

Introduction to the Initial Review Report of Greece

Teemu Oinonen

Bonn, 4 March 2008

Presentation overview

- Structure of the initial review report (IRR)
- The Expert Review Team (ERT)
- Allocation of tasks within the ERT
- Selected conclusions and recommendations from the review
- Concluding remarks

Structure of the report

- Introduction and summary – 5 pages
- Technical assessment – 46 pages
- Conclusions and recommendations – 3 pages
- References (Annex I) – 2 pages
- Acronyms and abbreviations (Annex II) – 1 page
- Details on selected adjustments – 5 pages
- With cover and contents, 65 pages in total

A technical assessment

- So the focus of the report is (as it should be) a technical review of:
 - The national system
 - Greenhouse gas inventory
 - Calculation of the assigned amount
 - Calculation of the commitment period reserve
 - National registry
 - LULUCF parameters, election of activities
- And, as it turned out to be in case of Greece
 - Adjustments

The Expert Review Team

- generalist – Mr. Paul Filliger (Switzerland)
- energy – Mr. Matej Gasperič (Slovenia)
- industrial processes – Mr. Teemu Oinonen (Finland)
- agriculture – Mr. Erda Lin (China)
- LULUCF – Mr. Héctor D. Ginzo (Argentina)
- waste – Mr. Jose Ramon T. Villarin (Philippines)

The review was coordinated by Ms. Keryn Oude-Egberink and Mr. Javier Hanna of the secretariat

Allocation of review tasks

- Each expert reviewed their IPCC sector
- Team's generalist Mr. Paul Filliger reviewed cross-cutting issues
- Mr. Filliger reviewed also the national system
- Mr. Jose Villarin reviewed the registry
- Mr. Héctor Ginzo reviewed the election of LULUCF activities and selected parameters
- Mr. Teemu Oinonen reviewed the assigned amount and commitment period reserve

Maintenance of the national system

- The ERT concluded ”that the national system of Greece is not fully compliant with the guidelines for national systems under Article 5, paragraph 1 of the Kyoto Protocol.”
- This conclusion followed from the in-country visit, and information provided by Greece that suggested the system was not adequately maintained

Inventory: Use of EU ETS data, improved consistency in energy sector

- Review of the Common Reporting Format (CRF) tables and the national inventory report (NIR) suggested improved time series consistency in the energy sector
- The improvement was due to use of data from the EU Emission Trading Scheme

Inventory: improved completeness in the industrial process sector

- Commercial refrigeration was included in the inventory, which improved the completeness of category 2.F Consumption of halocarbons and SF₆
- The ERT however recommended to include also estimates of potential emissions, since this is required by the UNFCCC reporting guidelines
- Potential emissions would also provide a "reality check" for the estimated actual level of HFC emissions

Inventory: recommendations of previous review implemented in the agriculture sector

- Greece had improved documentation by adding detail to methodological descriptions in the national inventory report
- An example is the adoption of a three-year average for animal population numbers

LULUCF: selection of parameters and activities

- Greece selected parameters that define forest in their initial report
- The parameters were found to within ranges prescribed in annex to decision 16/CMP.1
- The initial report did not identify election of article 3.4 activities, nor the accounting period
- During and after the review, Greece elected forest land management and commitment period accounting

Inventory: improved methods in waste sector

- Greece had implemented a tier 2 methodology (first-order decay, FOD) in calculating CH₄ emissions from waste disposal
- The change resulted in 32.6% reduction (about 1 Mt of CO₂-eq.) of the category's emissions in 1990

Review of assigned amount and CPR

In-country review of Greece

Replication of the calculation of assigned amount

| CRF | CO2 | CH4 | N2O | HFCs | PFCs | SF6 | |
|-----|------------|-----------|------------|-----------|--------|-------|-------------|
| 1 | 77 207 339 | 1 540 337 | 3 014 957 | 0 | 0 | 0 | 81 762 634 |
| 2 | 6 936 362 | 516 | 712 955 | 3 421 008 | 82 968 | 3 585 | 11 157 394 |
| 3 | 169 715 | 0 | 0 | 0 | 0 | 0 | 169 715 |
| 4 | 0 | 3 458 740 | 10 060 489 | 0 | 0 | 0 | 13 519 229 |
| 6 | 150 | 4 119 903 | 325 048 | 0 | 0 | 0 | 4 445 101 |
| | 84 313 566 | 9 119 496 | 14 113 449 | 3 421 008 | 82 968 | 3 585 | 111 054 072 |

