
Environment and Climate Regional Accession Network (ECRAN)

Regional Training Seminar on Assessment of GHG Inventories in the Energy and Industrial Processes Sectors

19 - 21 November 2014, Zagreb

ENVIRONMENTAL AND CLIMA REGIONAL NETWORK FOR ACCESSION - ECRAN

WORKSHOP REPORT

**Activity No 3.2.1 C/ 3.2.2 A Module 3 . REGIONAL TRAINING SEMINAR ON THE
ASSESSMENT POF GHG INVENTORIES IN THE ENERGY AND INDUSTRIAL PROCESSES
SECTOR**

19-21 NOVEMBER 2014, ZAGREB, CROATIA



This Project is funded by the
European Union



A project implemented by
Human Dynamics Consortium

Table of Contents

Table of Contents

I.	Background/Rationale	1
II.	Objectives of the training	2
	General objectives	2
	Specific objectives.....	2
	Results/outputs	2
III.	EU policy and legislation covered by the training	3
	Monitoring mechanism Regulation –Reporting requirements on greenhouse gas emissions	3
IV.	Highlights from the training seminar.....	5
	Day 1	5
	Day 2	7
	Day 3	8
V.	Evaluation	11
	ANNEX I – Agenda.....	14
	ANNEX II – Participants.....	19
	ANNEX III – Presentations (under separate cover).....	22





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I. Background/Rationale

Effective monitoring, reporting and verification (MRV) of greenhouse gas (GHG) emissions is critical for tracking progress towards the achievement of emission reduction targets. As Parties to the United Nations Framework Convention on Climate Change (UNFCCC) and its Kyoto Protocol, the European Union and Member States are required to report annually on their GHG emissions. They also have to report regularly on their climate change policies and measures through National Communications.

The annual EU GHG inventory report is prepared on behalf of the European Commission by the European Environmental Agency each spring. In line with UNFCCC reporting requirements, each Member State's annual inventory covers emissions up until two years previously.

Regulation (EU) No 525/2013 on mechanisms for monitoring and reporting greenhouse gas emissions and for reporting other information at national and Union level relevant to climate change (hereinafter: Monitoring Mechanism Regulation or MMR) revises and strengthens the EU's greenhouse gas monitoring and reporting framework in order to provide a better platform for EU action to tackle climate change. It fully substitutes the Decision No 280/2004/EC (Monitoring Mechanism Decision or MMD). Its main goals include improving the quality of the data reported, enabling the implementation of the Climate and Energy package through accurately tracking the progress of the Union and EU Member States towards meeting their emission targets for 2013-2020 and taking into account the periodic update at international level of the use of metrics (Global warming potentials) and methodologies (IPCC Guidelines) in the determination of greenhouse gas inventories.

The training seminar covered the following activities of ECRAN's Working Group 2 on "National inventory systems and the EU Monitoring Mechanism Regulation":

- Sub-task 2.1.C., Module 3 of the multi-module series of workshops related to capacity building on GHG inventory process in **Energy sector** and
- Sub-task 2.2.A. related to regional technical training seminars on GHG inventory in **Industrial Processes sector**

Sub-task 2.1.C., Module 3 (Energy) dealt with gap filling of activity data and checking the overall quality of implemented emission factors in GHG emission estimates with focus on key categories in Energy sector. In addition, fugitive emissions from fuels were reviewed for the first time.

Sub-task 2.2.A. (Industrial processes) dealt with identification of gaps in activity data and providing recommendations for establishment of data flow system for gap filling as well as checking the overall quality of implemented emission factors in GHG emission estimates with focus on key categories in Industrial Processes sector.

The results of this training will feed into assessment report which will include recommendations for short and long-term inventory improvements in relation to applied methodology, activity data and emission factors in the beneficiaries.

This regional training seminar was based on the *2006 IPCC Guidelines for National Greenhouse Gas Inventories*.



II. Objectives of the training

General objectives

The **wider** objective is to strengthen regional cooperation between the EU candidate countries and potential candidates in the fields of climate action and to assist towards the transposition and implementation of the EU climate policies and instruments as a key precondition for EU accession.

Specific objectives

The specific objective of the training program is to gradually improve/increase technical knowledge and institutional and procedural capacities of the ECRAN countries to prepare submissions of the National Inventory Reports according to the requirements of the MMR.

