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**Report for the Stage 3 in-depth review of emission
inventories submitted under the UNECE LRTAP
Convention and EU National Emissions Ceilings
Directive for:**

PORTUGAL

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INTRODUCTION

1. The mandate and overall objectives for the emission inventory review process under the LRTAP Convention is given by the UNECE document '*Methods and Procedures for the Technical Review of Air Pollutant Emission Inventories reported under the Convention and its Protocols*'⁽¹⁾ – hereafter referred to as the 'Methods and Procedures' document.
2. This annual review has concentrated on SO₂, NO_x, NMVOC, NH₃, plus PM₁₀ & PM_{2.5} for the time series years 1990 – 2006 reflecting current priorities from the EMEP Steering Body and the Task Force on Emission Inventories and Projections (TFEIP).
3. This report covers the stage 3 centralised review of the UNECE LRTPA Convention and EU NEC Directive inventories of France, coordinated by the EMEP emission centre CEIP acting as review secretariat. The review took place from 6th October 2008 to 10th October 2008 in Copenhagen, Denmark, and was hosted by the European Environment Agency (EEA). The following team of nominated experts from the roster of experts performed the review: generalist – Justin Goodwin (EC), Energy - Stephan Poupa (Austria) and Ole Kenneth Nielsen (Denmark), Industry - Helena Hnilicová (Czech r.), Solvents - Patrik Fauser (Denmark), Agriculture +Nature - Bernard Hyde (Ireland), Waste - Celine Gueguen (France).
4. No review findings have been included in this report for Industrial processes as there were difficulties in completing a review of the industrial process sector due to the time demanding task and language difficulties experienced by the industrial processes expert.
5. Justin Goodwin was the lead reviewer. The review was coordinated by Katarina Marečková, (EMEP Centre on Emission Inventories and Projections - CEIP).

¹ Methods and Procedures for the Technical Review of Air Pollutant Emission Inventories reported under the Convention and its Protocols. Note by the Task Force on Emission Inventories and Projections. /EB.AIR/GE.1/2007/16 <http://www.unece.org/env/documents/2007/eb/ge1/ece.eb.air.ge.1.2007.16.e.pdf>

PART A: KEY REVIEW FINDINGS

INVENTORY SUBMISSION

6. Portugal has reported emissions for its Protocol base year(s) (1990) and a full time series up to 2006 (the latest year) for its protocol pollutants in the NFR format. In addition, Portugal has also provided a full NFR 1990 - 2006 time series for CO and a 1990 - 2006 time series for PM₁₀ and PM_{2.5}. Portugal reported 2005 gridded emissions for Gothenburg protocol pollutants. Portugal also submitted a detailed IIR.
7. The CLRTAP inventory submitted by Portugal is of good quality and is in general well documented in the informative inventory report (IIR).

KEY CATEGORIES

8. Portugal has compiled and presented in its IIR a level Key Source Category Analysis for the following pollutants: NOX, CO, NMVOC, SOX, NH₃, TSP, PM₁₀ and PM_{2.5} heavy metals and Dioxins, PAHs and PCBs. All sectors have been included except sector 5, LULUCF. The level assessment is performed for 2006 for all pollutants.

QUALITY

Transparency

9. The ERT recognises the level of effort undertaken by Portugal in providing an inventory with a significant level of detail. The Portuguese IIR is detailed and well presented. EF and activity time series are almost always presented in detail (SNAP level), assumptions are indicated and references are given. The ERT encourages Portugal to compliment the excellent work done on the IIR with some additional descriptions indicated below (for Agriculture and Waste), and the addition of sub-title levels for each of the detailed sources to aid navigation. The ERT also encourages Portugal to provide more detailed descriptions of recalculations in future IIRs.
10. Portugal uses zero values in a number of areas in the reporting tables. The ERT encourages Portugal to use the appropriate notation keys (e.g. NO where emissions are "Not Occurring", NE where emissions are "Not Estimates" and IE where emissions are "Included Elsewhere") for reporting where estimates are not available or necessary. Following the review Portugal has indicated that notation keys are now being used for future reporting.

Completeness

11. The ERT acknowledges the effort to which Portugal has gone to provide estimates of emissions for all sub-sectors and all pollutants reviewed.
12. Portugal's inventory for the pollutants reviewed is generally complete. However, completeness was difficult to fully assess because of the limited use of notation keys in the reported tables. The ERT identified some possible missing sources in the waste (cremation, sludge spreading and open burning of wastes) and solvents (including electronic components manufacturing under Degreasing and Dry Cleaning) sectors. The ERT considers these sources to have little influence on the

national total but encourages Portugal to provide estimates in future submissions. The ERT recommends that the party should perform additional reviews to identify potential gaps in the inventory. The usage of notation keys is highly recommended to support the finding of such gaps.