Notes:

- (i) data from CRF-table Summary 2 (electronic version, with all decimals therein)
- (ii) 1990 data for CO2, CH4 and N2O, 1995 data for HFCs, PFCs and SF6
- (iii) LULUCF is a net sink for Greece; thus, category 5 is excluded from calculation
- (iv) double line between things that add up

Multiply base year emissions by 1.25 (from burden-sharing agreement) and by five to get the AA:

$$111\,054\,072 \quad \times \quad 1.25 \quad \times \quad 5 \quad = \quad 694\,087\,947$$

Conclusion: this is in exact agreement with the information presented in the initial report (p. 18).
And from this the commitment period reserve will follow, after multiplication by .9.

The registry

- The ERT visited the Center for Environment and Sustainable Development
- Mr. Gerhard Schwarz of Smart Technologies GmbH, and the Greek registry administrators, presented the software
- The Independent Assessment Report (IAR) gave the registry a very high score
- The ERT concluded that the registry was fully compliant with the requirements

Adjustments

- The ERT calculated six adjustments to correct for overestimates in the energy sector
- The total effect of the adjustments was 3.7% of the original total reported by Greece (about 4 Mt of CO₂-eq.)
- Greece accepted the adjustments in the final phase of the review process

(1) CO₂ from lignite combustion (1.A.1.a)

- Lignite is combusted to produce electricity
- (emissions) = (consumption) x (*emission factor*)
- Triggered by lack of transparency
- Basic adjustment method 1 (Default IPCC tier 1) from annex to decision 20/CMP.1
- CO₂ EF from a study by the Public Power Corporation (the biggest electric power company in Greece)
- Effect: about 0.68% (0.75 Mt CO₂-eq.)

(2) N₂O from liquid and solid fuels combustion (1.A.1, 1.A.2)

- What is the emission factor for N₂O?
- Triggered by lack of transparency and estimates not being in line with the Good Practice Guidance
- Basic adjustment method 1 (Default IPCC tier 1) from annex to decision 20/CMP.1
- Default IPCC EFs from the Revised 1996 IPCC Guidelines
- Effect: about 1.8% (2.0 Mt CO₂-eq.)

(3) CO₂ from ammonia production (1.A.2.c)

- Lignite is also used in ammonia production
- Consumed quantity overestimated
- Triggered by lack of transparency and supporting documentation
- Basic adjustment method 1 (Default IPCC tier 1) from annex to decision 20/CMP.1
- Activity data from the Statistical Yearbook of Greece 1990 - 1991
- CO₂ EF from the PPC study
- Effect: 0.078% (about 0.09 Mt CO₂-eq.)

(4) CO₂, CH₄ and N₂O from civil aviation (1.A.3.a)

- Discrepancy between flight statistics and Greece's energy balance
- Triggered by lack of transparency
- Basic adjustment method 3 (Extrapolation of emissions based on a driver) from annex to decision 20/CMP.1
- Adjusted activity data based on ERT's calculation using Landing and Take-Off (LTO) statistics as a driver
- Effect: about 0.79 % (0.88 Mt CO₂-eq.)

(5) CO₂ from lubricants combustion (1.A.3.b)

- Greece reports emissions from lubricants in road transportation
- The lubricant/fuel -ratio is much higher than in other countries
- Triggered by lack of transparency
- Basic adjustment method 1 (Default IPCC tier 1) from annex to decision 20/CMP.1
- Adjusted activity data based on lubricant/fuel ratio derived from a cluster of countries
- Effect: about 0.10 % (0.11 Mt CO₂-eq.)

(6) CH₄ and N₂O from biomass combustion (1.A.4.b)

- Greece reported constant biomass combustion in the residential sector over 1990 - 2004
- Triggered by lack of transparency, and discrepancy in methods and data used
- Basic adjustment method 1 (Default IPCC tier 1) from decision annex to 20/CMP.1
- Adjusted activity data based on FAO statistics and default parameters from IPCC good practice guidance for LULUCF and Revised 1996 IPCC Guidelines for national GHG Inventories
- Effect: about 0.18% (0.20 Mt CO₂-eq.)

