

# **Session III: Cross Cutting Issues “Institutional Arrangements for Consistency and Continuous Reporting”**

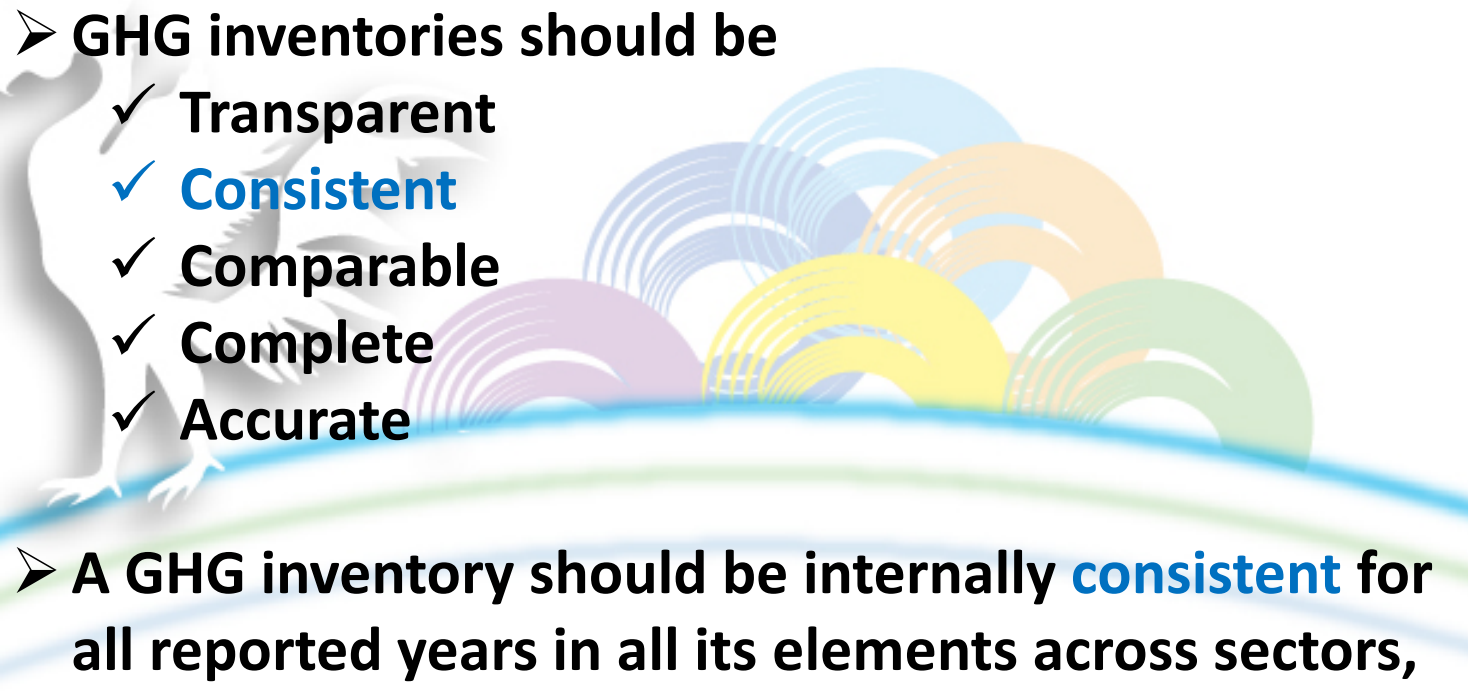
**WGIA 13 in Bali, Indonesia  
August 5th, 2015**

**Akira OSAKO  
Greenhouse Gas Inventory Office of Japan (GIO)  
National Institute for Environmental Studies (NIES)**



# **Introduction**

## What is CONSISTENCY?

- 
- GHG inventories should be
    - ✓ Transparent
    - ✓ **Consistent**
    - ✓ Comparable
    - ✓ Complete
    - ✓ Accurate
  - A GHG inventory should be internally **consistent** for all reported years in all its elements across sectors, categories and gases, in terms of methodologies and data sets

## Due Date of Inventory Submission

### ➤ **Non-Annex I Party**

- Non-Annex I Parties shall submit a biennial update report every two years.
- Non-Annex I Parties should submit their first biennial update report by December 2014.

