Training Workshop on the National System for the GHG Inventory

INSTITUTIONAL ARRANGEMENTS
for the NATIONAL INVENTORY SYSTEM

25-28 January 2011 FAO Headquarters, Rome, Italy

Sandro Federici & Mihaela Secrieru (Coalition for Rainforest Nations)

Scope of Presentation

To clarify what kind of

• entities (e.g. agencies, departments, ministries, etc.), and

• institutional, legal and procedural arrangements

are requested by the National Inventory System functions

Overview of Presentation

❖ What do institutional, legal and procedural arrangements consist of

❖ What kind of institutional arrangements are needed, and among which entities, in order to perform the functions of the National System

❖ Example of a framework of institutional arrangements

❖ How to track institutional, legal and procedural arrangements within the National Inventory System development

What is a National Inventory System (NIS)?

A *National Inventory System* (NIS) incorporates all the elements necessary to estimate GHG emissions and removals, including institutional, legal and procedural arrangements

Inventory Planning

Inventory Management

Inventory Preparation

High quality inventory that meets needs of policy-makers, researchers and public

Practically, the NIS consists of a set of relations between institutions and other subjects and of a stock of financial and human resources and facilities meant to ensure sustainability of the inventory preparation, consistency of reported estimates, and standard quality results

Institutional Arrangements (IA)

By **IA** we mean "institutional, legal and procedural arrangements"

IA consist of a **set of formal arrangements**
(such as regulations, directives, laws, decrees,
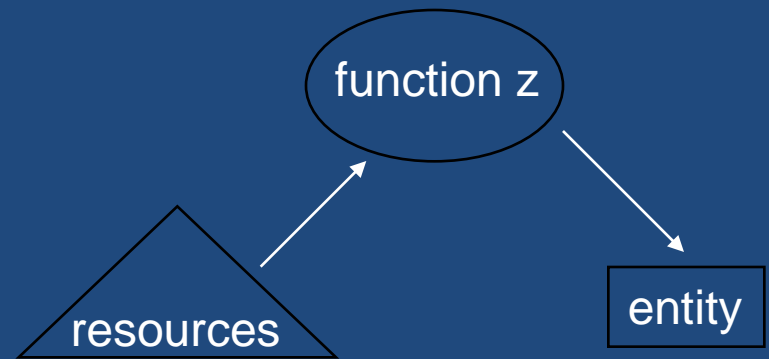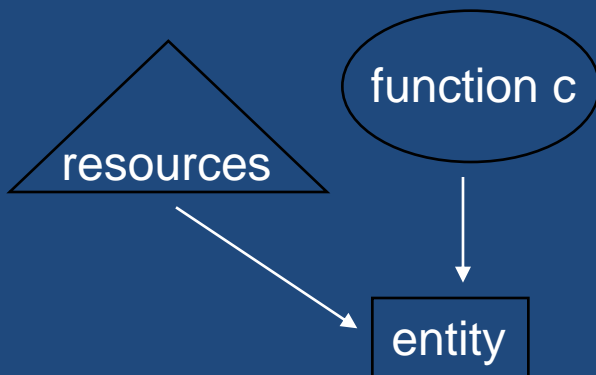or Memoranda of Understanding)

aimed at

providing the needed **financial** and **human resources**, as well as the **legal authority to ensure** that NIS **functions** will be entirely and efficiently **performed**