Consistency, including recalculations and time-series

13. Portugal has undertaken a number of recalculations for their 2008 submission in the energy, agriculture and waste sectors. However, descriptions have not been provided with enough details for the Energy or Waste sectors. The ERT encourages Portugal to provide additional details on the rationale for the recalculations as well as the impacts of the changes on the national estimates and time series in its future IIR submissions.

Comparability

14. The ERT notes that the inventory of Portugal is comparable with those of other reporting parties. The allocation of source categories follows that of the EMEP/UNECE reporting Guidelines. The ERT encourages Portugal to continue with this approach to national inventory calculation.

CLRTAP/NECD comparability

15. The ERT noted that there are some differences between the estimates provided by Portugal under LRTAP and NECD for energy as a result of the recalculations of the later LRTAP submission.

Accuracy and uncertainties

16. Portugal has not compiled uncertainty estimates for their UNECE submission. During the review Portugal indicated that it planned to extend the uncertainty assessment from the greenhouse gases to the other emission estimates. The ERT encourages Portugal to compile at least tier 1 estimates for future submissions.

Verification and quality assurance/quality control approaches

17. The ERT commends Portugal on its general quality assurance/quality control (QA/QC) activities. However, sector specific checks are not documented in the IIR. ERT encourages Portugal to provide information on sector-specific information on QA/QC procedures in future submissions.

FOLLOW-UP TO PREVIOUS REVIEWS

18. Portugal provided detailed responses to the questions identified in stage 2 on outliers of implied emissions factors. Due to the quality of the IIR and Portugal's responsiveness the ERT was able to review the inventory in detail and provide a number of detailed recommendations.

AREAS FOR IMPROVEMENTS IDENTIFIED BY PORTUGAL

19. Portugal has identified a number of areas of improvement in the Energy, Solvents and Waste sectors. These include:

- (a) More plant-specific emission factors to be incorporated and further development of country specific emission factor across the time series for some energy sectors. Following the review Portugal has indicated that this is part of its continuous improvement activities.
- (b) A review of the potential underestimation of fuel oil combustion in refineries and development of projects to incorporate high quality facility level data (e.g. EU ETS) into the national estimates and to generate country-specific emission factors.
- (c) Review of the compatibility between the inventory and the energy balance including continuing efforts to use fuel consumption data obtained directly from several sources - Large Combustion Plants (LCP) and EU ETS.
- (d) Improvements to the estimates in the solvent sector for paint application, degreasing and dry cleaning, the printing industry and rubber processing.
- (e) The applicability of the emission factors used in the calculation of NH₃ emissions from grazing for 4B Manure Management.
- (f) Integration of some of the missing sources (cremation of corpses and carcasses, incineration of waste oils) in the next submission and, to improve it, knowledge concerning industrial waste-water treatment.

PART B: RECOMMENDATIONS FOR IMPROVEMENTS TO THE PARTY

CROSS CUTTING IMPROVEMENTS IDENTIFIED BY THE ERT

20. The ERT has identified the following cross-cutting issues for improvement:
- (a) More detailed description of the time series of key sources into the IIR
 - (b) Further details of methodologies for some sectors missing from the current IIR as detailed below (including for 1.B fugitive emissions) & assumptions on the solvent content of paints, corrections of small errors on Waste for industrial waste water. Portugal has included details in the latest version of the IIR.
 - (c) Provision of sub category level chapters to aid navigation in the document.
 - (d) Inclusion of missing sources (including cremation, sludge spreading) and review methods for landfill NH₃
 - (e) To use the appropriate notation keys (e.g. NO where emissions are “Not Occurring”, NE where emissions are “Not Estimates” and IE where emissions are “Included Elsewhere”. Following the review Portugal has indicated that this issue has been addressed for future reporting.
 - (f) Elaborate on the rationale and explanation for the recalculations and possible implication for trends in some sectors in the IIR.
 - (g) To perform and present uncertainty analysis and use it to as a tool to focus on planned improvements to the key categories.
 - (h) To continue to develop projects for incorporating high quality facility level data (e.g. EUETS) into the national estimates and to generate country-specific emission factors.
21. Recommended improvements relating to specific source categories are presented in the relevant sector sections of this report.