Results/outputs

The following results were expected from the regional exercise:

- Quality control check of key categories with focus on completeness and accuracy
- Identification of activity data gaps and providing recommendations and guidance for gap filling
- Improved skills in selecting emission factors and other calculation parameters in Energy and Industrial Process sector
- Setting priorities for country-specific short and long-term GHG inventory improvements



III. EU policy and legislation covered by the training

Monitoring mechanism Regulation –Reporting requirements on greenhouse gas emissions

Effective monitoring, reporting and verification (MRV) of greenhouse gas (GHG) emissions is critical for tracking progress towards the achievement of emission reduction targets. The ultimate goal of the UN Framework Convention on Climate Change (UNFCCC) is to stabilise atmospheric concentrations of GHGs at a level which prevents dangerous human interference with the climate system.

As Parties to the UNFCCC and its Kyoto Protocol, the European Union and Member States are required to report annually on their GHG emissions. They also have to report regularly on their climate change policies and measures through National Communications.

The EU inventory reflects the sum of national inventories, based on Member States' monitoring of their own GHG emissions. This national monitoring is required under the **GHG monitoring mechanism** which was established in 1993 and revised two times, in 2004 and in 2013, as part of the EU's preparations for meeting its Kyoto Protocol emissions target. The annual EU GHG inventory report is prepared on behalf of the European Commission by the European Environmental Agency each spring. In line with UNFCCC reporting requirements, each Member State's annual inventory covers emissions up until two years previously.

The latest revision concerns the new Monitoring Mechanism Regulation (MMR) which entered into force on 8 July 2013¹. This mechanism now provides the legal basis to implement revised domestic commitments set out in the 2009 climate and energy package (20-20-20 commitments)², as well as to ensure timely and accurate monitoring of the progress in implementation of these commitments.

The key objectives of the GHG Monitoring Mechanism Regulation are to:

- Monitor all anthropogenic (man-made) GHG emissions covered by the Kyoto Protocol in the Member States;
- Evaluate progress towards meeting GHG reduction commitments under the UNFCCC and the Kyoto Protocol;
- Implement the UNFCCC and the Kyoto Protocol as regards national programmes, greenhouse gas inventories, national systems and registries of the EU and its Member States, and the relevant procedures under the Kyoto Protocol;
- Ensure the timeliness, completeness, accuracy, consistency, comparability and transparency of reporting by the EU and its Member States to the UNFCCC Secretariat.

¹ Regulation (EU) No 525/2013 of the European parliament and of the Council on mechanisms for monitoring and reporting greenhouse gas emissions and for reporting other information at national and Union level relevant to climate change and repealing Decision No 280/2004/EC

² http://ec.europa.eu/clima/policies/package/index_en.htm



It aims to improve the quality of data reported, help the EU and Member States keep track of progress towards meeting their emission targets for 2013-2020 and facilitate further development of the EU climate policy mix.

The new MMR also introduces new elements, such as reporting of:

- Member States' and the EU's low-carbon development strategies;
- Financial and technical support provided to developing countries, and commitments arising from the 2009 Copenhagen Accord and 2010 Cancún Agreements;
- Member States' use of revenues from the auctioning of allowances in the EU emissions trading system (EU ETS). Member States have committed to spend at least half of the revenue from such auctions on measures to fight climate change in the EU and third countries.
- Emissions and removals from land use, land-use change and forestry (LULUCF);
- Member States' adaptation to climate change;



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IV. Highlights from the training seminar

Reference is made to Annex I for the agenda, and Annex III for the presentations. Below only the highlights are presented. The workshop materials, including presentations and hand-outs are submitted under the separate cover (See Annex III).

Day 1

Introduction to the training seminar – Davor Vesligaj

- Mr Vesligaj presented overview of tasks and modules in Activity 2, main goals, approach to and structure of the training;
- It was highlighted that the goals of the training seminar were to: (1) familiarize participants (or refresh) with the new common reporting format (CRF) structure in Energy (EN) and Industrial Processes (IP) sectors, (2) provide guidance and good practice in handling the CRF tables, in selection of emission factors and other calculation parameters, (3) provide guidance on using alternative calculation techniques for filling the time-series and data gaps, (4) identify short- and medium-term priorities and critical issues in GHG inventory preparation with focus on EN and IP sectors and (5) work on GHG emission calculations and quality control checks in EN and IP sectors;
- Mr Vesligaj pointed out that the workshop agenda in practical work sessions on Day 2 and 3 would adjust to the needs of the participants from the beneficiary countries based on conclusions on gaps from country presentations and draft of *GHG Inventory Priority Matrix*.

