
Environment and Climate Regional Accession Network (ECRAN)

**Regional Training on the
EU Emissions Trading
System with focus on the
Monitoring, Reporting,
Verification and
Accreditation (MRVA)
Regulation**

10-11 September 2014, Zagreb

ENVIRONMENTAL AND CLIMA REGIONAL NETWORK FOR ACCESSION - ECRAN

WORKSHOP REPORT

Activity No 3.3.1. Module 2

**REGIONAL TRAINING ON THE EU EMISSION TRADING SYSTEMS WITH FOCUS ON
THE MONITORING, REPORTING, VERIFICATION AND ACCREDITATION (MVRA)
REGULATION**

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LIST OF ABBREVIATIONS

AER	Annual Emission Report
AVR	Accreditation and Verification Regulation
CEMS	Continuous Emission Measurement System
DAkKS	Deutsche Akkreditierungsstelle GmbH
DEHSt	German Emission Trading Authority
DG	Directorate General
EC	European Commission
ETS	Emission Trading System
EU	European Union
GHG	Greenhouse Gas
HAA	Croatian Accreditation Agency
MP	Monitoring Plan
MRR	Monitoring and Reporting Regulation
MRVA	Monitoring, Reporting, Verification and Accreditation
MS	Member State
NAB	National Accreditation Body
NCV	Net calorific value
NEA	Dutch Emission Authority
TJ	Terajoule
UKAS	UK Accreditation Service
VR	Verification Report
WG	Working Group



I. Background/Rationale

Activities under this ECRAN project focus on the ECRAN beneficiaries (Albania, Bosnia and Herzegovina, Croatia, Former Yugoslav Republic of Macedonia, Kosovo*¹, Montenegro, Serbia and Turkey).

The objectives of the Emissions Trading Working Group are to provide the essential regulatory building blocks and to increase the technical capacity for a well-functioning future national or regional ETS system, which could be or is modelled in line with the EU ETS. This would pave the way for further cooperation and linking with the EU ETS.

The following results are expected for this Working Group:

- To improve technical understanding of the EU ETS implementing provisions in relation to monitoring, reporting, verification and accreditation (MRVA) in the beneficiary countries, among the target group of industry and aircraft operators, as well as the Competent Authorities and potential verifiers.
- To identify institutional, legal and procedural arrangements for a future national or regional ETS system, which could be modelled in line with the EU ETS.

The ECRAN Emissions Trading Working Group aims at supporting the EU candidate and potential candidate countries in these implementation steps by means of formulating national and/or regional ETS roadmaps. These roadmaps will serve as a best-practice document for the implementation of ETS modelled along the EU ETS. It will address the steps required towards the full implementation of ETS and identify the resources and competences needed to achieve such implementation.

¹ *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.



II. Objectives of the training

General objectives

To support and give impetus for the preparation and implementation of emissions trading in the candidate countries, with a particular focus on the monitoring, reporting, verification and accreditation (MRVA) requirements.

Specific objectives

- Strengthen the understanding of the institutional, legal and procedural arrangements identified for the implementation of a national or regional emissions trading system in the beneficiary countries modelled along the EU ETS and its MRVA requirements.
- Exchange best practices in the implementation of MRVA requirements for emissions trading systems within the region, and between the EU Member State representatives and their counterparts in the beneficiary countries.
- Identify the responsibilities and duties of the various actors in EU ETS compliance processes, related ministries and other organizations, and provide explanation of the coordination essentials to minimize problems during the first implementation of the regulation.

Results/outputs

The participants will acquire:

1. Improved understanding of the details of the Monitoring and Reporting (MR) regulation as well as of the Accreditation and Verification (A&V) regulation of the European Commission.
2. Insight into the approaches and experiences in the implementation of both regulations in EU Member States
3. Better understanding of the required human and institutional resources for the implementation of the two regulations as part of an EU ETS system.
4. Insights in the lessons learned, the risks involved and the bottlenecks of the EU ETS implementation.



III. EU policy and legislation covered by the training

The European Union greenhouse gas emissions trading scheme (EU ETS) was established under Directive 2003/87/EC and became operable as of 1 January 2005. Its aim is to achieve the cost-effective reduction of greenhouse gas emissions from industrial installations in the EU using an economic instrument that ensures that environmental objectives are reached in an economically efficient manner while providing for a flexible approach in reaching such objectives.