SECTOR-SPECIFIC RECOMMENDATIONS FOR IMPROVEMENTS IDENTIFIED BY ERT

ENERGY AND TRANSPORT;

Review Scope

Pollutants Reviewed		SO ₂ , NO _x , NMVOC, NH ₃ , PM ₁₀ & PM _{2.5}		
Years		1990 – 2006 + (Protocol Years)		
NFRCode	CRF_NFRName	Reviewed	Not Reviewed	Recommendation Provided
1.A.1	Energy industries	x		
1.A.2	Manufacturing industries and construction	x		
1.A.3	Transport	x		
1.A.4	Commercial, Residential, Agriculture & Forestry	x		
1.A.5	Other	x		
1.B.1	Fugitive emissions from solid fuels	x		
1.B.2	Fugitive emissions from oil and natural gas	x		
<i>Note: Where a sector has been partially reviewed (e.g. some of the NFR codes) please indicate which codes have been reviewed and which have not in the respective columns.</i>				

General recommendations on cross-cutting issues.

22. Portugal has provided a detailed and generally transparent emissions inventory. Estimates are provided at the most detailed level for all energy sectors. Portugal's methodology and emission factors in the IIR are considered (by the ERT) to be transparent and well described for the Energy Sector. However, the ERT encourages Portugal to include more detailed descriptions of the time series of key sources into the IIR and details of some sectors missing from the current IIR as detailed below.

23. The ERT encourages Portugal to undertake an uncertainty analysis for the Energy Sector in order to help provide information on the improvement process and to provide an indication of the reliability of the inventory data.

24. Portugal uses zero values in a number of areas in the reporting tables. The ERT encourages Portugal to use the appropriate notation keys (e.g. NO where emissions are "Not Occurring", NE where emissions are "Not Estimates" and IE where emissions are "Included Elsewhere") for reporting where estimates are not available or necessary.

25. Portugal has recalculated its inventory for almost all sectors in the year 2005. However, the IIR does not include all the necessary explanations. The ERT encourages Portugal to provide a more detailed explanation for the recalculations, including the rationale, the impact on the sector and its implication for trends in the Energy sector in its IIR.

26. Portugal provided detailed responses to the questions identified in stage 2 on energy sector outliers of implied emissions factors.

Sub-Sector Specific Recommendations.

1.A.3a Air Transport:- All Pollutants

27. During the review Portugal stated that civil aircraft emissions for cruises between mainland Portugal and Madeira/the Azores are partially (50 %) included in the national totals. The ERT recommends that Portugal should improve documentation in the IIR for the procedures used in connection with the handling of territories.

1.A.2 & 1.A.4 Wood Combustion:- All Pollutants

28. The ERT noted that Portugal does not estimate emissions of SO₂ from fuel wood. Although this is likely to be a small source of SO₂ compared to the national totals emission factors are provided in the EMEP/CORINAIR guidebook. The ERT encourages Portugal to apply these default factors and to estimate SO₂ emissions from wood combustion in future submissions. Portugal intends to address this in the 2010 submission.

1.A.3.b Road transport - NMVOC

29. The ERT noted that the COPERT 3 transport model is used. Portugal expected to have the first draft results from COPERT 4 by the end of 2008 and plans to consider including the new estimates in the national inventory as soon as possible. The ERT welcomes Portugal's efforts to keep the inventory at the best available scientific level.

1.A.1 & 1.A.2 Industrial Combustion - All Pollutants

30. Portugal has indicated, in its IIR, that a potential underestimation of fuel oil and gas combustion in refineries has been identified. Portugal has initiated a project to streamline the collection of information on refineries as part of a programme to look at the consistency between EU-ETS and the inventory. Portugal also plans to extend this project to co-ordinate the collection of data from large units between DGEG and APA. The ERT commends Portugal's efforts in ensuring consistency between EU-ETS, the energy balance and the emission inventory and encourages Portugal to continue this effort.

1.A.2 Industrial Combustion:- Stationary Engines - CO

31. The ERT noted that the emission factors for CO from stationary engines using gasoline or gas oil (Table 2.78) seem to be very low. The ERT concluded that the lower value of a very broad range (12-1130 large plants, 12-631 small plants) from the EMEP/Corinair Guidebook has been used. The country responded that the same value for boilers was used in accordance with CORINAIR 90. The information in the EMEP guidebook was not clear enough to set a specific value for stationary engines and Portugal will revise this figure using references from the new Guidebook, US-EPA or even country specific information. The ERT encourages Portugal to review the emission factors for stationary engines.

