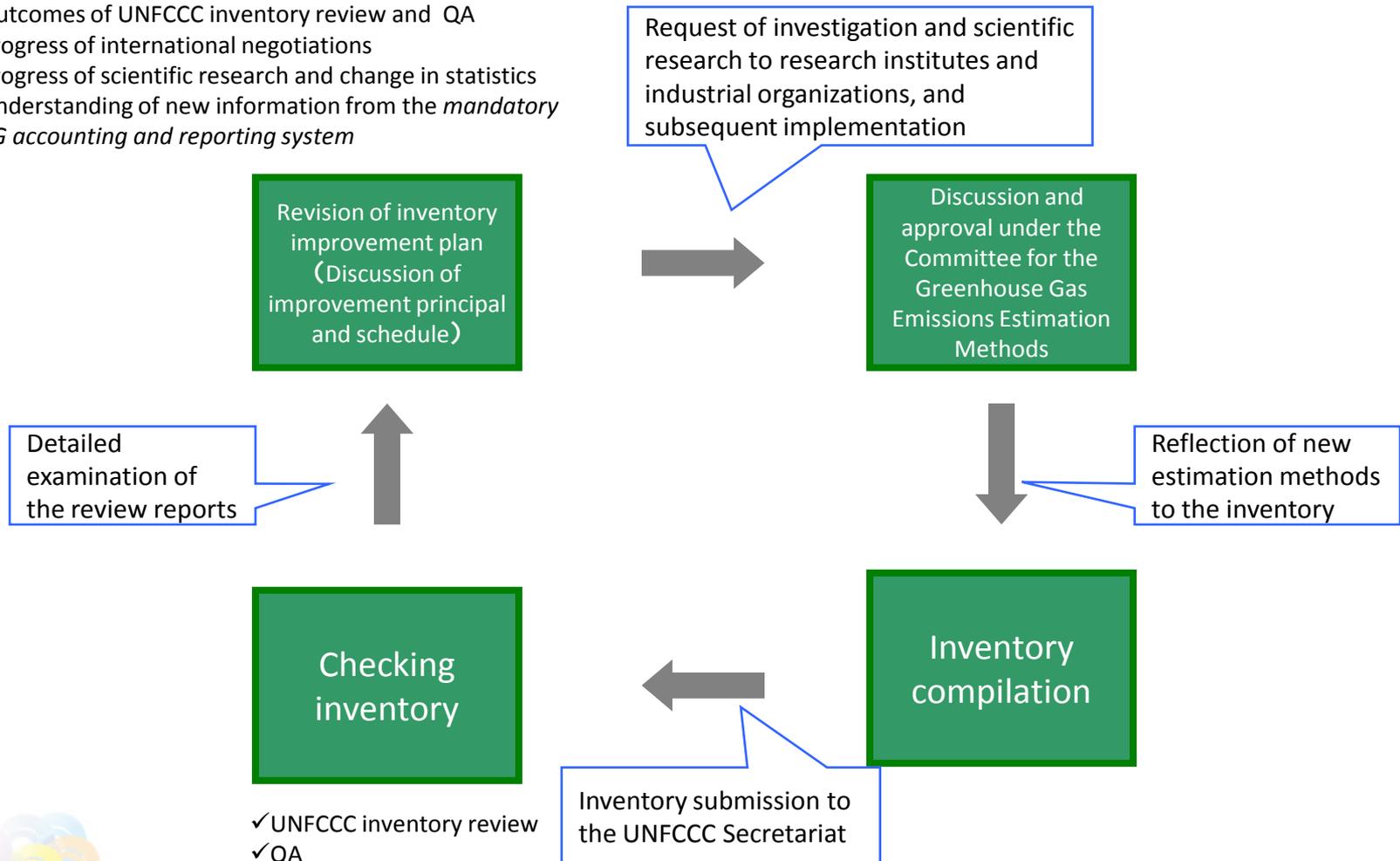
*Greenhouse gas Inventory Office of Japan*



# Improvement process

Matters taken into account:

- ✓ Outcomes of UNFCCC inventory review and QA
- ✓ Progress of international negotiations
- ✓ Progress of scientific research and change in statistics
- ✓ Understanding of new information from the *mandatory GHG accounting and reporting system*