The EU emissions trading system (EU ETS) is a cornerstone of the European Union's policy to combat climate change and a key tool for reducing the industrial greenhouse gas emissions. The EU ETS was established under Directive 2003/87/EC and became operable as of 1 January 2005.

The EU ETS covers more than 11,000 power stations and industrial plants in all 27 EU Member States plus Croatia, Iceland, Norway and Liechtenstein, as well as all flights from airlines operating in the EU or flying into and/or out of the EU.

The EU ETS works on the "**cap and trade**" principle, meaning that there is a "cap", or limit, on the total amount of certain greenhouse gases that can be emitted by the factories, power plants and other installations in the system, as well as originating from flights and aircraft within, entering or flying outbound from the EU. Within this cap, companies receive emission allowances which they can trade as needed. The cap/limit on the total number of allowances available ensures that they have a value. The cap for the year 2013 has been determined at 2,039,152,882 allowances, i.e. just under 2.04 billion allowances.

The **cap** will decrease each year by 1.74% of the average annual total quantity of allowances issued by the Member States in 2008-2012. In absolute terms this means that the number of allowances will be reduced annually by 37,435,387. In 2020, emissions from sectors covered by the EU ETS will be 21% lower than in 2005. The annual reduction in the cap will continue beyond 2020. To achieve the target of a 40% reduction in EU greenhouse gas emissions below 1990 levels by 2030, set out in the 2030 framework for climate and energy policy, the cap will need to be lowered by 2.2% per year from 2021, compared with 1.74% currently. This would reduce emissions from fixed installations to around 43% below 2005 levels by 2030 (See later under Structural Reform of the European Carbon Market).

Within the cap, companies receive or buy emission **allowances** which they can trade with one another as needed. If the emission exceeds the number of allowances received, the installation must purchase allowances from others. Conversely, if an installation has performed well at reducing its emissions, it can sell its leftover allowances. The installations can also buy allowances that are regularly auctioned from 1 January 2013 onwards. They can also buy limited amounts of international credits from emission-saving projects around the world. However, as from 2013 only emission saving projects from the so-called "Least Developed Countries" are eligible for use. The limit on the total number of allowances available ensures that they have a value.

After each year a company must first submit an emission report summarising the GHG emissions emitted during the year. This report should be based on the emission monitoring practice and



procedures laid down in the approved Monitoring Plan, and the total emissions verified by an accredited verifier. The next step is that the installation must surrender enough **allowances** to cover all its emissions in accordance with the verified emissions, otherwise penalties are imposed. If a company reduces its emissions to a level below the allowances received, it can keep the spare allowances to cover its future needs or sell the surplus to another company that is short of allowances. The flexibility that trading brings ensures that the emissions are cut where it costs least to do so.

Emissions can also be offset directly by buying and cancelling/deleting allowances.

The Directive currently applies to the following greenhouse gases and categories of activities, as listed in Annex I to the Directive:

- Carbon dioxide (CO₂) from:
 - power and heat generation;
 - energy-intensive industry sectors including oil refineries, steel works and production of iron, aluminium, metals, cement, lime, glass, ceramics, pulp, paper, cardboard, acids and bulk organic chemicals;
 - commercial aviation.
- Nitrous oxide (N₂O) from production of nitric, adipic, glyoxal and glyoxalic acids;
- Perfluorocarbons (PFCs) from aluminium production.

Commission Regulation (EU) No 601/2012 of 21 June 2012 on the monitoring and reporting of greenhouse gas emissions pursuant to Directive 2003/87/EC of the European Parliament and of the Council

The so called Monitoring and Reporting Regulation (**MRR**) establishes the requirements for the monitoring and reporting of greenhouse gas emissions by installations in the scheme pursuant to Directive 2003/87/EC. These requirements are effective as from 1 January 2013, from the start of the third trading period. This Regulation builds on the previous Commission Decision establishing monitoring and reporting guidelines (MRG 2004) that were revised in 2006 and implemented through Decision 2007/589/EC². These guidelines were applicable during the second period of the scheme (2008 to 2012). The new Monitoring and Reporting Regulation No 601/2012 provides detailed technical interpretation of the requirements set out in Article 14 and in Annex IV to the Directive. It aims at establishing basic monitoring methodologies to minimise the burden on operators and aircraft operators and facilitate the effective monitoring and reporting of greenhouse gas emissions pursuant to Directive 2003/87/EC.