Overview of the common reporting format (CRF) in Energy sector – Tinus Pulles

- Mr Pulles presented structure of the new CRF tables in Energy sector, including the source categories, background data, documentation boxes and potential cases of notation key including elsewheres (IE).

Overview of the common reporting format (CRF) in Industrial processes sector – Lorenz Moosmann

- Mr Moosmann presented in a detailed manner a structure of source categories in Industrial Processes sector according to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories together with main changes in comparison to the previous CRF structure (re-arrangements of source categories, inclusion of new gases, potential emissions that are no longer reported);
- Reference was made to cross-cutting issues, use of notation key including elsewheres (IE) and appropriate allocation of emissions between the Energy and Industrial Processes sectors and within Industrial Processes sub-categories in order to avoid double-counting of emissions.

Practical approach in handling the CRF tables – part I Energy – Tinus Pulles

- The key points in presentation were related to understanding of energy statistics where reference was made to the IEA Energy Statistics Manual and how to start developing customized database for the estimation of GHG emissions in Energy sector;



- Mr Pulles went through the structure of energy balance with explanations related to reference and sectoral approach as stipulated by the IPCC Guidelines, and what is needed to close energy balance in terms of activity data which are later used for the GHG emissions estimation;
- Main part of presentation was the introduction to development of a database, using the MS Access software, which (database) could be used for import and archiving of activity data from official energy statistics (example was taken from IEA online database) or other available sources of data, calculation of GHG emissions and exporting results in the CRF compatible .xls files.

Practical approach in handling the CRF tables – part II Industrial processes – Andrea Hublin

- Ms Hublin presentation included a detailed account of the inventory preparation process in terms of activity data collection, choice of method(s), emission factors and other parameters and the GHG emission calculation in Industrial Processes sector with reference to the new CRF tables;
- Structure and design of sub-sectoral spreadsheets used for bottom-up (facility level) emission calculation by IP sectoral expert were presented and explained to the participants;
- Examples of so called “meta” CRF table for Industrial Processes sub-categories were also presented and detailed explanations on practical issues in handling these tables and connections with calculation spreadsheets were provided.

Status of GHG inventories related to the Energy, IP and Solvent and Other Product Use – beneficiary country presentations

- A representative of each beneficiary country gave a concise presentation on current status of national GHG inventory related to the Energy and Industrial Processes sector
- Content of presentations included: Overview of National system (institutions, legislation, organization), Completeness (years, gases), Non-estimates (NEs), Key categories, 3 most critical issues per sector (AD, EF, method) and progress made since the end of past RENA project
- Detailed account of country’s status could be found in their respective presentations

Start-up of “ECRAN GHG Inventory Priority Matrix (IPM)”– Davor Vesligaj

- Based on presentations given by beneficiary representatives and in particular on the identified urgent inventory issues which have to be resolved, Mr Vesligaj has prepared a draft of the GHG Inventory Priority Matrix which identifies critical source categories and gases per each country (see summary table below)

Country	Energy	Industrial processes
Albania (not present at seminar)	-	-
Bosnia and Herzegovina	<ul style="list-style-type: none"> • Transport • Coal categorization • Fugitive emission from refineries 	<ul style="list-style-type: none"> • F-gases
Croatia	<ul style="list-style-type: none"> • Development of country-specific emission factor (tier II) for fuel combustion 	<ul style="list-style-type: none"> • F-gases
FYROM	<ul style="list-style-type: none"> • Transport 	<ul style="list-style-type: none"> • F-gases
Kosovo*	<ul style="list-style-type: none"> • Calculation of GHG emissions for the period 2009-2013 based on available energy balance 	<ul style="list-style-type: none"> • Review of source category Other, beside cement and lime production



Montenegro	<ul style="list-style-type: none"> • Transport 	<ul style="list-style-type: none"> • F-gases
Serbia	<ul style="list-style-type: none"> • Fugitive emission from refineries 	<ul style="list-style-type: none"> • F-gases
Turkey	<ul style="list-style-type: none"> • Fuel categorization according to country-specific nomenclature 	<ul style="list-style-type: none"> • F-gases • Country-specific emission factor for cement production

Conclusions and closing of Day 1 – Davor Vesligaj

- Main conclusion of Day 1 is that initial agenda should be slightly adjusted according to the identified source-categories and gases presented in the previous table;
- Proposal for the three ad-hoc inventory teams was presented and accepted by the participants. *Team 1: FYROM and Serbia, Team 2: Bosnia and Herzegovina and Montenegro, Team 3: Turkey, Kosovo* and Croatia.*

Day 2

Reference is made to Annex I for the agenda, and Annex III for the presentations. Below only the highlights are presented. The workshop materials, including presentations and hand-outs are submitted under separate cover (See Annex III).