32. Following the review Portugal concluded that 1.A.2 could not be split into stationary and mobile combustion. The ERT encourages Portugal to continue to investigate the feasibility of separating stationary and mobile fuel consumption data in the future.

1.B Fugitive emissions – NMVOC

33. During the review the ERT noted the absence of a methodology description for category 1.B fugitive emissions in the IIR. Portugal provided a document during the review describing the methods for emission estimation from refineries, storage and distribution of oil products. The ERT encourages Portugal to include this documentation in future submissions and to make sure that the inventory and documentation covers the missing subsectors identified (transmission/distribution of natural gas/city gas and storage and handling of coal). Following the review Portugal has indicated that it will include this information in future submissions.

INDUSTRIAL PROCESSES

34. No review findings have been included for Industrial Processes as there were difficulties in completing a review of the Industrial Process sector due to the time demanding task and language difficulties experienced by the Industrial Processes Expert.

SOLVENTS

Review Scope

Pollutants Reviewed		SO ₂ , NO _x , NMVOC, NH ₃ , PM ₁₀ & PM _{2.5}		
Years		1990 – 2006 + (Protocol Years)		
NFRCode	CRF_NFRName	Reviewed	Not Reviewed	Recommendation Provided
3.A.1	Decorative coating application	3A		x
3.A.2	Industrial coating application			
3.A.3	Other coating application (Please specify the sources included/excluded in the “notes” column to the right)			
3.B.1	Degreasing	3B		x
3.B.2	Dry cleaning			
3.C	Chemical Products, Manufacture & Processing	3C		X
3.D.1	Printing	3D		x
3.D.2	Domestic solvent use including fungicides			
3.D.3	Other product use			

Note: Where a sector has been partially reviewed (e.g. some of the NFR codes) please indicate which codes have been reviewed and which have not in the respective columns.

General recommendations on cross-cutting issues

35. The ERT considers the solvents sector to be complete and comprehensive with good levels of detail in the methodology descriptions. The IIR is generally transparent and well presented/organised although some additional detail has been recommended below.

36. No recalculations are stated in the IIR. There is no difference between the 2007 and 2008 reports of 2005 emissions on category levels 3A to 3D. Time series are consistent

37. The ERT encourages Portugal to undertake an uncertainty analysis for the Solvents Sector in order to help provide information on the improvement process and to provide an indication of the reliability of the inventory data.

38. Portugal uses zero values in a number of areas in the reporting tables. The ERT encourages Portugal to use the appropriate notation keys (e.g. NO where emissions are “Not Occurring”, NE where emissions are “Not Estimates” and IE where emissions are “Included Elsewhere”) for reporting where estimates are not available or necessary.

39. The ERT encourages Portugal to include more detail in the IIR, e.g. the specific solvent content assumed in paints.

40. The ERT encourages Portugal to check if specific chemicals, e.g. dibutyl phthalate in Table 4.24, fulfil the requirements for VOCs, i.e. vapour pressure >0.01 kPa at room temperature, or at the temperature of use.

41. The ERT encourages Portugal to include a list of the most important chemical and/or product groups, where such information is available.

42. The ERT encourages Portugal to implement the planned projects to adjust emission factors for paint application and the methodology for Degreasing and dry cleaning, the development of improvements in consistency with the activity data time series and better knowledge of processes in the printing industry and revision of the method for estimating Rubber.

Sector-specific Recommendations

3.A. Paints and Coatings – NMVOC

43. The ERT encourages Portugal to assess the remains in cans, tubes, containers for paints, adhesives and other solvent containing products. At present it is assumed that the entire amount of the product is emitted. If a fraction is left and the container is incinerated, which is more realistic, the EF will be reduced.

44. The ERT encourages Portugal to include an explanation in the report on how the value for solvent content in solvent based paint, in Table 4.2, is determined.

3.B. Dry Cleaning and Degreasing – NMVOC

45. The ERT noted that electronic components manufacturing is not specifically mentioned in the current IIR. The ERT encourages Portugal to clarify in future IIRs and emissions reports whether electronic components manufacturing is accounted for under Degreasing and Dry Cleaning.

3.C. Chemical Products, Manufacture & Processing – NMVOC

46. During the review Portugal identified specific ongoing improvements in the rubber processing activity calculations. The ERT encourages Portugal to include details of these improvements in the next submission.