The Regulation sets out the following 10 Annexes:

- Annex I sets out the minimum content of the Monitoring Plan for installations and for aviation emissions, (Art 12(1));
- Annex II sets the tier thresholds for calculation-based methodologies related to installations (Art

² Decision 2007/589/EC is repealed as from 1 January 2013. However, the provisions of the Decision will continue to apply to the monitoring and reporting and verification of emissions and, where applicable, activity data occurring prior to 1 January 2013



12(1));

- Annex III sets out the methodologies for aviation (Article 52 and Article 56);
- Annex IV sets out activity-specific monitoring methodologies related to installations listed in Annex I of the ETS Directive (Article 20(2));
- Annex V established the minimum tier requirements for calculation-based methodologies involving category A installations and calculation factors for commercial standard fuels used by Category B and C installations (Article 26(1));
- Annex VI presents the reference values for calculation factors (Article 13(1)(a));
- Annex VII specifies the minimum frequency of analyses (Article 35);
- Annex VIII specifies the measurement-based methodologies (Article 41);
- Annex IX indicates the minimum data and information which need to be retained by installations and aircraft operators (Article 66(1));
- Annex X specifies the minimum content of the Annual Reports (Article 67(3)).

The MRR requirements are designed to ensure regular and precise monitoring and reporting of greenhouse gas emissions in the participating countries (i.e. the EU Member States and countries in the EEA plus Croatia).

The annual procedure of ensuring the proper monitoring, reporting and verification (MRV) of the emissions, as well as all processes connected to these activities, are known as the “compliance cycle” of the EU ETS.

- Industrial installations and aircraft operators covered by the EU ETS are required to have an approved monitoring plan, according to which they monitor and report their emissions during the year. In the case of industrial installations, the monitoring plan forms part of the approved permit that is also required.
- Once the year has ended, the installations and the aircraft operators have to draft an emission report in which they report their emissions that have been monitored and recorded according to the requirements and procedures specified in the approved monitoring plan.
- A crucial next step in the emissions trading compliance cycle is the verification of emission reports prepared by the operators. The objective of verification is to ensure that emissions have been accurately monitored and reported in full accordance with the requirements of the MRR and that reliable and correct emissions data are reported according to Article 14(3) and Annex IV of Directive 2003/87/EC. The data in the annual emissions report must be verified before **31 March each year** by an accredited verifier (for the requirements on the verification, see next section).
- Once verified, operators must surrender the equivalent number of allowances by **30 April of the same year**. Common rules for the monitoring and reporting of emissions, as well as for the accreditation of verifiers and the verification of annual emissions reports are important for ensuring the quality of the annually reported emissions and the credibility of the data.

The table below summarises the common timeline of the annual ETS Compliance cycle for emissions in year N as specified in the MRR .



Table - Common timeline of the Annual ETS Compliance cycle for emissions in year N as specified in the MRR

When?	Who?	What?
Not specified by MRR but common sense suggests before 31 December N-1	Competent Authority	Approve Monitoring Plan (aviation and installations) and issue permit (in case of installations)
1 January N		Start of the Monitoring period
By 28 February N	Competent Authority	Allocation of allowances for free (if applicable) into the Operator's account in the Registry
31 December N		End of the monitoring period ³
31 March N+1 ⁴	Verifier	Finalise the verification of the emission report and issue verification report to the operator
31 March N+1 ⁵	Operators	Submit the verified annual emissions report
31 March N+1	Operators/Verifier	Enter the verified emissions figure in the verified emissions table of the Union Registry
March – April N+1	Competent Authority	Subject to national legislation, possible spot checks of submitted annual reports. Require corrections by the operator if applicable.
30 April N+1	Operator	Surrender allowances (amount corresponding to verified annual emissions) in Registry system
30 June N+1	Operator	Submit report on possible improvements of the Monitoring Plan, if applicable ⁵
(No specified deadline)	Competent Authority	Carry out further checks on submitted annual emissions reports, where considered necessary or as may be required by national legislation; require changes of the emissions data and surrender of additional allowances, if applicable (in accordance with Member State legislation).

³ Although usually not considered part of the compliance cycle, it may be useful to note that by 31 December the operator has to submit information about changes to the installation's capacity, activity level and operation, if applicable. This is a new element based on Article 24(1) of the CIMs. This notification was applicable for the first time in December 2012.