“Warming up” - Good practice on filling the time-series and data gaps – Harry Vreuls and Davor Vesligaj

- Mr Vreuls presented good practice on the application of alternative calculation techniques in cases of time-series and data gaps. Reference was made to the theoretical background, possible options, consistency and extrapolation, summary of alternative calculation techniques provided in the 2006 IPCC Guidelines and documentation and archiving procedures;
- Mr Vesligaj presented and explained practical examples of extrapolation and interpolation of the activity data in order to fill gaps in time-series.

Good practice in selecting emission factors and other parameters in Energy sector, Working on the GHG emission calculations and the QC checks in CRF categories 1A1 and 1A2 (energy industries and manufacturing industries and construction) – Tinus Pulles

- Mr Pulles continued with the practical case example of inventory database development using the MS Access software tool for preparation of inventory in Energy sector;
- Reference was made to source nomenclature, fuel nomenclature, default NCV and emission factors and establishment of relation between the calculation parameters;
- It was concluded that although this approach has many advantages over plain spreadsheet calculation model it requires advanced knowledge of the MS Access software tool;
- Mr Pulles also presented Internet links to the inventory related resources and guidelines which could be used by participants.

Working on the GHG emission calculations and the QC checks in CRF categories 1A3a-d (transport) – Tinus Pulles, Harry Vreuls and Davor Vesligaj



- Three ad-hoc inventory teams were simultaneously working on the transport sector emissions under the supervision of ECRAN experts;
- Key findings and issues per country are presented in table below:

Country	Key findings and issues in transport sector
Albania (not present at seminar)	-
Bosnia and Herzegovina	<ul style="list-style-type: none"> • Completeness and consistency of fuel balance at country level is key issue • Bottom-up COPERT IV model is used to close fuel balance gaps • Data on vehicle fleet are available
Croatia	<ul style="list-style-type: none"> • GHG emissions from road transport are complete and consistent • There is a need for improvement of fuel consumption data in domestic transport out of bunker fuel
FYROM	<ul style="list-style-type: none"> • Bottom-up COPERT IV model is used for GHG emission calculation
Kosovo* ³	<ul style="list-style-type: none"> • 2006 IPCC methodology was applied • Interpolation was applied to fill gaps in activity data
Montenegro	<ul style="list-style-type: none"> • Fuel balance is complete and consistent • Data on vehicle fleet are not available
Serbia	<ul style="list-style-type: none"> • There is a need to improve consistency and completeness of activity data in the period 1990-2013
Turkey	<ul style="list-style-type: none"> • GHG emissions from road transport are complete and consistent • There is a need for improvement of fuel consumption data in domestic transport out of bunker fuel (joint project with Croatia)

Working on the GHG emission calculations and the QC checks in CRF categories 1B1-2 (fugitive emissions from fuels) – Andrea Hublin, Tinus Pulles and Harry Vreuls

- Experts worked with beneficiary countries which identified fugitive emissions as a priority improvement objective (Bosnia-Herzegovina and Serbia) on the status of activity data and methodological choice for calculation of emissions.

Conclusions and closing of Day 2 – all participants

- Experts summarized the key issues and findings in Energy sector and presented the schedule for Day 3

Day 3

Reference is made to Annex I for the agenda, and Annex III for the presentations. Below only the highlights are presented. The workshop materials, including presentations and hand-outs are submitted under separate cover (See Annex III).