Concluding remarks

- The IRR documents results of the technical assessment of Greece's initial report and greenhouse gas inventory
- The report documents the sector-specific findings of the review
- Where the report identifies a problem, it also suggests a solution (where appropriate)
- The report contains an assessment of the national system, the registry, and the LULUCF-related selections
- The report documents in detail the calculation of adjustments

The Initial Review Process in Case of Greece

Teemu Oinonen

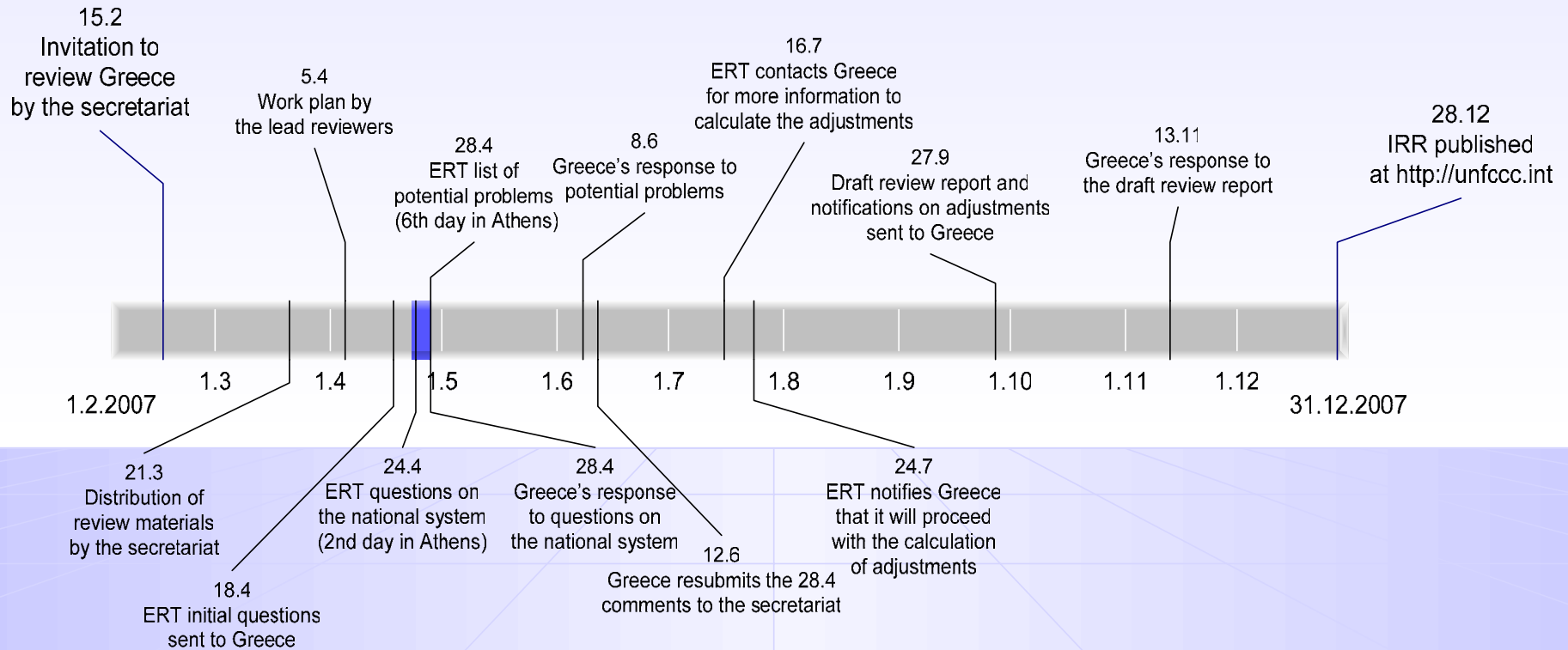
Bonn, 4 March 2008

Presentation overview

- Review timeline
- Key documents reviewed
- Initial questions by the ERT - an example
- Good co-operation with the Greek teams
- Preparation of the Initial Review Report (IRR)
- Concluding remarks