⁴ According to Article 67(1) of the MRR, competent authorities may require operators or aircraft operators to submit the verified annual emission report earlier than by 31 March, but by 28 February at the earliest.

⁵ There are two different types of improvement reports pursuant to Article 69 of the MRR. One is to be submitted in the year where a verifier reports improvement recommendations, and the other (which may be combined with the first, if applicable) every year for category C installations, every two years for category B, and every four years for category A installations. For categorisation, see Article 19 of the MRR. The CA may set a different deadline, but no later than 30 September of that year.



Commission Regulation (EU) No 600/2012 of 21 June 2012 on the verification of greenhouse gas emission reports and tonne-kilometre reports and the accreditation of verifiers pursuant to Directive 2003/87/EC of the European Parliament and of the Council.

This Regulation applies to the verification of greenhouse gas emissions and tonne-kilometre data occurring from 1 January 2013 and reported pursuant to Article 14 of Directive 2003/87/EC.

Verification provisions are legally provided for by Article 15, while the criteria for the verification are defined in Annex V to Directive 2003/87/EC .

In accordance with the principles of Annex V of Directive 2003/87/EC, the verifier should apply a risk-based approach with the aim of reaching a verification opinion providing reasonable assurance that the total emissions or tonne-kilometres are not materially misstated and the report can be verified as satisfactory. The level of assurance should relate to the depth and detail of verification activities carried out during the verification and the wording of the verification opinion statement.

The Regulation sets an overall framework of rules for the accreditation of verifiers to ensure that the verification of operator's or aircraft operator's reports in the framework of the EU ETS, to be submitted in accordance with the MRR (Commission Regulation (EU) No 601/2012) is carried out by verifiers that possess the technical competence to perform the entrusted task in an independent and impartial manner and in conformity with the requirements and principles set out in this Regulation.

All verification activities in the verification process are interconnected and should be concluded with the issuance of a verification report by the verifier containing a verification statement that is commensurate with the outcome of the verification assessment. Harmonised requirements for the verification reports and the performance of the verification activities are established to ensure that verification reports and verification activities in the Member States meet the same standards.

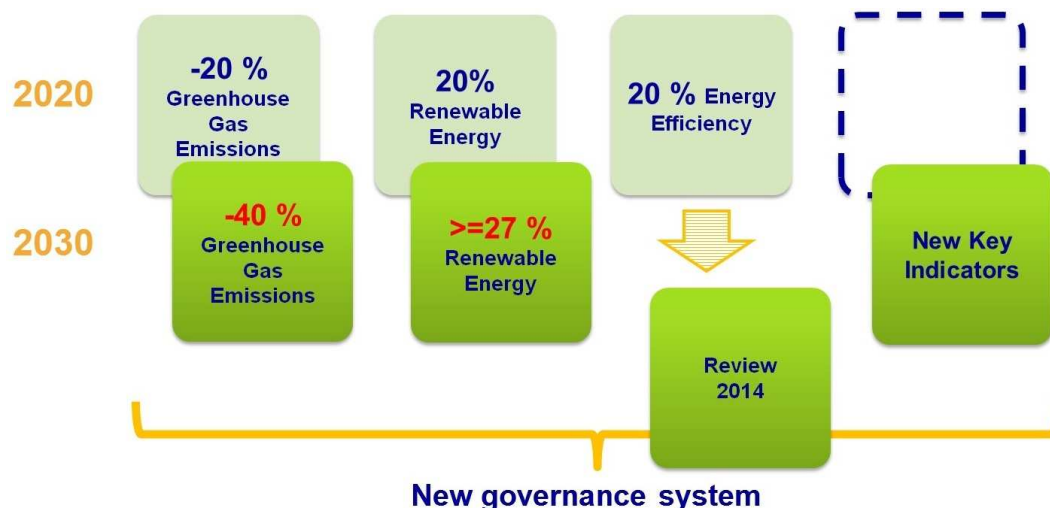


IV. Highlights from the training workshop

Reference is made to Annex I for the agenda, and Annex III for the presentations.

Day 1 – Zagreb, Croatia, 10 September 2014.