³ *This designation is without prejudice to positions on status, and is in line with UNSCR 1244 and the ICJ Opinion on the Kosovo Declaration of Independence



Good practice in selecting the emission factors and other parameters in Industrial processes sector –
Andrea Hublin and Lorenz Moosmann

- Ms Hublin presented good practice in selecting the activity data, emission factors and other parameters in IP sector for CRF source categories 2A, 2B and 2C. Particular attention was given to a detailed explanation of methodological choice (tiers) according to decision trees, completeness, development of consistent time series, uncertainty assessment, QA/QC, reporting and documentation as an important part of QA/QC system
- Mr Moosmann presented good practice in selecting the activity data, default emission factors and other parameters in IP sector for CRF source categories 2F. Reference was made to four countries: Austria, Croatia, Italy and Greece which could be used as a representative cluster in estimating the F-gases emissions from commercial and industrial refrigeration, stationary air conditioning and mobile air conditioning. From methodological point, two approaches were presented and explained, Approach A and Approach B as well as the three approaches based on data from other countries

Working on the GHG emission calculations and the QC checks in CRF categories 2A, 2B, 2C and 2F –
Andrea Hublin, Lorenz Moosmann, Tinus Pulles and Harry Vreuls

- For practical work session, two ad-hoc inventory teams were formed: Team 1: FYROM, Serbia, Bosnia and Herzegovina and Montenegro Team 2: Turkey, Kosovo* and Croatia.
- Ms Hublin supervised the practical work on emissions from consumption of halocarbons and SF₆ in stationary air conditioning equipment and Mr. Moosmann supervised the practical work on emissions from consumption of halocarbons in mobile air conditioning. Both experts prepared detailed calculation spreadsheets with emission factors in order to streamline practical work on emission calculations.
- Recommendations for improvements were made on the calculation of emissions from metal production.

Discussion, Conclusions, evaluation and wrap up – all participants

- During the final discussion participants emphasized that approach to this training seminar fitted its purpose and that the experts combined the theoretical and practical work well
- Since most of the sectors related issues were discussed and to a large extent concluded during Day 1 and Day 2 wrap-up meetings, additional questions/points were identified as the cross-cutting issues in future development of national GHG inventories, i.e.:
- - What would be the most appropriate base/reference year in the GHG inventory which will present basis for future negotiation on targets in the framework of accession process to the European Union? This is particularly important since most of the beneficiary countries still face significant data gaps in emission inventories. Initial proposal was to choose between 2005 which was used as a reference year for the EU 2020 targets in the ETS and non-ETS sectors or 2010 for which quality of activity data is much better for almost all the beneficiary countries.
 - Should countries use the GHG emissions from the verified reports submitted by EU ETS operators in order to increase the accuracy of emissions estimates and if yes how consistency of time-series should be preserved? General expert's advice (Pulles) is to



- avoid use of the ETS data for GHG inventory purposes since methodological approaches and the purpose of reporting are different.
- Information should be provided on the latest development of new UNFCCC inventory software for the non-Annex I Parties.

 - Next training seminar in February will cover Agriculture sector and will be held in Sarajevo, Bosnia-Herzegovina. Participants asked that the activity data tables for practical exercise are sent in advance.



V. Evaluation

The following is the summary of the training evaluation report based on analysis of the questionnaires provided to the participants during the training. 23 participants filled the evaluation form. It shows that the expectations of the workshop were met.

Statistical Information

1.1	Workshop Session	Sub-task 3.2.1 – C and sub-task 3.2.2 A: Regional training seminar on the assessment of GHG inventories in the Energy and Industrial Processes sectors
1.2	Facilitators name	As per agenda
1.3	Name and Surname of Participants (evaluators) optional	As per participants' list

Your Expectations

Please indicate to what extent specific expectations were met, or not met:

My Expectations	My expectations were met		
	Fully	Partially	Not at all
1. The training workshop succeeded to identify activity data gaps and to provide recommendations and guidance for gap filing.	 (74%)	I (26%)	
2. The training helped us to improve our skills in selecting emission factors and other calculation parameters in the Energy and Industrial processes sectors	 57(%)	 (43%)	
3. The training helps us to gradually improve/ increase our technical knowledge and institutional and procedural capacities to prepare the future submission of the National Inventory Reports according to the requirements of the MMR.	 (65%)	 (35%)	



Workshop and Presentation

Please rate the following statements in respect of this training module:

