

TW TR 2008-IB-EN-02

Setting up National Inventory System

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Outline

Goal (What has to be delivered?)

- Informative Inventory Report (IIR)
- NFR-Tables with inventories and projections
- (CRF-Tables) & National Inventory Report (NIR)

How to reach the goal ?

- Develop Sustainable National System

National Inventory System (NIS) Includes:

- Legal
- Institutional
- Procedural

Arrangements made within a Party for estimating emissions and projections **AND** for reporting and archiving the inventory information

NIS Objectives

- To enable Parties to estimate anthropogenic emissions and projections AND report them on regular bases

- To facilitate reviews

- To help ensure and improve quality of the inventory (TCCCA) and compliance
 - Transparency
 - Consistency
 - Comparability
 - Completeness
 - Accuracy

Advantages of NIS

NIS = structured, sustainable, written workplan

- ✓ Identifies and resolves legal and institutional barriers
- ✓ Defines and allocates tasks and responsibilities
- ✓ Helps to determine needed time and resources
- ✓ Improves quality of inventory

Advantages of NIS

- ✓ Facilitates official communications for you and UNECE, EEA, EC....
- ✓ Efficient use of resources
- ✓ Provides basis to get support from superiors
- ✓ Maintain how-to knowledge
- ✓ Know where to find it
- ✓ Facilitates use of inventory for related purposes

How?

- Establishing AND maintaining the institutional, legal, and procedural arrangements
- Ensuring sufficient time, skilled people, budget
- Through good
 - Planning
 - Preparation
 - Management (of information)
 - Training of the staff

Legal framework

Legal bases for regular compilation and reporting on national inventories (*Acts, decrees, memorandums of understanding, contracts...*)

- Ensures provision of required resources (on time)
- Clearly defines responsibilities (e.g. single legal entity)
- Ensures inventory compilers access to data needed (on time)
- Defines the product (s) to be delivered

Example: Legal arrangements

■ Austrian **Environment Control Act**

- Sets up the Federal Environment Agency : Umweltbundesamt
- Designates Umweltbundesamt as the single national entity for the inventory preparation
- Regulates financing
- Sets rules for dealing with (confidential) personal data

■ National statistics Act

- Sets up the National Statistical Office
- Energy balance on a contract basis

■ Austrian Emissions Trading Law & Ordinances

- how to report for operators
- how to include into the national inventory

Institutional framework

Inventory preparation process set-up

- Overall responsibility – **single entity** to coordinate all activities
- Delegated responsibilities for compilation of sectoral inventories
- Activity data providers are identified
- Quality manager nominated
- Archiving system established

Procedural framework

Rules for inventory preparation elaborated and **written**

- Annual workplan
- Time schedule
- Manual of methods including EFs and definition of AD
- Formats for data exchange and reporting agreed/distributed
- Documentation system established
- (Long/short term) Strategy for improvement developed

Write it down!

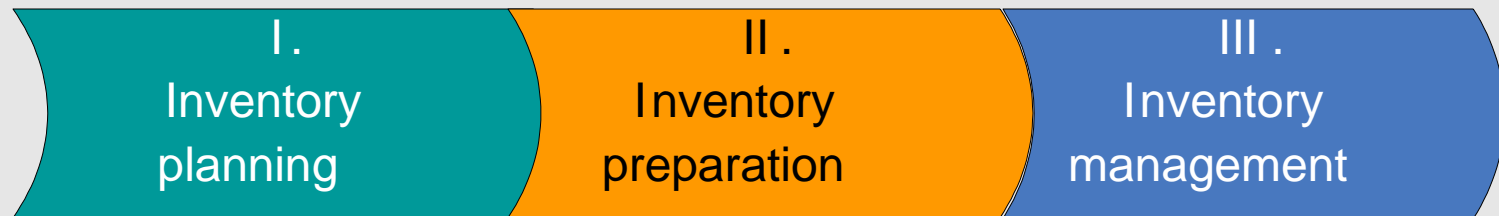
Good Documentation of NIS ensures:

- ✓ Sustainability
- ✓ Clarity
- ✓ Responsibility
- ✓ Efficiency

COMPILATION OF INVENTORY

3 phases of inventory compilation

Preparation of the inventory includes three stages.



Inventory planning

- team
- timetable
- data sources
- key source analysis
- ...

Inventory preparation

- collecting data
- emission estimation
- report writing
- QA/QC
- ...

Inventory management

- data processing
- data storage & backup
- access authorization
- ...