Institutional Arrangements (IA)
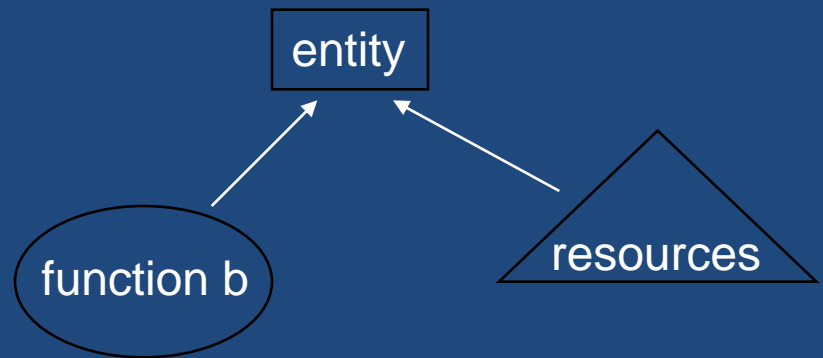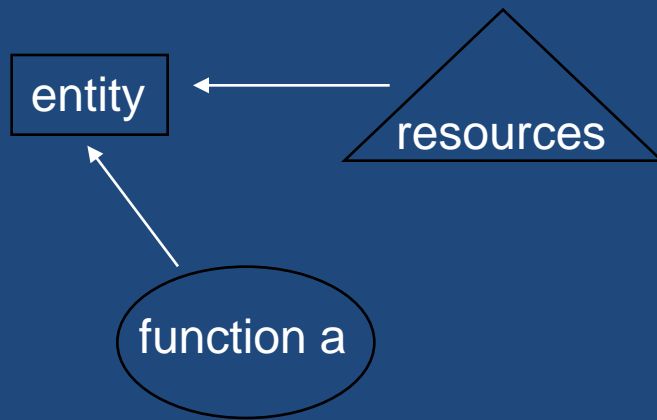
National Inventory System

… Institutional Arrangements (IA)

- An implementing entity must be identified for each of the functions

- For each NIS function an appropriate IA (within the entity and/or among entities) shall be set up in order to ensure efficient performance of the function itself

- In order for the entity to perform the assigned function, it must have sufficient capacity in terms of:

  - financial and human resources and technical expertise
  - legal authority

... Institutional Arrangements (IA)

Be aware of:

Conflict of Responsibility

- Two entities are assigned the same level of power of intervention on one of the functions.

Vacuum of Responsibility

- A function is not assigned to any entity.

Loops

- An entity is assigned a function that it exerts on another entity, and the latter can, in turn, control the first entity.

Institutional Arrangements (IA)

A well functioning IA identifies (where available) and/or sets up appropriate* entities to which it assigns the various NIS functions.

Each entity is liable for performing its function.

* An "appropriate" entity has at its disposal the necessary financial resources, facilities, skilled personnel and legal authority to deal with the assigned function.

Institutional Arrangements (IA) for the National System for the GHG Inventory

Functions to be assigned through IA

3 Areas:

➢Inventory Planning

➢Inventory Preparation

➢Inventory Management

(*Guidelines for national systems - Decision 19/CMP.1*)

Functions relating to
Inventory Planning

1. "*<u>Establish and maintain</u> the institutional, legal and procedural arrangements necessary to perform the functions, as appropriate, between the government agencies and other entities responsible for the performance of all functions*"

This function applies:

- <u>at the general level</u> to the entity which sets up the country's NIS (e.g. Ministry, Prime Minister Cabinet, Agency)

- <u>at the single level</u> to the entity which sets up a single IA with another entity/ies to perform one of its assigned functions