Source: UNFCCC biennial update reporting guidelines for Parties not included in Annex I to the Convention

### ➤ **Annex I Party**

- Due by 15 April each year

Source: Guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part I: UNFCCC reporting guidelines on annual greenhouse gas inventories

## Session III

### ➤ **Japan**

- “Towards continuous annual reporting of National Inventory”  
by Akira Osako

### ➤ **China**

- “For consistence in China Greenhouse Gas Inventory”  
by Prof. Su Mingshan

### ➤ **Malaysia**

- “Institutional Arrangements for Making Continuous GHG Inventory of BUR”  
by Dr. Yap, Kok Seng

### ➤ **Thailand**

- “Thailand GHG Inventory Institutional Arrangement”  
by Dr. Nattanich Asvapoositkul



# **Towards continuous annual reporting of National Inventory --- Japan's Experience ---**

**WGIA 13 Session III  
August 5th, 2015**

**Akira OSAKO  
Greenhouse Gas Inventory Office of Japan (GIO)  
National Institute for Environmental Studies (NIES)**

# ***Outline of Presentation***

## **Key Elements of Japan's National System for Continuous Annual Reporting**

### **1. Institutional Arrangements**

The relevant entity staffs involved in the inventory preparation and their roles are determined.

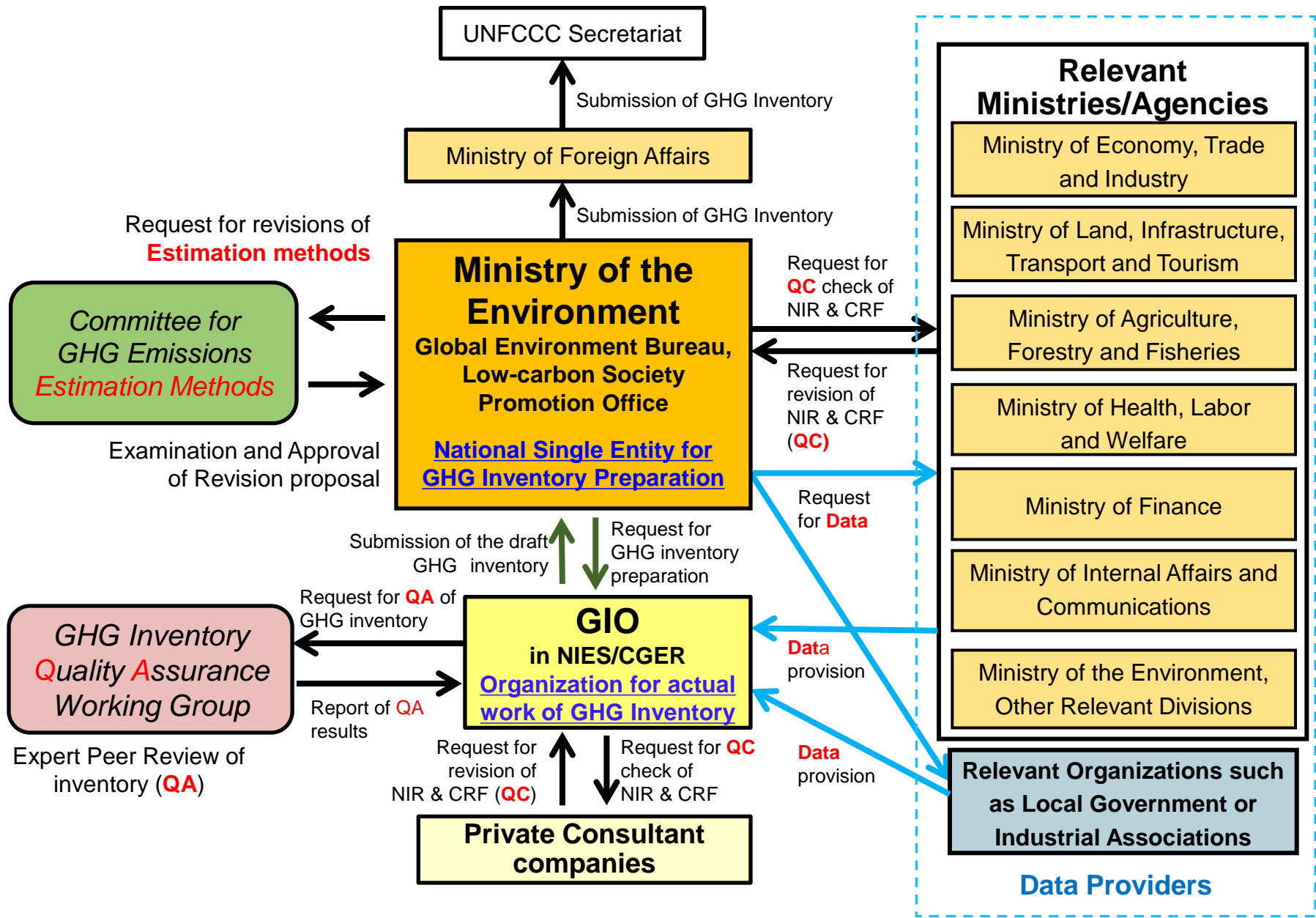
### **2. Inventory Submission Schedule**