Aspect of Workshop	Excellent	Good	Average	Acceptable	Poor	Unacceptable
1 The workshop achieved the objectives set	IIII IIII I (44%)	IIII IIII I (44%)	III (12%)			
2 The quality of the workshop was of a high standard	IIII III (35%)	IIII IIII II (52%)	III (13%)			
3 The content of the workshop was well suited to my level of understanding and experience	IIII IIII I (44%)	IIII III (36%)	III (6%)			
4 The practical work was relevant and informative	IIII I (27%)	IIII IIII (48%)	IIII (23%)		I (4%)	
5 The workshop was interactive	IIII IIII III (54%)	IIII IIII I (46%)				
6 Facilitators were well prepared and knowledgeable on the subject matter	IIII IIII (45%)	IIII III (41%)		III (14%)		
7 The duration of this workshop was neither too long nor too short	IIII II (29%)	IIII IIII IIII (63%)	II (8%)			
8 The logistical arrangements (venue, refreshments, equipment) were satisfactory	IIII III (38%)	IIII II (33%)	III (15%)	I (5%)	I (5%)	
9 Attending this workshop was time well spent	IIII IIII (38%)	IIII IIII IIII (62%)				

Comments and suggestions

I have the following comment and/or suggestions in addition to questions already answered:

Workshop Sessions:

- To prepare working materials before trainings

Facilitators:

- Well prepared for practical work;
- Great;
- Hands-on for practical advice/ tips/ tools;
- Continue with this approach.

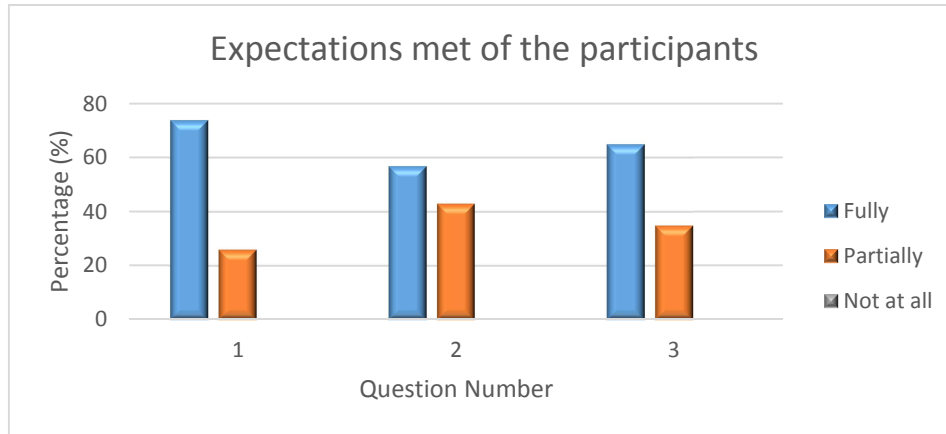
Workshop level and content:

- Excellent;
- Continue with this approach;
- The best workshop till now for ECRAN WG2.



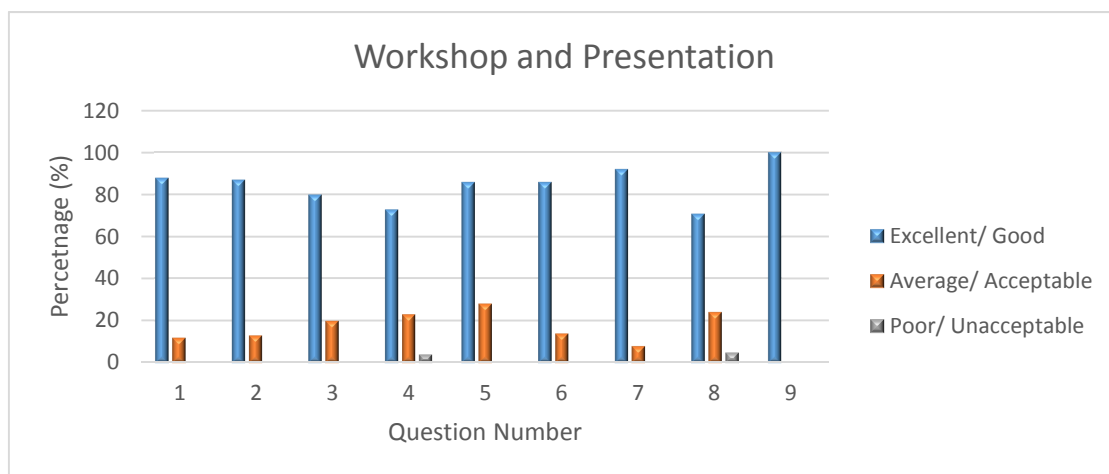
EXECTIONS OF PARTICIPANTS

1. The training workshop succeeded to identify activity data gaps and to provide recommendations and guidance for gap filing.
2. The training helped us to improve our skills in selecting emission factors and other calculation parameters in the Energy and Industrial processes sectors
3. The training helps us to gradually improve/ increase our technical knowledge and institutional and procedural capacities to prepare the future submission of the National Inventory Reports according to the requirements of the MMR.