... Functions relating to
Inventory Planning

"Establish and maintain" Function at the general level
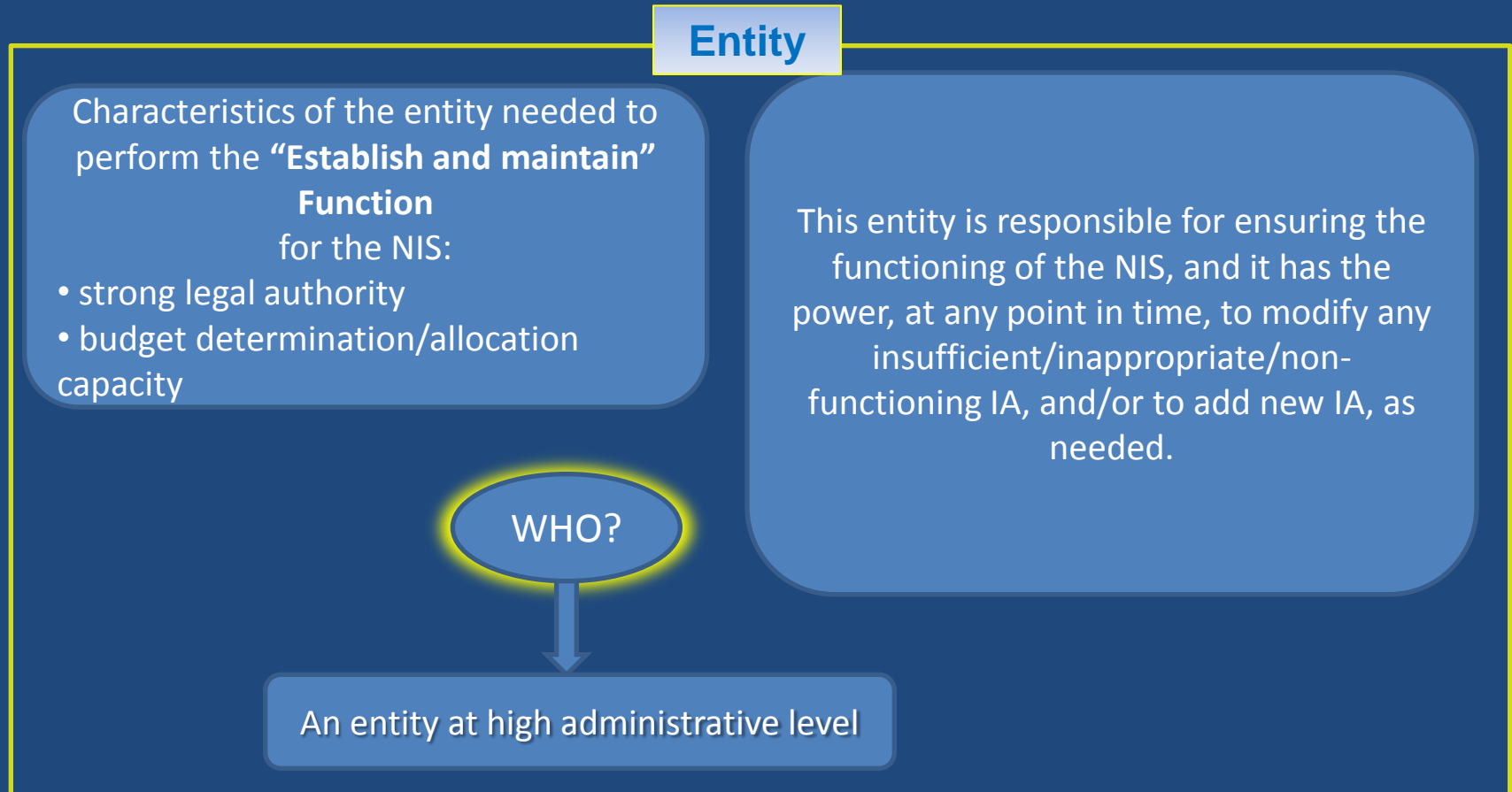
Entity

Characteristics of the entity needed to perform the **"Establish and maintain" Function** for the NIS:
- strong legal authority
- budget determination/allocation capacity

This entity is responsible for ensuring the functioning of the NIS, and it has the power, at any point in time, to modify any insufficient/inappropriate/non-functioning IA, and/or to add new IA, as needed.

WHO?