The series of works for inventory submissions are scheduled based on the experiences in the past.

### **3. Inventory Compilation Procedures**

The rules for the inventory compilation procedures such as data collection, emission estimate calculations and archiving are determined.

# 1. Japan's Institutional Arrangements (1)

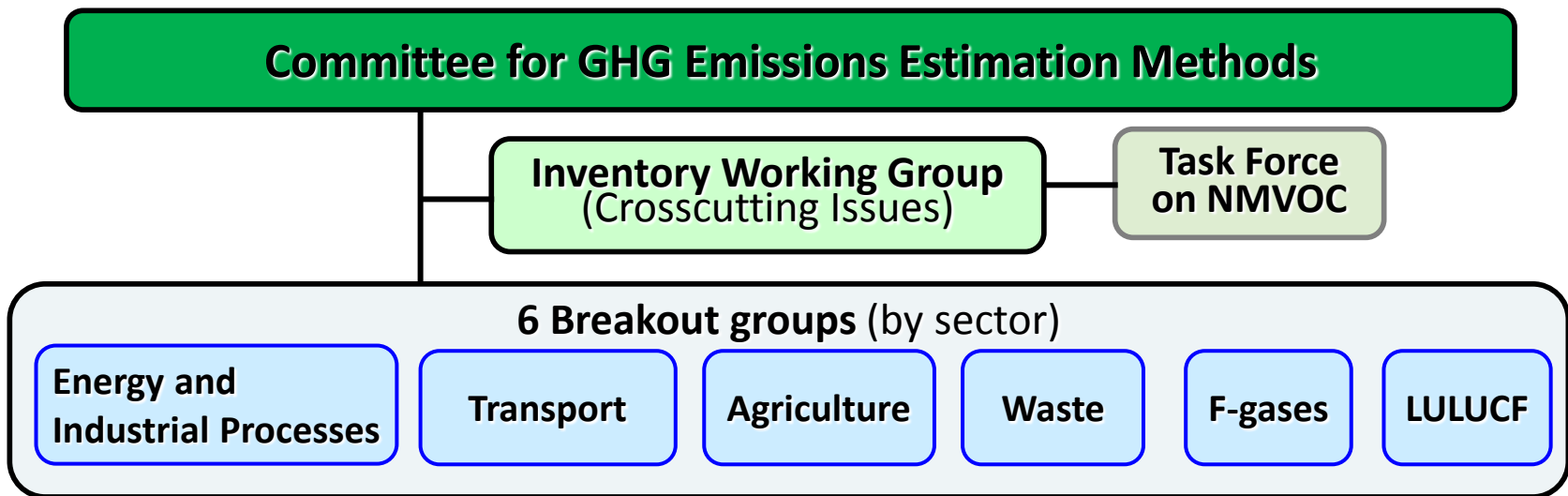




# 1. Japan's Institutional Arrangements (2)

## Committee for GHG Emissions Estimation Methods

- ◆ Created and run by the Ministry of the Environment.
- ◆ Considers the methods for calculating inventory emissions and removals, and considers the selection of parameters such as activity data and emission factors.
- ◆ The inventory WG, breakout groups and taskforce comprise approximately 60 delegated experts in various fields such as research institutes, universities, and industry organizations, and consider suggestions for inventory improvements.
- ◆ Meeting to be held once or twice annually for review of issues to be addressed and approval of its solution on inventory
- ◆ Private consultant companies perform technical researches and administrative works as a secretariat to the committee.



# 1. Japan's Institutional Arrangements (3)

## Roles and responsibilities of each entity involved in the inventory preparation process (1)

Entity	Roles and responsibilities
<b>MoE</b> (Low-carbon Society Promotion Office, Global Environment Bureau, Ministry of the Environment)	<ul style="list-style-type: none"><li>• The single national agency responsible for preparing Japan's inventory.</li><li>• Responsible for editing and submitting the inventory.</li><li>• Coordinates the QA/QC activities for the inventory.</li><li>• Prepares, confirms, and approves the QA/QC plan and the inventory improvement plan.</li><li>• Officially requests the data used for inventory to the relevant ministries and organizations.</li><li>• Requests for QC check of the NIR and CRF drafts to the relevant ministries.</li></ul>