# Inventory compilation schedule (Annual)

| Process |  | Relevant Entities   | Jun         | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr   | May |
|---------|--|---|-------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|-----|
| 1       | Discussion for improvement   | MOE, GIO  | →           |     |     |     |     |     |     |     |     |     |       |     |
| 2       | Consideration of inventory improvements & Holding the meeting of the Committee | MOE, (GIO, Private consultant)                                  | →           |     |     |     |     |     |     |     |     |     |       |     |
| 3       | Data collection  | MOE, GIO, Relevant Ministries/ Organization, Private consultant | Preliminary |     |     |     | →   |     |     |     | →   |     | Final |     |
| 4       | Preparation of draft CRF and NIR   | GIO, Private consultant   |             |     |     |     |     |     |     | →   |     |     |       |     |
| 5       | Implementation of QC and coordination with relevant ministries                 | MOE, GIO, Relevant Ministries, Private consultant               |             |     |     |     |     |     |     |     | →   |     |       |     |
| 6       | Finalizing draft CRF and NIR   | MOE, GIO, Private consultant                                    |             |     |     |     |     |     |     |     |     | →   |       |     |
| 7       | Submission and official announcement   | MOE, Ministry of Foreign Affairs, GIO                           |             |     |     |     |     |     |     |     |     |     | ★     |     |
| 8       | QA-WG  | MOE, GIO, Relevant Ministries                                   | →           |     |     |     |     |     |     |     |     |     |       | →   |



# Inventory compilation schedule (Jan - April)

| Process |   | Jan |   |   | Feb |   |   | Mar |   |   | Apr |   |   |
|---------|---|-----|---|---|-----|---|---|-----|---|---|-----|---|---|
| 1       | Update of calculation files                                   | ■   | ■ | ■ | ■   | ■ | ■ | ■   | ■ | ■ | ■   | ■ | ■ |
| 2       | Data collection   | ■   | ■ | ■ | ■   | ■ | ■ | ■   | ■ | ■ | ■   | ■ | ■ |
| 3       | Preparation of NIR  | ■   | ■ | ■ | ■   | ■ | ■ | ■   | ■ | ■ | ■   | ■ | ■ |
| 4       | Estimation of emissions/removals                              | ■   | ■ | ■ | ■   | ■ | ■ | ■   | ■ | ■ | ■   | ■ | ■ |
| 5       | Preparation of CRF  | ■   | ■ | ■ | ■   | ■ | ■ | ■   | ■ | ■ | ■   | ■ | ■ |
| 6       | 1 <sup>st</sup> QC of draft NIR and CRF                       | ■   | ■ | ■ | ■   | ■ | ■ | ■   | ■ | ■ | ■   | ■ | ■ |
| 7       | 2 <sup>nd</sup> QC of revised NIR and CRF                     | ■   | ■ | ■ | ■   | ■ | ■ | ■   | ■ | ■ | ■   | ■ | ■ |
| 8       | Finalizing NIR and CRF → Submission and official announcement | ■   | ■ | ■ | ■   | ■ | ■ | ■   | ■ | ■ | ■   | ★ | ■ |

The following aspects are important for timely submission:

- ✓ Planning and management
- ✓ Clear understanding of the preparation process and one's role
- ✓ Clear understanding of required data for estimation