An entity at high administrative level

Type of needed IA: Institutional-Legal Arrangement

... Functions relating to
Inventory Planning

"Establish and maintain" Function at the single level

Entity

Every entity may set up an IA with another entity/ies in order to perform one of its assigned functions.
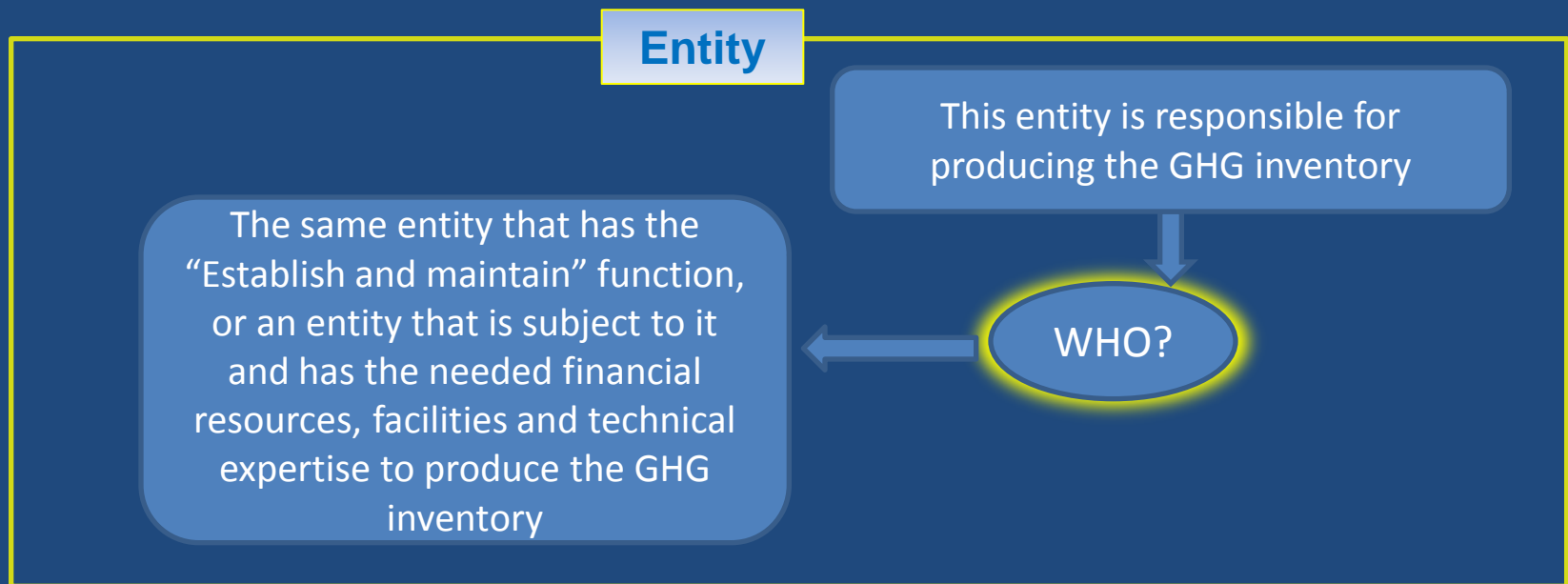
WHO?

Every entity that sets up an IA

Type of needed IA: Legal Arrangement

… Functions relating to
Inventory Planning

2. "*Ensure sufficient capacity for timely performance of the inventory functions, including data collection for estimating anthropogenic GHG emissions by sources and removals by sinks and arrangements for technical competence of the staff involved in the GHG inventory development process*"

Entity

This entity is responsible for producing the GHG inventory

The same entity that has the "Establish and maintain" function, or an entity that is subject to it and has the needed financial resources, facilities and technical expertise to produce the GHG inventory

WHO?

Type of needed IA: Institutional-Legal Arrangement

... Functions relating to
Inventory Planning

3. "_Designate_ a single national entity with overall responsibility for the national GHG inventory."

Entity

"Hierarchy" Function: A _pyramidal hierarchy_ which assigns the overall liability to a single entity.

WHO designs the "national entity"?

The entity that sets up (establish and maintain) the NIS, an entity at high administrative level

Characteristics of the "national entity":
• it has legal authority within the national administration to prepare the national GHG inventory
• it has financial capacity and technical expertise

WHO is the designed "national entity"?

Typically, a ministry/dept/agency. It is the entity that produces the GHG inventory (GHG Inventory Unit)

Type of needed IA: Institutional-Legal Arrangement

... Functions relating to
Inventory Planning

4. *"Make available the postal and electronic addresses of the national entity responsible for the inventory"*

Entity

"Identification" Function: *Make public the identity of the entity overall responsible for the GHG inventory, and provide the channel to access it.*

WHO?

The entity that produces the GHG inventory (GHG Inventory Unit)

Type of needed IA: Institutional-Legal Arrangement

... Functions relating to
Inventory Planning

5. *"Define and allocate specific responsibilities in the GHG inventory development process, including those relating to choice of methods, data collection, particularly activity data and emission factors from statistical services and other entities, processing and archiving, and QC and QA. In defining responsibilities, the role of each involved entity shall be specified, and institutional, legal and procedural arrangements shall be clarified."*

The *"Liability" Function* applies:

- at the general level to the entity responsible for the NIS (e.g. Ministry, Prime Minister Cabinet, Agency)
- at the single level to each entity to which a single function has been assigned

... Functions relating to
Inventory Planning

"Liability" Function at the general level

Entity

A well functioning NIS identifies (where available) and/or sets up appropriate entities to which it assigns the various functions. These entities then become responsible for the functions they have been assigned. Therefore, all needed functions shall be assigned and responsibilities shall be unequivocally allocated.