# 1. Japan's Institutional Arrangements (4)

## Roles and responsibilities of each entity involved in the inventory preparation process (2)

Entity	Roles and responsibilities
<b>GIO/CGER/NIES</b> (Greenhouse Gas Inventory Office of Japan, Center for Global Environmental Research, National Institute for Environmental Studies)	<ul style="list-style-type: none"><li>• Performs the actual work of inventory compilation.</li><li>• Responsible for inventory calculations, editing, and the archiving and management of all data.</li></ul>
Relevant ministries/agencies	<ul style="list-style-type: none"><li>• Confirm of data provided for the preparation of the inventory.</li><li>• Confirm of the inventory (CRF, NIR, spreadsheets, and other information) prepared by the GIO (Category-specific QC).</li><li>• (When necessary), respond to questions from expert review teams about the relevant statistics or data, and prepare comments on draft reviews.</li><li>• (When necessary), respond to the visits by expert review teams.</li></ul>

# 1. Japan's Institutional Arrangements (5)

## Roles and responsibilities of each entity involved in the inventory preparation process (3)

Entity	Roles and responsibilities
Relevant organizations such as local government or industrial associations	<ul style="list-style-type: none"><li>• Confirm of data provided for the preparation of the inventory.</li><li>• (When necessary), respond to questions from expert review teams about the relevant statistics or data, and prepare comments on draft reviews.</li></ul>
Private consulting companies	<ul style="list-style-type: none"><li>• Quality control (QC) of inventory (CRF, NIR, spreadsheets, and other information) compiled by the Ministry of the Environment and the GIO.</li><li>• (When necessary), providing support for responding to questions from expert review teams and for preparing comments on draft reviews.</li><li>• (When necessary), providing support for responding to the visits by expert review teams.</li></ul>