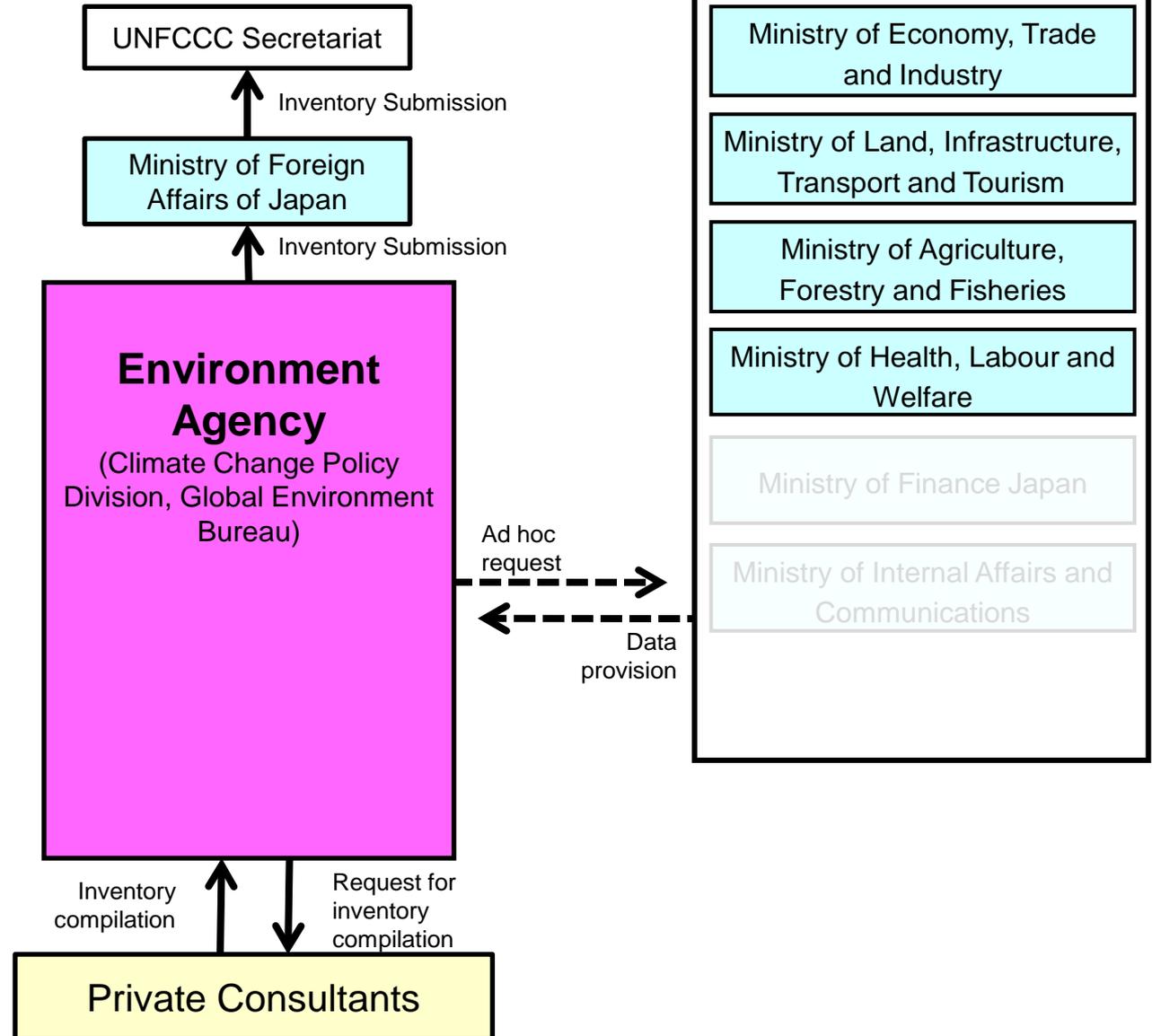
# **HISTORY: THE DEVELOPMENT OF JAPAN'S NATIONAL SYSTEM**