- Introduction to the Workshop – Imre Csikós European Union (EU) climate and energy package is a set of legislation aiming to ensure climate and energy targets to 2020, known as “20-20-20” targets, setting three objectives:
 - Reduce Greenhouse Gas (GHG) Emission levels by 20%
 - Increase share of Renewables to 20%
 - Reduce energy consumption by 20%
- The European Commission set a roadmap for moving to a low-carbon economy by year 2050. Taking 1990 as a baseline, the long-term goal is to cut GHG emissions by 80% by 2050, taking in consideration available technologies.
- The European Commission (EC) proposed a framework for climate and energy 2030. Targets for year 2030 are set tighter as compared to 2020 to allow a trajectory towards the 2050 decarbonisation targets as can be seen in picture 1.



Picture 1

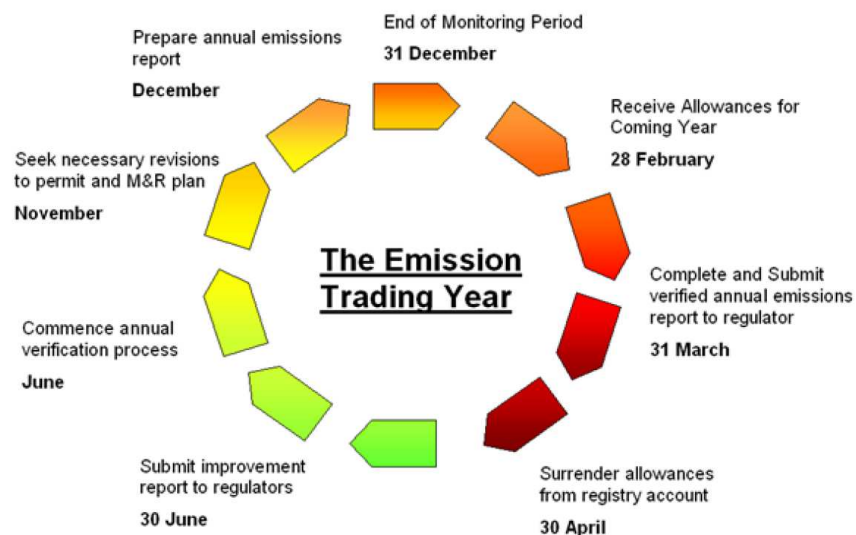
- An overview of the EU Climate Change legislation and policy was presented, including both legislation in force and newly planned EU Climate legislation and policies, such as: first generation biofuels (ILUC), ETS Aviation, Reform of the EU Emission Trading System (ETS), maritime transport, etc.
- The ECRAN Activities were presented for the period 2013-2016. The ECRAN programme is designed to engage candidate and potential candidate countries to converge with the EU Climate acquis and EU Climate policies. Regarding beneficiary countries however, it is necessary to ensure greater involvement from other sectors with direct relevance to climate work.

Overview of EU ETS – Monique Voogt

- The focus in this presentation was The Monitoring and Reporting regulation (MRR) and the Accreditation and Verification Regulation (AVR).



- This training is a part of series of trainings, seminars and missions on EU ETS, where all the participants should afterwards possess a full understanding of the ETS requirements as well as familiarisation with experiences of Member States (MS).
- EU ETS is a cornerstone of EU Climate Policy that was put into operation in 2005. Also, it is a cost-effective policy, offering companies flexibility in their mitigation strategy. It is currently in phase III, aiming to establish a stable and growing carbon market until 2020.
- EU ETS policy is applied in 28 EU MS countries, and in addition in the EEA Member States Iceland, Liechtenstein and Norway, and it is covering approximately 45% of total EU emissions, from more than 12,000 installations and 1,000 aircraft operators. From 2005 to 2012, the trading volume was increased from 94 million to 7.9 billion tonnes (that is approximately 56 billion euros).
- The Directives and regulations that were briefly presented:
 - Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 on establishing a scheme for greenhouse gas emission allowance trading within the Community amending Council Directive 96/61/EC.
 - Directive 2009/29/EC of the European Parliament and of the Council of 23 April 2009 on amending Directive 2003/87/EC so as to improve and extend the greenhouse gas emission allowance trading scheme of the Community.
 - Regulation (EU) 600/2012 of 21 June 2012 on the verification of greenhouse gas emissions reports and tonne-kilometre reports and the accreditation of verifiers pursuant to Directive 2003/87/EC of the European Parliament and of the Council.
 - Regulation (EU) 601/2012 of 21 June 2012 on the monitoring and reporting of greenhouse gas emissions pursuant to Directive 2003/87/EC of the European Parliament and of the Council.
- Implementation cycle of EU ETS was briefly presented, including main elements: monitoring plan, emission report, verification, improvement report and compliance, including allocation, issuance of allowances, register and operation. EU ETS Compliance Cycle was presented and explained.