Inventory planning

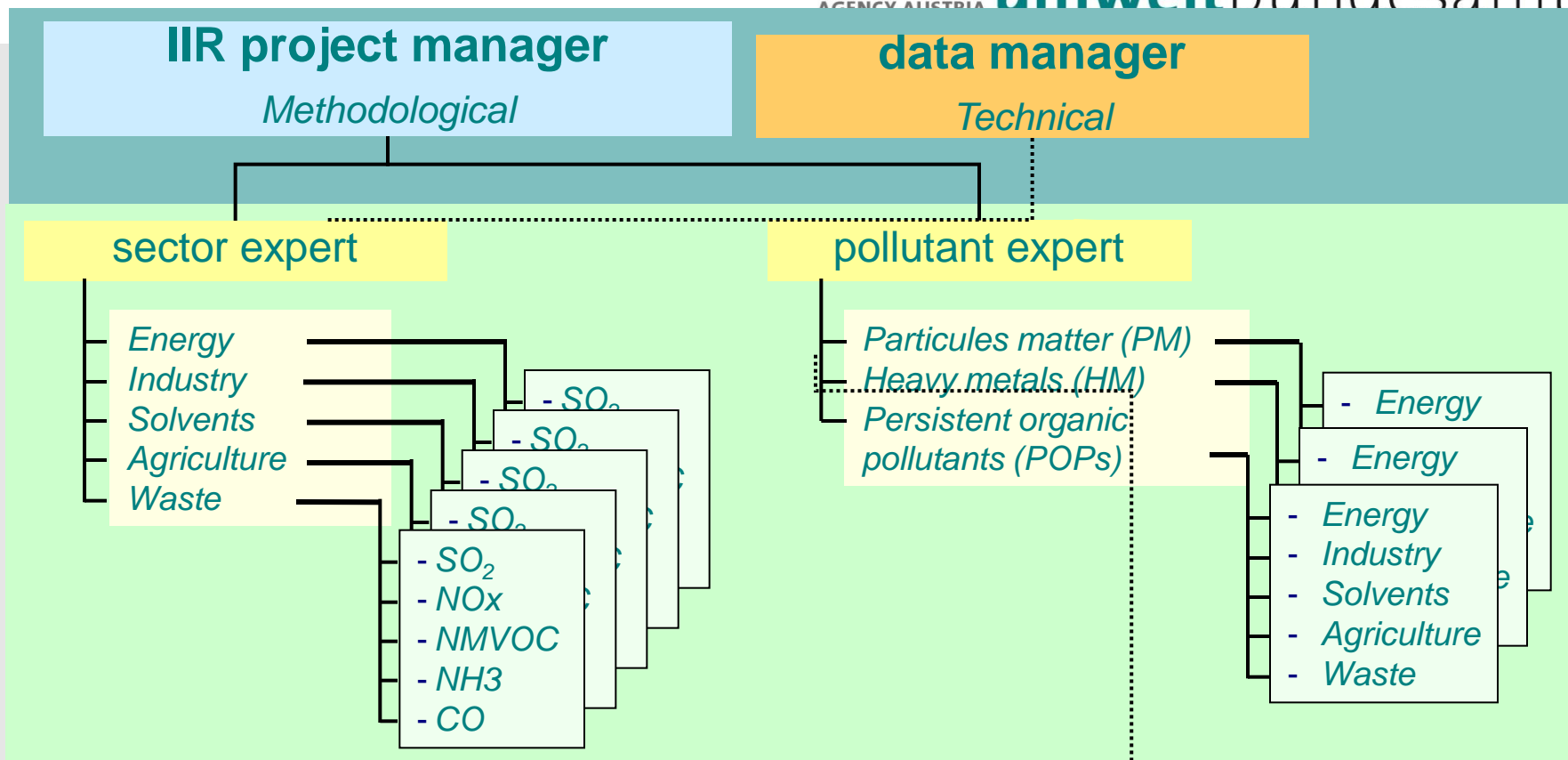
- Appoint national entity and inventory coordinator
- Plan resources , obtain budget
- Define inventory products and plan results dissemination
- Assign other inventory personnel (*sectoral experts, quality manger, DB administrator,...*)
- Establish rules for overall inventory preparation (*documentation, formats, spreadsheet management,...*)
- Establish time schedule
- Complete and distribute work plan
- Determine priorities
- Identify data providers
- Prepare contracts, etc..

Write it down !