WHO? → The entity that sets up (establish and maintain) the NIS, an entity at high administrative level

Type of needed IA: Institutional-Legal Arrangement

... Functions relating to
Inventory Planning

"Liability" Function at the single level

Entity

Each entity to which a function has been assigned may set up IA with other entities in order to obtain all needed elements for performing the function. Therefore, the entity which should provide the needed element is responsible for doing so.

WHO? → The same entity that establishes and maintains the IA

Type of needed IA: Institutional-Legal Arrangement

Inventory Planning

6. *"Elaborate an inventory QA/QC plan which describes specific QC procedures to be implemented during the inventory development process, facilitate the overall QA procedures to be conducted, to the extent possible, on the entire GHG inventory and establish quality objectives"*

Entity

"Evaluation" Function: Elaborate the plan for ensuring the quality of the GHG inventory

Characteristics of the entity:
• Involved in the inventory development process
• Technical expertise

WHO?

Possibly the entity that produces the GHG inventory (GHG Inventory Unit)

Type of needed IA: Institutional-Legal Arrangement

... Functions relating to
Inventory Planning

7. *"Establish processes for the official consideration and approval of the inventory, including any recalculations, prior to its submission and to respond to any issues raised by the inventory review process"*

Entity

"Official status" Function: the system set through IA shall produce official national statistics

WHO? → The entity that sets up (establish and maintain) the NIS, an entity at high administrative level

Type of needed IA: Institutional-Legal Arrangement

... Functions relating to
Inventory Planning

8. *"As part of its inventory planning, the Party should consider ways to <u>improve the quality</u> of activity data, emission factors, methods and other relevant technical elements of inventories. Information obtained from the implementation of the QA/QC programme and any review process should be considered in the improvement of the GHG inventory (and its national system)."*

The *"Improvement" Function* applies:

- <u>at the general level</u> to the entity which sets up the NIS (e.g. Ministry, Prime Minister Cabinet, Agency)

- <u>at the single level</u> to the entity which sets up a single IA with another entity/ies to perform one of its assigned functions

... Functions relating to
Inventory Planning

"Improvement" Function at the general level:

Entity

IA should be set up in a manner that guarantees any further improvement. It should be ensured that inputs coming from quality assessment processes (such as the inventory review, the QA and the QC procedures) can be implemented in the IA "maintain" function.

WHO?

The entity that sets up (establish and maintain) the NIS, an entity at high administrative level

Type of needed IA: Institutional-Legal Arrangement

... Functions relating to
Inventory Planning

"Improvement" Function at the single level:

Entity

IA should be set up in a manner that guarantees any further improvement. It should be ensured that inputs coming from quality assessment processes (such as the inventory review, the QA and the QC procedures) can be implemented in the IA "maintain" function.

WHO?

Every entity that has been assigned the function that should be improved.

Type of needed IA: Institutional-Legal Arrangement

Functions relating to Inventory Preparation

9. *"Identify key categories following the methods described in the IPCC Guidelines"*

Entity

"Analysis" Function: the most relevant sources/sinks shall be identified in order to channel resources and to properly frame IA (indeed IA are fundamental among entities able to provide needed data for estimating relevant source/sink, and the entity entitled to produce the GHG inventory).

WHO? → **GHG Inventory Unit**

Type of needed IA: Procedural Arrangement

... Functions relating to
Inventory Preparation

10. *"Prepare estimates in accordance with the methods described in the IPCC guidelines, and ensure that appropriate methods are used to estimate emissions/removals from key categories"*

Entity

"Estimating" Function: *the estimates of GHG fluxes shall be prepared in a consistent way with the adopted good practices.*

WHO? → **GHG Inventory Unit**

Type of needed IA: Procedural Arrangement

... Functions relating to Inventory Preparation

11. *"Collect sufficient activity data, process information and emission factors as are necessary to support the methods selected for estimating anthropogenic GHG emissions by sources and removals by sinks"*

Entity

"Completeness" Function: *the IA shall ensure the needed flux of information/data/resources for the production of the national GHG inventory.*

WHO?