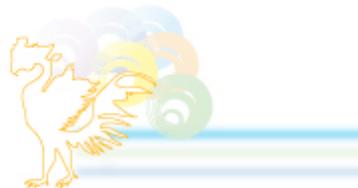
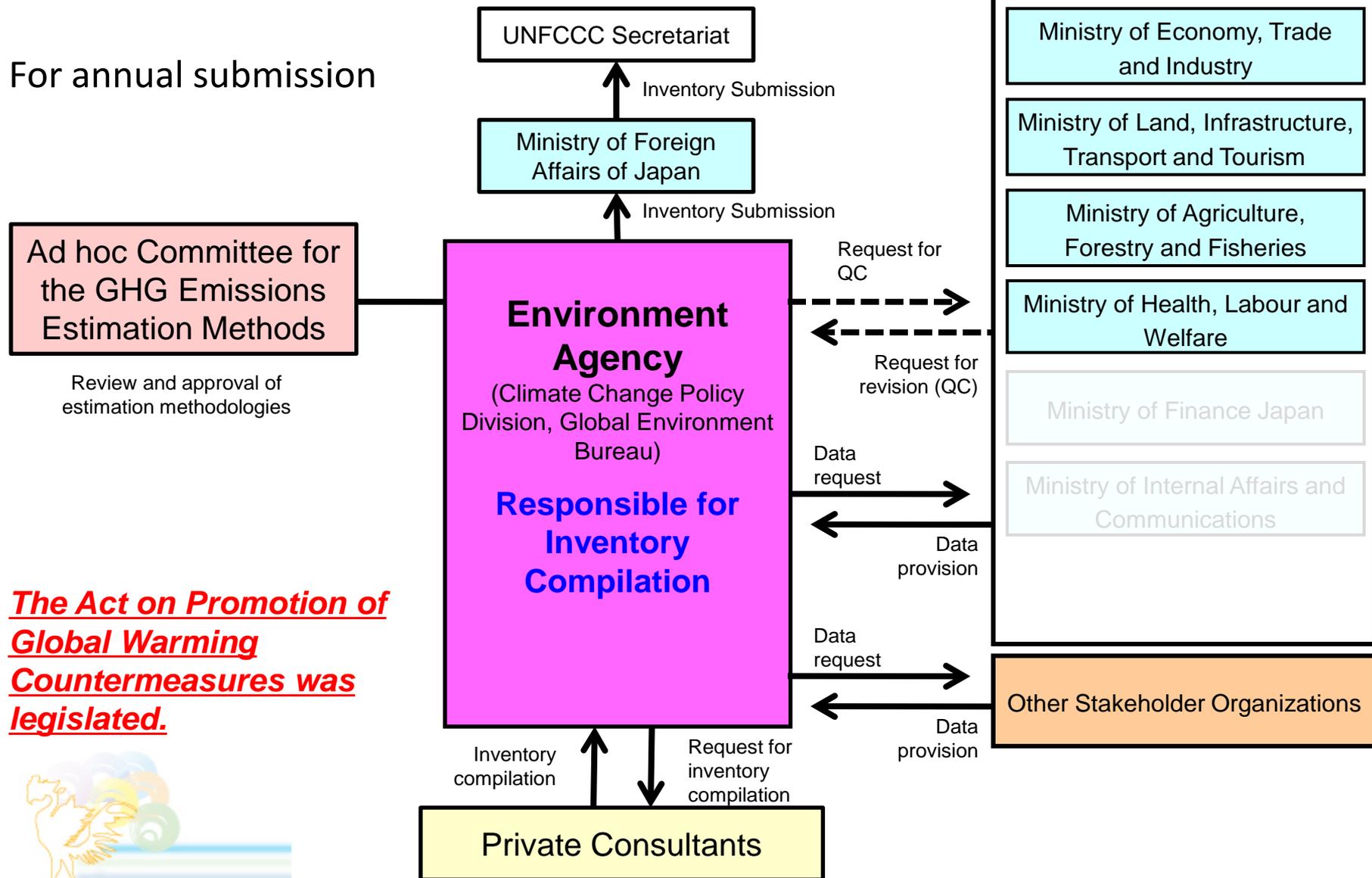
# Phase 1 (1992-1994)