Picture 2

- Roles and responsibilities of actors involved in the compliance cycle:
 - Operator submits Monitoring Plan (MP) to the Competent Authority (CA) for approval;



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- Competent Authority approves MP only if fully in conformity with the monitoring requirements ;
- Operator monitors its emissions in line with approved MP;
- Operator draft Emissions Report on the basis of monitored emissions in full conformity with the approved MP ;
- Accredited verifier verifies the emissions report which the operator submits to the CA;
- Competent Authority accepts emissions report only if it has been verified by an accredited verifier.

Monitoring and Reporting Regulation (MRR) - Alex Pijnenburg

- MRR Regulation is EU Regulation No. 601/2013 adopted in June 2012 after revision of a four-year period of implementation. It is directly applicable with no national implementation. It contains requirements for monitoring GHG emissions, and provisions on monitoring plan and reporting.
- Basic concepts of MRR include emission source, that is, separately identifiable part of an installation or a process within an installation, from which relevant GHG are emitted. It is also important to identify fuel type and product. Factors related to MRR are:
 - Annual activity data (TJ/tonne/nM3) - Data on the amount of fuels or materials consumed or produced by a process as relevant for the calculation-based monitoring methodology;
 - Emission factor (t CO₂ / unit) - Average emission rate of a greenhouse gas relative to the activity data of a source stream assuming complete oxidation for combustion and complete conversion for all other chemical reactions;
 - Net calorific value (TJ/unit) - Specific amount of energy released as heat when a fuel or material undergoes complete combustion with oxygen under standard conditions less the heat of vaporisation of any water formed.
- Monitoring approaches are divided into four groups:
 - Calculation-based approaches:
 - Standard methodology;
 - Mass balance;
 - Measurement-based approaches
 - Methodology not based on tiers (“fall-back approach”);
 - Combination of approaches.
- Standard calculation methodology contains one simple formula, which states that emissions are equal to input times emission factor. Under this methodology, combustion emissions is calculated per source stream by multiplying the activity data related to the amount of fuel combusted, expressed as TJ based on net calorific value (NCV), with the corresponding emission factor, expressed as tonnes CO₂ per TJ (t CO₂/TJ) consistent with the use of NCV, and with the corresponding oxidation factor.
 - Emission combustion = Activity data * Emission factor * Oxidation factor;
 - Emission process = Activity data * Emission factor * Conversion factor.
- Under the mass balance methodology, CO₂ quantity shall be calculated with correspondence to each source stream included in the mass balance by multiplying the activity data related to the amount of material entering or leaving the boundaries of the mass balance, with the material’s carbon content multiplied by 3.664 t CO₂/t C. E
- According to the measurement-based approach, the emissions are first to be determined for each hour of measurement from the hourly average concentration and the hourly average flow



rate. Thereafter all hourly values of the reporting year are summed up for the total emissions of that emission point, also called Continuous Emission Measurement System (CEMS). This approach however is not often used, mainly because the equipment is expensive, and fuel gas measurements can be difficult.

- In order to avoid situation where certain methodologies are technically not feasible or lead to unreasonable costs, a so called non-tier methodology is used, fall-back methodology and it is applicable when:
 - calculation or measurement is technically not feasible or leads to unreasonable costs;
 - operators propose an alternative methodology.

Several examples were said regarding this methodology, mainly because of its rare use, including fugitive carbon emissions in mass balance and ventilation air with hydrocarbons.

- Except in cases where situation requires a specific methodology to be applied for some activities, the M&R Regulation allows the operator to combine seamlessly the different approaches outlined above, on the condition that no data gaps and no double counting occur.
- A list of specific monitoring rules for all ETS sectors included in Annex IV of the Regulation were presented. Each activity of the monitoring rules for all sectors needs to have a scope and specific monitoring rules.
- Relevant question in ETS monitoring emissions include uncertainty and tiers system. Uncertainty is defined as a range within which the true value is expected to lie with a specified level of confidence. It is the overarching concept which combines precision and assumed accuracy. Measurements can be accurate, but imprecise, or vice versa, while ideal situation is precise and accurate. The tiers for activity data of a source stream are defined using thresholds for a maximum uncertainty allowed for the determination of the quantity of fuel or material over a reporting period.
- Categorisation of installations was presented, having four major categories according to the tonnes of CO₂ equivalent emissions:
 - Category A (less or equal 50,000 tonnes);
 - Category B (More than 50,000 and less or equal 500,000 tonnes);
 - Category C (more than 500,000 tonnes);
 - Installations with low emissions (less than 25,000 tonnes).