Inventory planning: team

ENVIRONMENT
AGENCY AUSTRIA

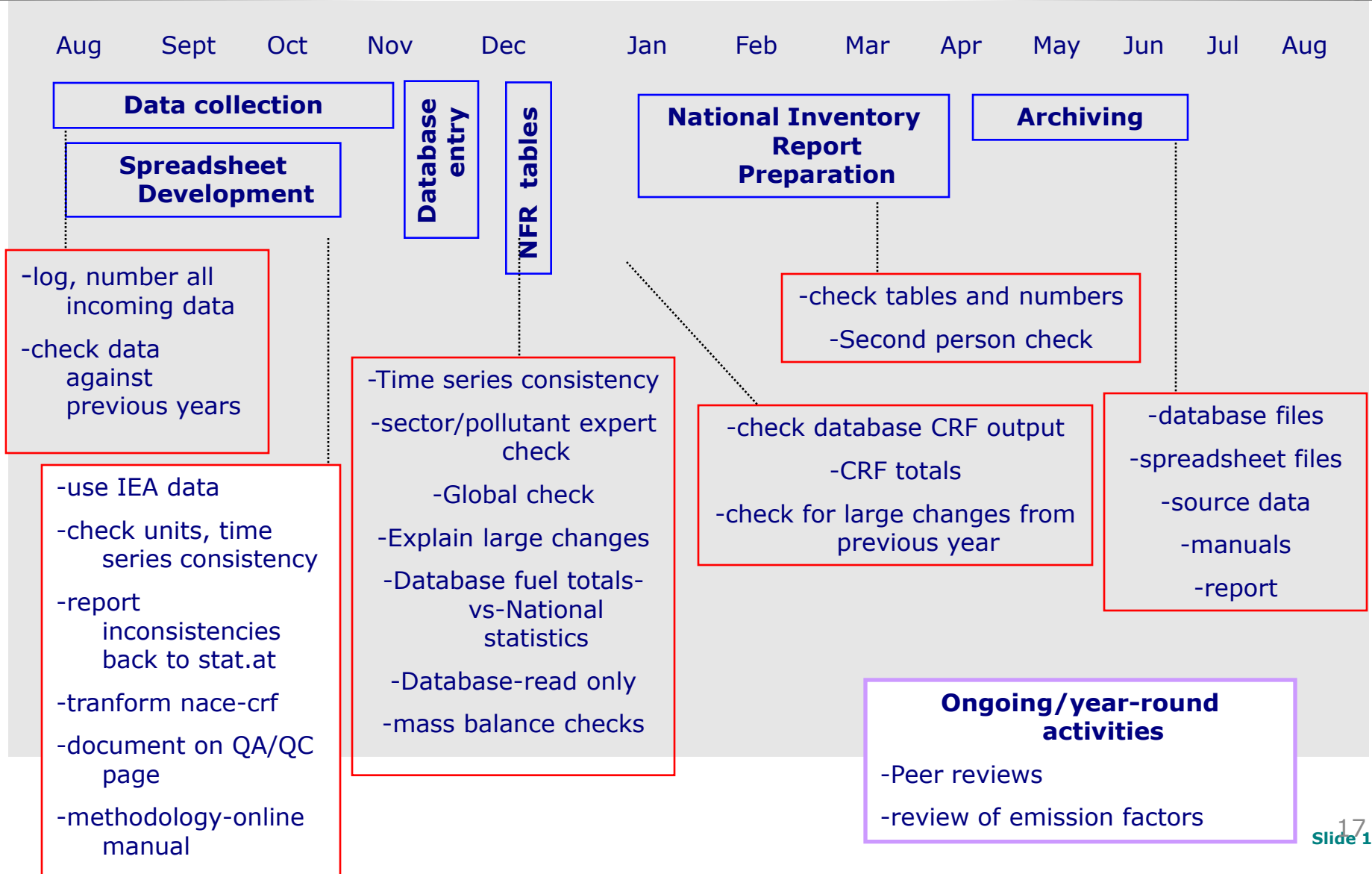
umweltbundesamt^U



Responsibilities of sector experts / pollutant experts

- collecting activity data, emission factors and other relevant information
- report (chapter) writing
- providing background data for NFR tables
- Quality control