WORKSHOP AND PRESENTATION

- 1 The workshop achieved the objectives set
- 2 The quality of the workshop was of a high standard
- 3 The content of the workshop was well suited to my level of understanding and experience
- 4 The practical work was relevant and informative
- 5 The workshop was interactive
- 6 Facilitators were well prepared and knowledgeable on the subject matter
- 7 The duration of this workshop was neither too long nor too short
- 8 The logistical arrangements (venue, refreshments, equipment) were satisfactory
- 9 Attending this workshop was time well spent



ANNEX I – Agenda

Day 1 – Wednesday, 19 November, 2014

Topic: Assessment of GHG Inventories in Energy and Industrial Processes sectors Chair and Co-Chairs: Imre Csikós, Davor Vešligaj Venue: Hotel Panorama				
Start	Finish	Topic	Speaker	Sub topic/Content
08:30	09:00	Registration		
09.00	09.15	Welcome	Imre Csikós, ECRAN	<ul style="list-style-type: none"> • Introduction of participants • Approval of the agenda
09.15	09.45	Introduction to Sub-task 2.1-C: Module 3 and Sub-task 2.2.A (15')	Davor Vešligaj, ECRAN	<ul style="list-style-type: none"> • Overview • Overall and specific goals of training seminar
09.45	10.00	Overview of the common reporting format (CRF) in Energy sector, (15')	Tinus Pulles, ECRAN	<ul style="list-style-type: none"> • Source categories • Background data and documentation boxes • Cross-cutting and including elsewheres (IEs)
10.00	10.15	Overview of the common reporting format (CRF) in Industrial processes sector (15')	Lorenz Moosmann, UBA - Austria, Industrial processes expert	<ul style="list-style-type: none"> • Source categories • Background data and documentation boxes • Cross-cutting and including elsewheres (IEs)
10.15	11.00	Practical approach in handling the CRF tables – part I Energy (45')	Tinus Pulles, ECRAN	<ul style="list-style-type: none"> • How to start working with the CRF tables? • Examples of calculation tables (“meta CRF tables”) • How to fill in the CRF tables-tips and tricks?
11.00	11.15	Coffee Break		
11.15	12.00	Practical approach in handling the CRF tables – part II Industrial	Andrea Hublin, ECRAN	<ul style="list-style-type: none"> • How to start working with the CRF tables? • Examples of calculation tables (“meta CRF tables”) • How to fill in the CRF tables-tips



		processes		and tricks?
12.00	13.00	Lunch Break		
13.00	14.00	<p><i>“From RENA to ECRAN” – country presentations</i></p> <p>Status of GHG inventories in part related to Energy, IP and Solvent and Other Product Use– Part I (60’)</p>	<p>Kosovo*</p> <p>Bosnia-Herzegovina</p> <p>Albania</p> <p>Montenegro</p> <p><i>(Max 15 minutes presentation per country, presentation template will be provided before)</i></p>	<ul style="list-style-type: none"> • Overview of National system (institutions, legislation, organization) • Completeness (years, gases) • Non-estimates (NEs) • Key categories • 3 most critical issues per sector (AD, EF, method) • Progress made
14.00	14.15	Coffee Break		
14.15	15.15	<p><i>“From RENA to ECRAN” – country presentations</i></p> <p>Status of GHG inventories in part related to Energy, IP and Solvent and Other Product Use– Part II (60’)</p>	<p>Croatia</p> <p>Republic of Serbia</p> <p>The former Yugoslav Republic of Macedonia</p> <p>Turkey</p> <p><i>(Max 15 minutes presentation per country, presentation template will be provided before)</i></p>	<ul style="list-style-type: none"> • Overview of National system (institutions, legislation, organization) • Completeness (years, categories, gases) • Non-estimates (NEs) • Key categories • 3 most critical issues per sector (AD, EF, method) • Progress made
15.15	15.45	Start-up of <i>“ECRAN GHG Inventory Priority Matrix (IPM)”</i>	Davor Vešligaj, ECRAN	WG 2 coordinator will develop and present initial matrix with common and country-specific priorities for GHG inventory improvement based on country presentations
15.45	16.00	Conclusions and closing of Day 1	Imre Csikós, ECRAN	