# 2. Inventory compilation Annual Schedule

## Annual

Process		Relevant Entities	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	
1	Discussion for improvement (★ Kick-off meeting)	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	GHG Inventory Quality Assurance Working Group	MOE, GIO, Relevant Ministries	→											→	

# 3. Inventory Compilation Procedures (1)

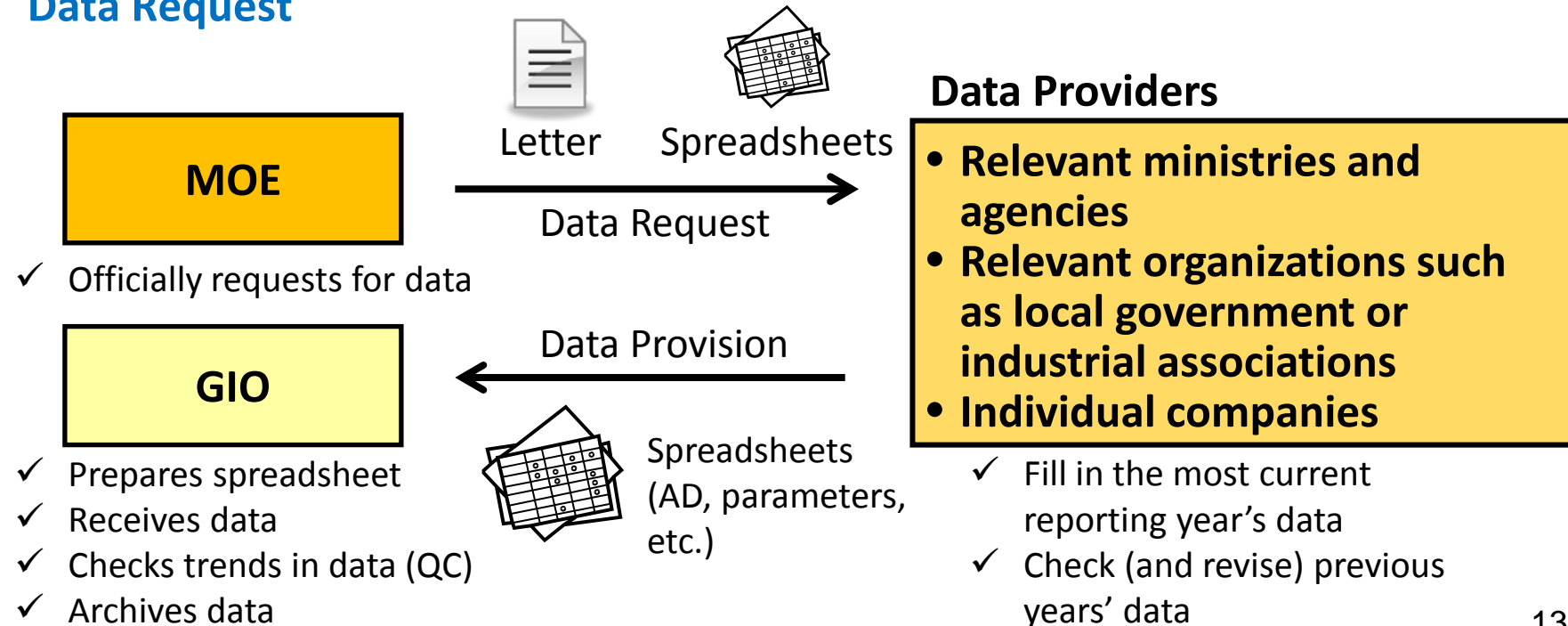
## 3-1. Data Collection Process (1)

### ➤ Sources of Activity data (and parameters)

- Published statistics
- Unpublished official data provided by relevant ministries/ agencies
- Unpublished data provided by relevant organizations such as local government or industrial associations
- Unpublished data provided by individual companies