The national inventory system



Inventory planning: AP timetable example

31th of december

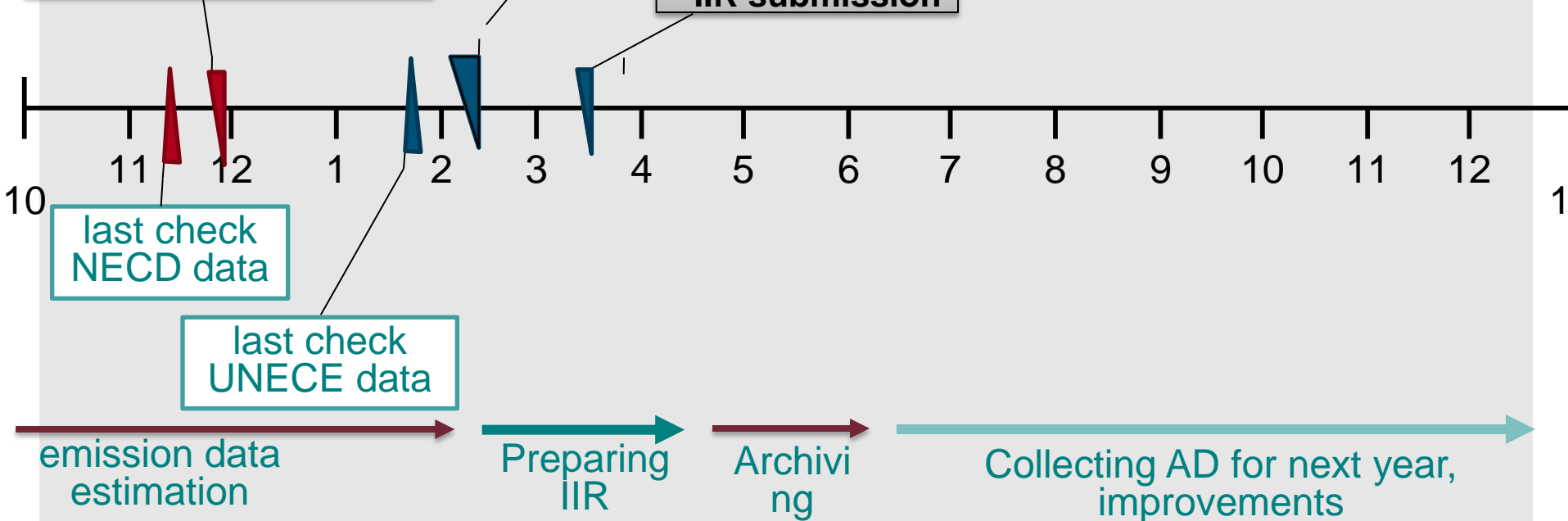
- **NEC submission** (NFR tables)
- Austria's National Air Emission Inventory 1980 -2004 submission under directive 2001/81/EC (Short report)

15th of february

- **UNECE submission** (NFR tables)
- LPS data
- National Air Emission Inventory 1990 – 2010 submission under LRTAP (Short report)

15 th of March

- **IIR submission**



Inventory preparation

- Determine the data availability and quality
- Distribute overall/sector specific inventory preparation instructions
- Select methods and emission factors
- Conduct calculations /recalculations
- Complete QA/QC
- Undertake Key category analyses
- (Conduct uncertainty assessment)
- Complete reporting
- Draft chapters for inventory report
- **Complete documentation and archiving**
- Undertake dissemination of results
- Complete improvements

Inventory preparation: IIR outline use CEIP template

Introduction

- Institutional Arrangement for Inventory Preparation,
- Reporting obligation under the UNECE/LRTAP Convention and its Protocols
- Inventory Preparation Process - Methodologies and Data Sources Used
- Key Source Analysis
- Quality Assurance and Quality Control (QA/QC)
- Uncertainty Assessment
- Completeness

TREND IN TOTAL EMISSIONS PER POLLUTANT

- Emission Targets regarding the protocols
- Emission Trends for Air Pollutants covered by the Multi- Effect Protocol and CO:
SO₂ emissions - NO_x emissions - NMVOC emissions - NH₃ emissions - CO emissions
- Emission Trends for Particulate Matter: TSP, PM10, PM2.5
- Emission Trends for Heavy Metals: Cd emissions, Hg emissions, Pb emissions
- Emission Trends for POPs: PAH emissions, Dioxins and Furans, HCB emissions

MAJOR CHANGES

- Relation to data reported earlier
- Explanations and Justifications for Recalculations
- Major Changes by Sector
- Recalculations per Gas

Inventory (data) management

- Develop the system for data management = **A reliable data management** to fulfil data collecting and reporting requirements is absolutely needed because:
 - data collection and processing is performed by different experts
 - big amount of data
 - reporting requirements grow rapidly and may change over time
- **Store and back up all the data**
- Develop long term strategy for improvement
- Prepare sytem for next round of inventory

Discussion

- *Experience:* How does your country do it now?
- *Planning:* How do you think your country should do it under ideal circumstances?
- *Barriers?*
- *Suggestions*