Categorisation of source streams includes:

- De-minimis source streams;
- Minor source streams;
- Major source streams.
- Another issue that needed to be presented was assessment of unreasonable costs. Improvement costs are unreasonable when costs are higher than benefit and when the costs are higher than allowance price multiplied by the improvement factor. An example of unreasonable costs was given, so the participants could grasp the practicalities..
- MRR requires ensurance of data production, collection, processing and storage in a controlled way, which is operated through data management and control system.

Requirements of MRR on data flow activities include:

- Identification of primary data source;



- Covering of each step in data flow from primary data to report;
- Relevant processing steps;
- Electronic processing of data and storage.

Also, requirements of MRR on control activities include specific written procedures on quality assurance of both measurement equipment and information technology system, segregation of duties, records keeping, internal reviews, corrective action and others.

- MRR requirements for improvement principle that operators need to take into account are:
 - Report on the proposed improvements to the CA for approval;
 - Up to date monitoring plan as appropriate;
 - Implementation of the improvements according to the time table proposed in the approved improvement report.

Croatia's experience with implementation of the MRR – Melita Zdilar and Milena Grgic

- As a new EU MS, Croatia's experience is valuable to the EU candidate countries and potential candidates, mainly because of the neighbouring region. The emission trading scheme has been applied in Croatia from 2010 to 2012, when monitoring and reporting on emissions from installations occurred, while since January 2013, free and partly free allocation on emissions of industrial plants occurred, joining the EU ETS.
- It was important to mention that there are 72 operators of installations included in ETS in Croatia, while 13 operators were excluded as they are considered as small operators not falling under the scope of Annex I to the EU ETS Directive. The Competent authority in Croatia for ETS is the Ministry of Environment and Nature Protection with the responsibility of cooperation with other ministries and accreditation bodies, reporting on the ETS and exchanging information, issuing permits and fines and support operators and stakeholders. On the other hand, the Croatian Environmental Agency serves as a national administrator of the Union Registry, approving MP and AER, and as well supporting operators. The website of the Ministry for climate activities is shown, demonstrating how individuals can get informed of the legislation, permits, current situation and steps to take regarding ETS, especially regarding issues of the monitoring plan.
- The monitoring plan can be filled at the same website (<http://klima.mzoip.hr>), as well as on the site of the Environmental protection Agency's site (<http://azo.hr/Dokumenti>), and shall be submitted in two hard copies and two electronic copies. All frequently asked questions can be found on website.
- However, even Croatia has been facing difficulties in proper implementation of ETS regulations. Only four people works in ETS administration in the Ministry, and additionally two in the Agency. Croatia still faces a lack of knowledge of operators on proper implementation of their obligations in the EU ETS. Moreover, there is lack of awareness on the importance of climate change.
- Croatia has actually started with the Commission Decision 2007/589/EC on establishing the guidelines for monitoring and reporting of greenhouse gas emissions. Croatia was included in the Dutch G2G project "Capacity Development related to Climate policies in Croatia" with the Dutch Competent Authority NEA in 2009. Their first monitoring plan was approved in January 2011. However, Croatia joined the EU ETS in its third period of EU ETS (January 2013), having new challenges: new sectors, new greenhouse gases, free allocation and national/union registry. The scheme of EU ETS in Croatia was schematically presented (as on picture 3):



EU ETS Monitoring Plan – Alex Pijnenburg

- Overview of the ETS Monitoring Plan (MP) was presented by Mr Alex Pijnenburg from the Dutch Emission Authority. An introduction was made with the general requirements from the MRR of Art. 11 specified for the installations. Herein, each operator shall monitor GHG emissions based on an approved MP. Monitoring plan is specific for individual installation, and it should serve as a manual for operator for monitoring and reporting. Also, as previously mentioned, MP is the basis of the compliance cycle.
- Minimum content of a monitoring plan should have key elements:
 - General information about the installation;
 - Detailed description of calculation-based methodology;
 - Detailed description of fall-back;
 - Detailed description of measurement based methodology;
 - Monitoring methodology for nitric acid (N₂O);
 - Monitoring methodology for PerFluorCarbons (PFC);
 - Monitoring transfer of CO₂.