Review of Greece

February - December, 2007



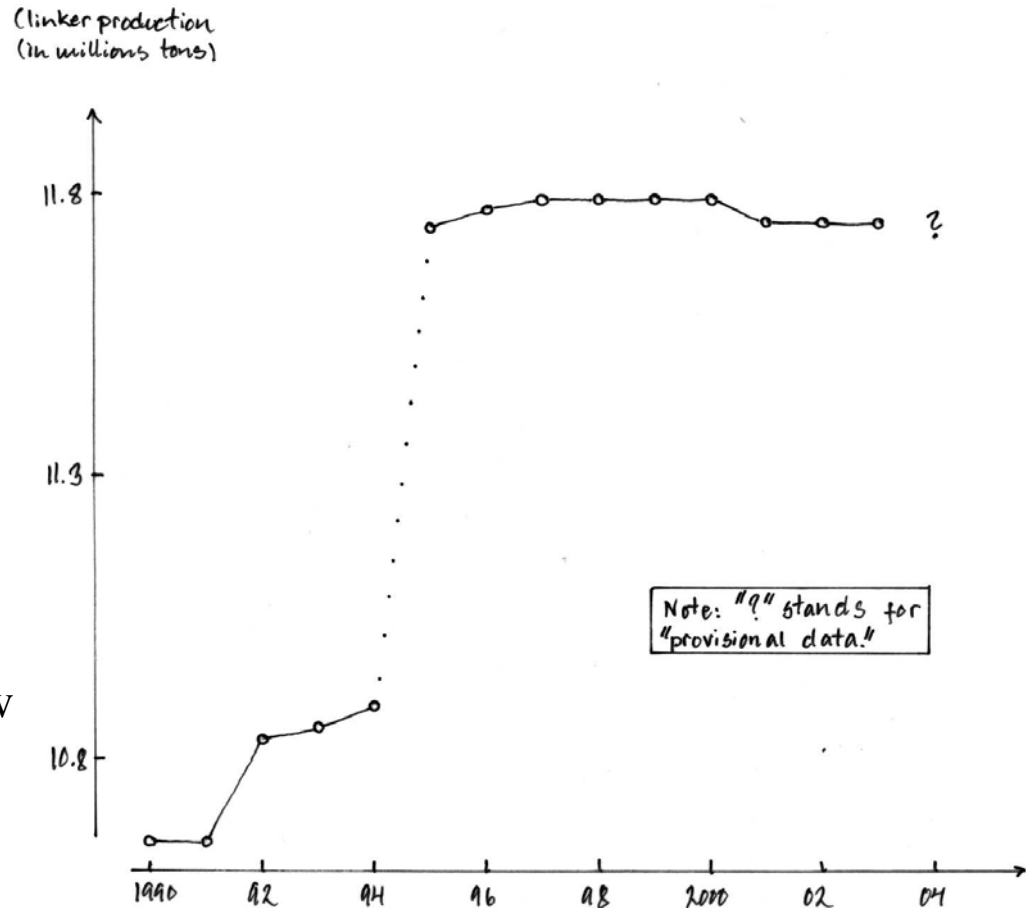
Key documents reviewed

- The initial report
- The national inventory report (NIR)
- The Common Reporting Format (CRF) tables for years 1990 - 2004
- Review transcripts
- NIR, CRF and review report from the previous review cycle
- During the review week in Athens, the ERT also had access to archives and the inventory team's electronic files

Initial questions - an example

The graph displays a smooth of the clinker production data (NIR table 4.5, p. 97). The analysis suggests there may be two “levels” of production, a shift occurring between years 1994 and 1995.

During the review, NOA’s inventory team explained the shift. The ERT could also review plant-level data that confirmed the explanation.



Good co-operation with the NOA inventory team and the registry administrators

- Detailed technical questions were discussed during the review week in Athens
- The NOA team was very friendly, helpful, open and professional
- The same remarks apply to the team at the National Centre for Environment and Sustainability
- Both teams were also very flexible (the ERT worked also during evenings and on Saturday)

Preparation of the IRR 1/2

- During the review week in Athens
 - the ERT held wrap-up meetings after each day of review
 - experts wrote their review transcripts
 - experts wrote drafts of the IRR sections
 - the ERT formulated the list of potential problems
- After the week in Athens, the lead reviewers compiled a zero order draft of the IRR

Preparation of the IRR 2/2

- Subsequent editing and responses to Greece's comments were prepared via email and phone conferencing
- The lead reviewers and the secretariat had a central role in the editing process
- Experts participated actively in checking and commenting
- Decision 22/CMP.1 was followed closely throughout the process

Concluding remarks

- I've shown you a timeline that documents the key events and documents of the review process
- Sector-specific drafts of the IRR were written during the review week in Athens
- The report was finalised and adjustments documented in detail afterwards via email and phone conferencing
- The UNFCCC review guidelines were followed closely: Greece had opportunity to correct problems and to comment the report