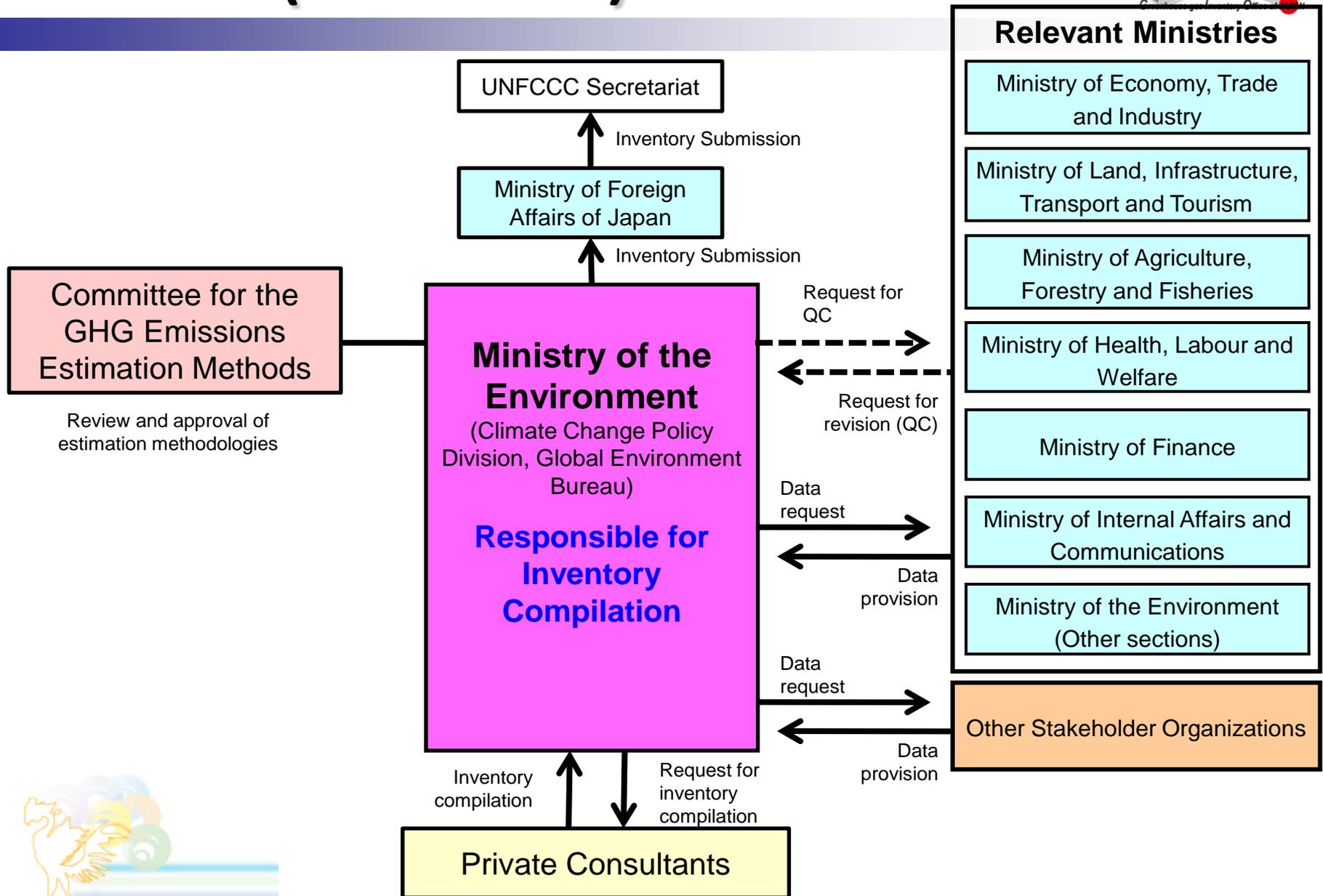
For Initial NC



# Phase 2 (1996-1998)



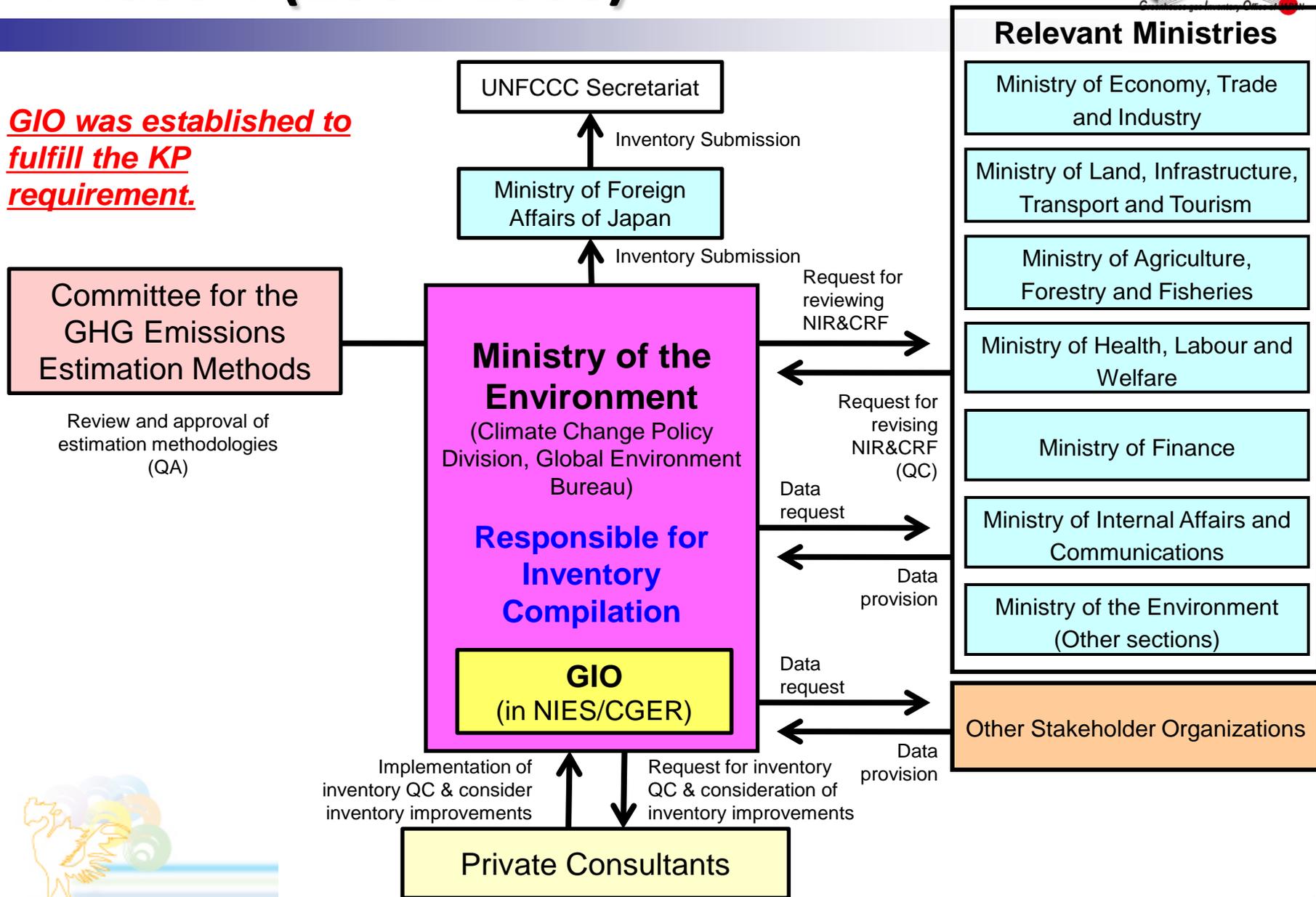
# Phase 3 (1999-2002)