Collected  
by Data  
Request

### ➤ Data Request



# 3. Inventory Compilation Procedures (2)

## 3-1. Data Collection Process (2)

### Examples of Statistics and Data

Ministries/Organizations		Statistics or Data
Relevant Ministries	Ministry of the Environment	Statistics for waste, etc.
	Ministry of Economy, Trade and Industry	General Energy Statistics, Census of Manufactures, etc.
	Ministry of Land, Infrastructure and Transportation	Annual of Land Transport Statistics, etc.
	Ministry of Agriculture, Forestry and Fishery	Crop Statistics, Livestock Statistics, etc.
	Ministry of Health, Labor and Welfare	Statistics of Production by Pharmaceutical Industry
Relevant Organizations	Federation of Electric Power Companies	Amount of Fuel Used by Pressurized Fluidized Bed Boilers
	Japan Coal Energy Center	Coal Production
	Japan Cement Association	Amount of clinker production, etc.
Individual companies		Confidential data

# 3. Inventory Compilation Procedures (3)

## 3-1. Data Collection Process (3)

### ➤ Useful in-house documents for data collection

- **List of published statistics** and data-books to be bought with the information such as statistics or book name, author, editor, book store, telephone number, price, expected date of issue, etc..
- **List of unpublished data** to be requested with the information such as data name, IPCC sector/ category name, name of inventory staff, name of provider, etc..
- **List of data providers** with the information such as name of ministry, agency, organization, association or company, name of provider's department or division, name of provider's staff, telephone number, e-mail address, etc..
- **Template of request letter** to the relevant ministries, agencies, organizations, companies, etc..

➤ **Note: Each document should be updated periodically.**



# **3. Inventory Compilation Procedures (4)**

## **3-2. Emission Estimate Calculation files (1)**

### **Japan has developed its own emission estimate calculation files called “JNGI”**

- “JNGI” stands for Japan National GHG Inventory.
- Most popular calculation software of Microsoft Excel is used.
- Step-by-step file structure is adopted for corresponding to each calculation process from data collection to emissions summary.
- The excel files are designed similarly in time-series consideration so that every inventory related person easily understands the files.
- The files once made are re-usable every year onward.
- Cell colors and cell comments are described in same manner.

# 3. Inventory Compilation Procedures (5)

## 3-2. Emission Estimate Calculation files (2)

### Construction of JNGI Files

- **JNGI files are divided and their titles are determined by level and sector/category**

- Level 1: Files for data input
- Level 2: Files for calculation of emission factors and activity data
- Level 3: Files for calculation of emissions
- Level 4: Files for QC check and output to CRF Reporter
- Level 5: Files for output to NIR tables and graphs

**For example:** The file with the title of “**1B-L3-2015**” is the calculation file of the emissions from 1B category (fugitive emissions from fuels) prepared for 2015 submission.

- **Calculation is automatically carried from level 1 to Level 5**

The files are designed and linked to next levels in order to calculate the emissions automatically, therefore once the files are constructed or updated and once the data are newly input or updated in the L1 or L2 files, the related emissions are automatically calculated and arranged in L3, L4 and L5 files by updating each link step by step.