GHG Inventory Unit

Type of needed IA: Procedural Arrangement

Inventory Preparation

12. *"Make a quantitative estimate of inventory uncertainty for each category and for the inventory in total, following the IPCC guidelines"*
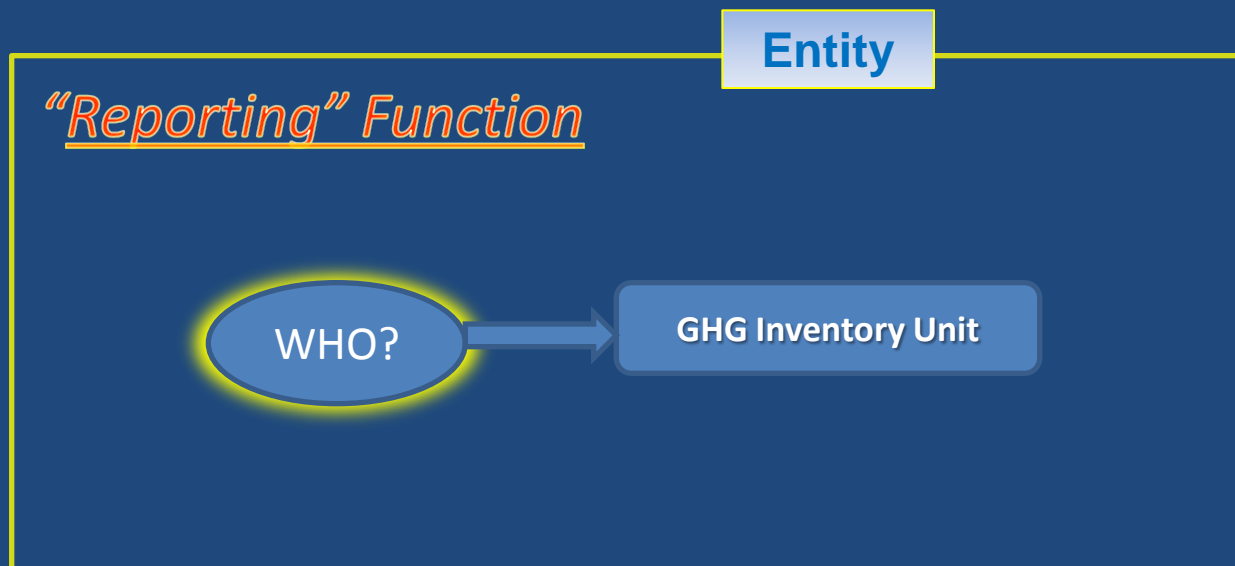
Entity

"Assessment" Function: *the likelihood of reported GHG values for fluxes is estimated; this information should drive further improvements of the national inventory system.*

WHO? → **GHG Inventory Unit**

Type of needed IA: Procedural Arrangement

... Functions relating to
Inventory Preparation

13. *"Compile the national GHG inventory"*

Entity

"Reporting" Function

WHO? → GHG Inventory Unit

Type of needed IA: Procedural Arrangement

... Functions relating to
Inventory Preparation

14. *"Implement inventory QC procedures in accordance with its QA/QC plan following the IPCC Guidelines"*

Entity

"Control" Function: internal routine checks in order to ensure that no errors will occur during the workflow

WHO? → **GHG Inventory Unit**

Type of needed IA: Procedural Arrangement

Inventory Preparation

15. *"Provide for a <u>review of the inventory</u> by personnel that have not been involved in the inventory development, preferably an independent third party, before the submission of the inventory, in accordance with the planned QA procedures"*

Entity

<u>"Review" Function</u>: external checking of errors and assessment of transparency, completeness, accuracy, comparability and consistency of the GHG inventory.

WHO? → An external entity (national or international) with the necessary technical expertise

Type of needed IA: Procedural Arrangement

... Functions relating to
Inventory Preparation

16. *"Based on the QA results and QC outputs, the Party shall re-evaluate the inventory planning process in order to meet the established quality objectives"*

Entity

"Improving" Function: *Every entity to which a function has been assigned has to implement the outputs coming from quality assessment procedures (QA, QC and other review processes)*

WHO?