# Phase 4 (2002-2008)



**GIO was established to fulfill the KP requirement.**





# Summary

- Japan's national system has been developed to meet requirements of the Convention and the Kyoto Protocol, especially with a focus on the latter.
- The establishment of the Greenhouse Gas Inventory Office (GIO) in 2002 was at the core of the development of the National System.
- Organizing a National System for inventory compilation takes a long time, but is a necessary element for periodical national GHG inventory preparation.
- It ensures time-series consistency and effective compilation of inventory.



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## Welcome to the Website of the Greenhouse Gas Inventory Office of Japan (GIO)

To promote the prevention of global warming, GIO is engaged in the development of annual greenhouse gas inventories and the national inventory report, which involves the necessary tasks such as international response, and conducts research that is needed for inventory preparation and utilizes developed inventories.

Under the Kyoto Protocol that Japan ratified in June of 2002, the greenhouse gases subject to the quantified reduction commitments are carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF<sub>6</sub>). These quantified reduction commitments have been established for each country. During the first commitment period, from 2008 to 2012, Japan has committed to reducing these greenhouse gases by 6% from the base year's emissions (1990 for CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O, while 1995 for HFCs, PFCs, and SF<sub>6</sub>). Therefore, accurate emissions inventories are more essential than ever. All developed countries have been responsible for the development of the national inventory on emissions and removals of greenhouse gases mentioned above by one year prior to the first commitment period (2007). The greenhouse gas inventories are crucial databases to report the achievement on the reduction commitments under the Kyoto Protocol.



### What's New!

### Archives



### Focus

- October 6, 2007 [Proceedings of the 5th Workshop on Greenhouse Gas Inventories in Asia](#)
- May 16, 2008 [The GHGs Emissions Data of Japan \(2006\)](#)
- May 16, 2008 [National GHGs Inventory Report of JAPAN \(2008\)](#)
- December 25, 2007 [Renewal "National GHGs Inventory Report of JAPAN \(2007\)" Ver.5.0](#)
- December 18, 2007 [Agenda of the 5th Workshop on Greenhouse Gas Inventories in Asia](#)

- [Workshops on Greenhouse Gas \(GHG\) Inventories in Asia Region](#)
- [National GHGs Inventory Report of JAPAN](#)

# Thank you

## GIO Website

<http://www-gio.nies.go.jp/index.html>



*Greenhouse gas Inventory Office of Japan*