# 3. Inventory Compilation Procedures (6)

## 3-3. Documentation and Archive system (1)

**As important part of inventory management, includes**

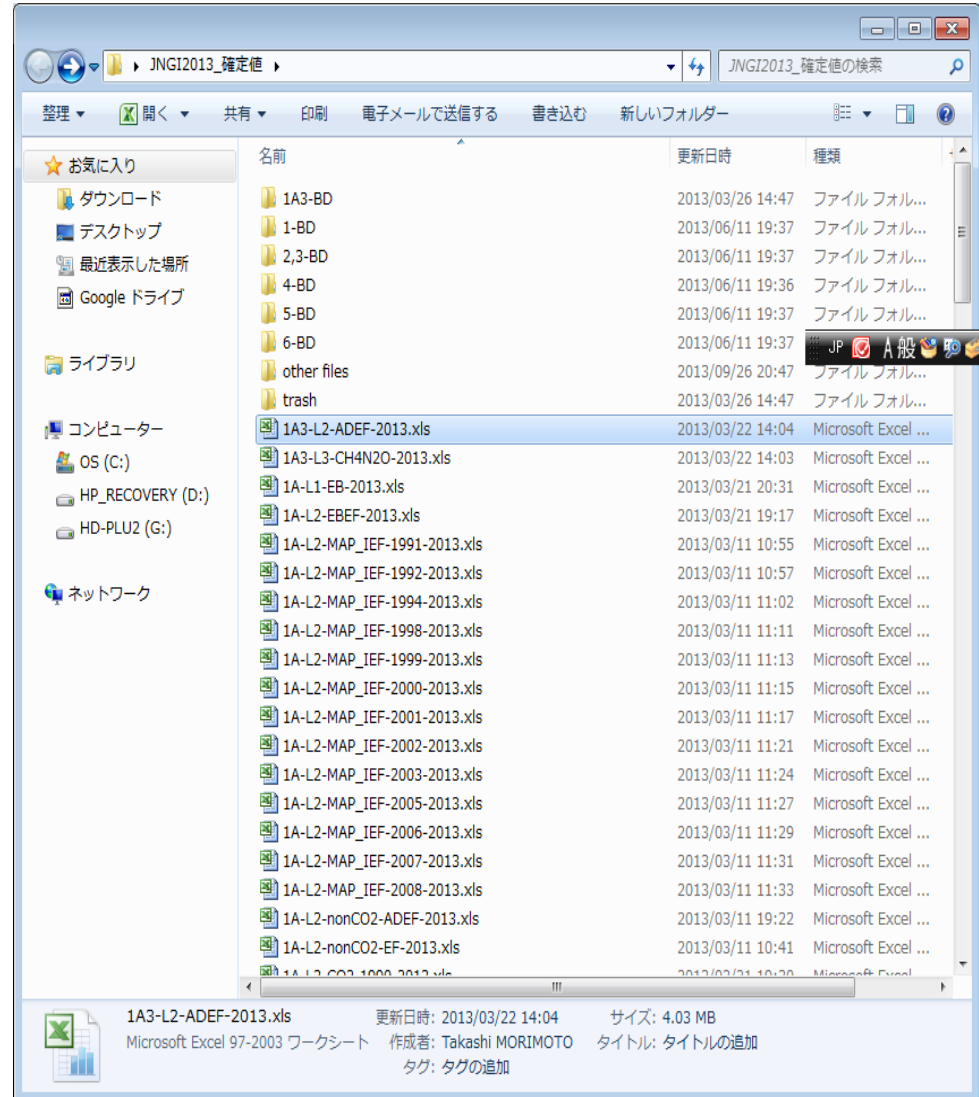
- **Document and systematically archive and organize all** the information in electronic or printed form related to planning, preparation, and management of inventory development and activities including UNFCCC technical reviews and the Committee for GHG Emissions Estimation Methods.
- **Collecting and gathering at a single** location, GIO
- **Established archive procedures for:**
  - Electronic information (e.g. Provided data, JNGI files and CRF- and NIR-related files) in Word, Excel, PDF, or other format
  - Printed form (books of statistics, data, and source materials)
- **The server is automatically backed up** to two other locations within the Institute (NIES) every day

# 3. Inventory Compilation Procedures (7)

## 3-3. Documentation and Archive system (2)

### Electronic information:

All electronic information (e.g. provided data, JNGI files and CRF- and NIR-related files) in Word, Excel, PDF, or other format are **concentratedly** archived in NIES (National Institute for Environmental Studies) computer servers.



# 3. Inventory Compilation Procedures (8)

## 3-3. Documentation and Archive system (3)



GIO's Bookshelf

### Printed matter:

All related printed matter (books of statistics, data, and source materials) are **concentratedly** archived in GIO.



Main Research Building III, NIES  
where GIO is located in



**Thank you very much.**

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