Every entity to which the function that should be improved has been assigned

Type of needed IA: Procedural Arrangement

Functions relating to
Inventory Management

17. "*Archive inventory information* for each year. This information shall include all disaggregated emission factors, activity data, and documentation about how these factors and data have been generated and aggregated for the preparation of the inventory. This information shall also include internal documentation on QA/QC procedures, external and internal reviews, documentation on annual key categories and key category identification and planned inventory improvements*"*

Entity

"Archiving" Function: a rigorous system for storing all information on GHG estimates and processes employed to achieve them is necessary for ensuring sustainability of the inventory process.
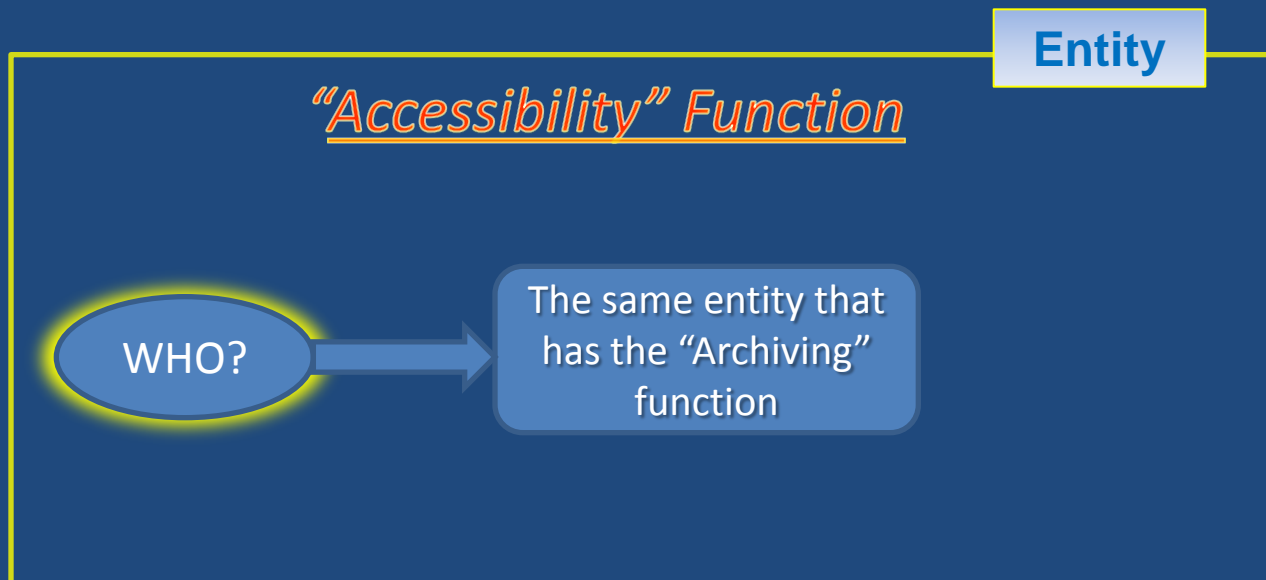
WHO?

↓

Possibly the GHG Inventory Unit

Type of needed IA: Institutional-Legal Arrangement

... Functions relating to
Inventory Management

18. *"Provide __access__ to all archived information used by the Party to prepare the GHG inventory"*

Entity

"Accessibility" Function

WHO? → The same entity that has the "Archiving" function

Type of needed IA: Procedural Arrangement

Inventory Management

19. *"Respond to requests for clarifying inventory information resulting from the different stages of the review process of the inventory information, and information on the national system, in a timely manner"*

Entity

"Transparency" Function: *Interaction with stakeholders and sharing of information (Q raised by stakeholders shall be properly and timely answered)*

WHO? → **GHG Inventory Unit**

Type of needed IA: Procedural Arrangement

Inventory Management

20. *"As part of its inventory management, each Party should make the archived information accessible by collecting and gathering it at a single location"*

Entity

"Security" Function: *One single access policy is necessary for ensuring safe management of stored information, including tracking access and potential modification of stored information*

WHO? → The same entity that has the "Archiving" function

Type of needed IA: Procedural Arrangement

Conclusion

- The IA framework is the set of relations that rules the flow of resources, data, information among elements of the NIS

- A robust framework of IA can ensure the proper functioning of the National System and the consequent delivery of consistent estimates with the best achievable quality

Conclusion

- In order to be robust, an IA should be:
    - unambiguous,
    - Sustainable, i.e., shall assign/individuate resources available/needed for performing the function to which it relates,
    - subject to improvements as consequence of quality checks/reviews

Example of a framework of IA

- see Excel file

How to track IA within the NIS

- see Word template file