47. The ERT encourages Portugal to include, in future submissions, the table supplied during the stage 3 review, with the relative distribution of benzene and gasoline in rubber processing, cf. annex A.

AGRICULTURE

Review Scope:

Pollutants Reviewed		SO ₂ , NO _x , NMVOC, NH ₃ , PM ₁₀ & PM _{2.5}		
Years		1990 – 2006 + (Protocol Years)		
NFRCode	CRF_NFRName	Reviewed	Not Reviewed	Recommendation Provided
4.B	Manure Management	NH ₃		
4.D1	Direct Soil Emissions	NH ₃		
4.F	Field burning of agricultural wastes	NMVOC, CO, PM ₁₀ , PM _{2.5}		
5E	Other	CO, NMVOC		
<i>Note: Where a sector has been partially reviewed (e.g. some of the NFR codes) please indicate which codes have been reviewed and which have not in the respective columns.</i>				

General recommendations on cross cutting issues

48. The inventory is complete with respect to the most important sources of emissions. The IIR is generally transparent for the Agriculture sector with some exceptions outlined below for 4B and 4D

49. The ERT noted that recalculations were undertaken in response to an in-country review of the 2006 Inventory Submission under the UNFCCC and of the Informative Inventory Report under the Kyoto Protocol for Portugal. This has resulted in a revision of nitrogen excretion ratios for 4B3 sheep and a revision of activity data and volatilisation rates for fertilizer use in 4D1 Direct Soil Emissions. The ERT acknowledges the effort undertaken for this revision and encourages Portugal in the effort that any further recalculations as a result of the UNFCCC review process which have an effect on emission reporting under CLRTAP and or NECD are included in future submissions.

50. Portugal uses zero values in a number of areas in the reporting tables. The ERT encourages Portugal to use the appropriate notation keys (e.g. NO where emissions are “Not Occurring”, NE where emissions are “Not Estimates” and IE where emissions are “Included Elsewhere”) for reporting where estimates are not available or necessary.

Sector specific recommendations

4.B Manure management - NH₃

51. The ERT noted that the methodology description for NH₃ emissions from 4B Manure Management was not clearly presented. During the review Portugal acknowledged that it would consider revising the description in its next submission. The ERT encourages Portugal to undertake a revision of the description of the methodology for future submissions.

52. The ERT questioned the applicability of the emission factors used in the calculation of NH₃ emissions for grazing, housing and outside storage and land spreading of manures for 4B Manure Management. During the review Portugal

indicated that it would undertake a review of the applicability of the emission factors. The ERT encourages Portugal to undertake this initiative and to report on its findings in future submissions.

53. Portugal is encouraged by the ERT to provide more detailed information in its next IIR submission on the data used for calculations and the inclusion of activity data for 4B Manure Management.

4.D.1 Agricultural Soils - NH₃

54. The ERT encourages Portugal to provide detailed information on the breakdown of national fertilizer consumption into the relevant compounds in use, which are accounted for in emission estimates under 4D1 Direct Soil Emissions.

WASTE

Review Scope:

Pollutants Reviewed		SO ₂ , NO _x , NMVOC, NH ₃ , PM ₁₀ & PM _{2.5}		
Years		1990 – 2006 + (Protocol Years)		
NFRCode	CRF_NFRName	Reviewed	Not Reviewed	Recommendation Provided
6.A	solid waste disposal on land	x		x
6.B	waste-water handling	x		x
6.C	waste incineration	x		x
6.D	other waste (e)	x		no

Note: Where a sector has been partially reviewed (e.g. some of the NFR codes) please indicate which codes have been reviewed and which have not in the respective columns.

General recommendations on cross-cutting issues.

55. This first Portuguese IIR shows a high level of transparency in terms of methodologies and data. EF and activity time series are almost always presented in detail, assumptions are indicated and references are given (except for industrial waste water). The ERT encourages Portugal to complement the excellent work done on the IIR with the addition of sub-title levels for each of the detailed sources to aid navigation.

56. The ERT noted a few small editorial errors in the graphical representations, equations and units. However, these have no impact on calculated emission values. The ERT encourages Portugal to improve transparency further by correcting these mistakes in the next submission.

57. Portugal has included all of the most important sources in its waste inventory. However, some NFR 6 sources, which are documented in the EMEP/CORINAIR Inventory guidebook, are not included in Portugal's estimates. These include cremation and sludge spreading and Portugal does not provide any rationale for this exclusion. The ERT encourages Portugal to improve the completeness of the inventory by including these sources and to describe in its IIR where sources have not been included.