Day 2 – Thursday, 20 November, 2014

Topic: Assessment of GHG Inventories in Energy sector (fuel combustion and fugitive emissions)				
Chair and Co-Chairs: Imre Csikós, Andrea Hublin				
Venue: Hotel Panorama				
Start	Finish	Topic	Speaker	Sub topic/Content
08:30	09:00	Registration		
09.00	09.15	Introduction	Imre Csikós, ECRAN	
09.15	09.45	“Warming up” - Good practice on filling the time-series and data gaps (30’)	Harry Vreuls, RVO, Netherlands Davor Vešligaj, ECRAN	<ul style="list-style-type: none"> • Alternative calculation techniques with examples • Q&A
09.45	10.30	Good practice in selecting emission factors and other parameters in Energy sector (45’)	Tinus Pulles	<ul style="list-style-type: none"> • Selection and application of emission factors and other calculation parameters for fuel combustion and fugitive emissions from fuels categories with examples • Q&A
10.30	10.45	Coffee Break		
10.45	11.45	Working on GHG emission calculations and QC checks in CRF categories 1A1 and 1A2 (energy industries and manufacturing industries and construction)	Tinus Pulles Harry Vreuls Davor Vešligaj	<ul style="list-style-type: none"> • 4 ad-hoc inventory teams will be formed based on identified common and country-specific issues and priorities (one team = two ECRAN countries) • team work with expert supervision
11.45	12.45	Lunch Break		
12.45	13.45	Working on GHG emission calculations and QC checks in CRF	Tinus Pulles Harry Vreuls Davor Vešligaj	<ul style="list-style-type: none"> • team work with expert supervision



		categories 1A3a-d (transport)		
13.45	14.00	Coffee Break		
14.00	15.00	Working on GHG emission calculations and QC checks in CRF categories 1B1-2 (fugitive emissions from fuels)	Tinus Pulles Harry Vreuls Andrea Hublin	<ul style="list-style-type: none"> team work with expert supervision
15.00	15.30	Plenary session	All participants	
15.30	16.00	Conclusions and closing of Day 2	Imre Csikós, ECRAN	

Day 3 – Friday , 21 November, 2014

Topic: Assessment of GHG Inventories in Industrial Processes				
Chair and Co-Chairs: Imre Csikós, Harry Vreuls				
Venue: Hotel Panorama				
Start	Finish	Topic	Speaker	Sub topic/Content
08:30	09:00	Registration		
09.00	09.15	Introduction	Imre Csikós, ECRAN	
09.15	10.30	Good practice in selecting emission factors and other parameters in Industrial processes sector (45')	Andrea Hublin Lorenz Moosmann, UBA – Austria Industrial processes expert	<ul style="list-style-type: none"> Selection and application of emission factors and other calculation parameters for fuel combustion and fugitive emissions from fuels categories with examples Q&A
10.30	11.15	Working on GHG emission calculations and QC checks in CRF categories 2A and 2B (Mineral	Andrea Hublin Lorenz Moosmann, UBA – Austria Tinus Pulles	<ul style="list-style-type: none"> 4 ad-hoc inventory teams (Red, Blue, Green and Orange) will be formed based on identified common and country-specific issues and priorities (one team = two ECRAN countries)



		products and chemical industry) (45')		<ul style="list-style-type: none"> team work with expert supervision
11.15	11.30	Coffee Break		
11.30	12.15	Working on GHG emission calculations and QC checks in CRF categories 2C (Metal production) (45')	<p>Andrea Hublin Lorenz Moosmann, UBA – Austria</p> <p>Tinus Pulles</p>	<ul style="list-style-type: none"> team work with expert supervision
12.15	13.15	Lunch Break		
13.15	14.00	Working on GHG emission calculations and QC checks in CRF categories 2F (Consumption of Halocarbons and SF ₆) (45')	<p>Lorenz Moosmann, UBA – Austria, Industrial processes expert 1</p> <p>Andrea Hublin</p>	<ul style="list-style-type: none"> Joint work
14.00	14.15	Coffee Break		
14.15	15.00	Plenary session	All participants	<ul style="list-style-type: none"> Present results of the working sessions Discuss remaining questions
15.00	15.30	Discussion, Conclusions, evaluation and wrap up		



ANNEX II – Participants

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		Tourism		
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ANNEX III – Presentations (under separate cover)

Presentations can be downloaded from:

<http://www.ecranetwork.org/Climate/GHG>



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