58. Portugal uses zero values in a number of areas in the reporting tables. The ERT encourages Portugal to use the appropriate notation keys (e.g. NO where emissions are "Not Occurring", NE where emissions are "Not Estimates" and IE where emissions are "Included Elsewhere") for reporting where estimates are not available or necessary.

Sector-specific Recommendations

6.A.1&2 Landfills: – NH₃

59. Landfill disposal has been identified by Portugal as key category for NH₃. The ERT noted that no other Parties identify this sector as a key category for NH₃. The

ERT noted that the Portuguese methodology applied for calculating NH₃ emissions from landfill disposal of municipal and industrial waste uses a FOD similar to the one used to calculate CH₄. As NH₃ emissions do not have a direct relation with the DOC content, the ERT considers the adaptation of the CH₄ FOD inappropriate. The ERT recommends that Portugal should revise its methodology and estimate NH₃ emissions from landfills on the basis of CH₄ emission values (calculated under UNFCCC) and the NH₃/CH₄ ratio estimated on the basis of measurements. Following the review Portugal has revised its methodology using a NH₃/CH₄ ratio proposed by Eggleston (1992) (0.0073 kg NH₃/kg CH₄).

6.A. 3: – NMVOC and all pollutants

60. The ERT identified some problems concerning an apparent inconsistency in the activity time series from Landfills. During the review Portugal identified a problem with the “open burning of industrial waste on land” which is allocated to landfill emissions in its submission. The data actually refers to the incineration of industrial waste in dedicated MSW units and other industrial units. The ERT recommends that Portugal should review the methods (appropriateness of EF and AD) to make sure that emissions are not already included in the estimates of municipal waste incineration. The ERT also encourages Portugal to consider allocating these emissions to 6C incineration.

6.A.3 : – all pollutants

61. Waste-water treatment and sludges are included by Portugal as an industrial waste and considered under the subcategory “open burning of industrial waste”. The ERT indicated that emission factors for the incineration of waste-water sludges are different from those used for the incineration of municipal solid waste (EMEP/CORINAIR 090205) and the open burning of wastes. The ERT encourages Portugal to use plant-specific emission values for the incineration of wastes when available. Where these are not available, the ERT encourages Portugal to estimate the waste part of each category (municipal + non-hazardous industrial waste, wastewater sludge) and apply the appropriate emission factors. The ERT also encourages Portugal to consider allocating these emissions under 6C incineration.

6.B.1&2 Wastewater handling

62. Portugal calculates NH₃ emissions from individual private wastewater treatment (and more particularly, latrines and septic tanks) by using the methodology presented in CORINAIR (v.2006) for Latrines. Portugal assumes that as both latrines and septic tanks are associated with equivalent anaerobic conditions in the 2006 IPCC guidelines they are equivalent in term of NH₃ emissions. However the ERT has noted that there are important differences between latrines and septic tanks for NH₃ emission estimations, as latrines are "dry systems" without water supply whereas septic tanks are not, and because - according to the EMEP/CORINAIR guidebook - NH₃ is reduced in “wet systems”. The ERT encourages Portugal to split its estimates for latrines and septic tanks and apply appropriate emission factors for NH₃. Following the review Portugal has revised its estimates. NH₃ emissions from individual private wastewater according to the recommendations of the ERT.

63. The ERT encourages Portugal to provide, in future IIRs, a description of data sources, methods and activity data used for its estimates of industrial waste water treatment, in a similar manner to that provided for other categories in the IIR.

6.C Hazardous waste incineration:

64. The ERT has noted that Portugal uses some measurement data for the development of emission factors for emissions from incineration plants. The ERT encourages Portugal to check if these values, obtained from industrial plants, match with previously used EF and if a consistent time series can be constructed.

LIST OF ADDITIONAL MATERIALS PROVIDED BY THE PORTUGAL DURING THE REVIEW

1. Portugal Stage 1 report 2008
2. Portugal Stage 2 S&A report
3. Portugal IIR 2008
4. Response to preliminary questions raised prior to the review: Portugal q1 responses.doc
5. Response to questions raised during the review: Portugal q2-Ag-jg_20081008.doc
6. Solvents: cf. question above:

Product	Solvent
New tyres	100% Benzene
Reconstructed tyres	100% Benzene
Other rubber products	1.7% Gasoline
	98.3% Benzene