Also, this minimum content should have supporting documents that includes uncertainty assessment, risk assessment and sampling plan.

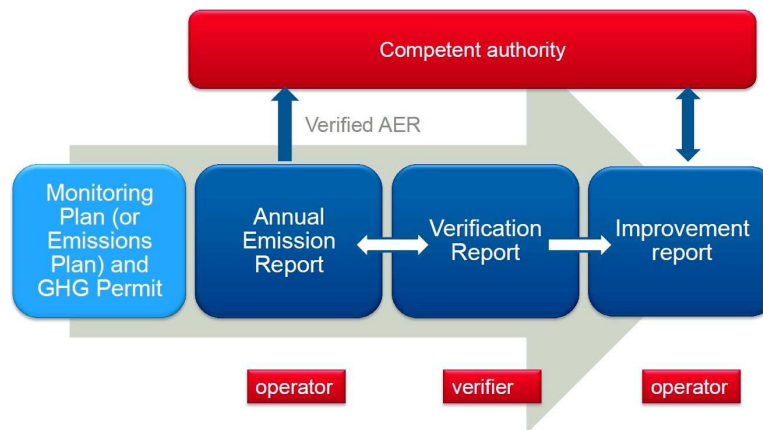
- A Monitoring Plan template published by EC was presented. It is an excel spread sheet and it is commonly used in most MS. A period of time was devoted to this template, with the explanations of the mandatory input fields, calculated results and explanation guidance and examples, all contained in the template. An example was given of MP in Netherlands, which apart from previously mentioned three supporting documents also includes diagrams and calculation formulas. It was emphasized that in this case the IPCC software can be used for the ETS calculations, but only in several situations.
- The remaining time of the presentation was left for the procedure of setting up a MP. It has six steps:
 - Description of installation activities;
 - Choice of methodology;
 - Identification of emission sources and source streams;
 - Identification of measurement instruments and uncertainty;
 - Monitoring methodology of each source stream;
 - Risk assessment, management procedures definition, dataflow and control system.

Annual Emission Reporting – Naomi Walker

- According to MRR Article 67, an operator or an aircraft operator shall submit to the competent authority by 31 March [28 February at the earliest] of each year an emission report that covers the annual emissions of the reporting period, verified in accordance with Regulation (EU) No 600/2012. The Annual Emission Report (AER) is a representation of the monitoring undertaken by the operator during the monitoring period and it contains the verified emission figures against which allowances must be surrendered. Further on, the AER template of installations was shown, also an excel file, as used in the United Kingdom.



- Roles and responsibilities of AER were schematically presented, as on picture 5:



Picture 5

- The operator is responsible for complying with the MRR, preparing the AER, appointing an appropriately accredited verifier, submitting the verified AER to the competent authority. The Verifier carries out the verification and provides the operator with a verification report. The competent authority receives the verified AER and carries out the compliance checks. The authority approves or disapproves the improvement report submissions and gives feedback on verifier performance.
- The process of verifying emission reports shall be an effective and reliable tool providing information upon which an operator or an aircraft operator can act to improve performance in monitoring and reporting emissions.
- It is the duty of an operator to regularly check whether the monitoring methodology applied can be improved. So, there are two types of improvement reports:
 - Tiers applied and application of fall-back approach;
 - Verifier findings
 - Outstanding non-conformities;
 - Recommendations for improvement.
- Regarding the low emission installations, they are also required to submit an improvement report, but unlikely to be needing one. These installations are exempt from submitting an improvement report that is related to the verifiers' findings.
- At the end of the presentations, links of useful documents were presented and they include Commission templates (annual emission reports, verification reports, and improvement reports) MR and AV guidance on reviewing the annual emissions and verification reports, as well as the quick guide on the role of the verifier and of the competent authority.

Practical Experiences with Monitoring and Reporting

United Kingdom – Naomi Walker

- Policy of GHG emission trading regulations is regulated by the UK Government, with the guidance of EU ETS of the European Commission. The lower level of the scheme are Regulators, that is, competent authorities, and there are five of them in the country
 - Environmental Agency;
 - Scottish Environmental Protection Agency;
 - Northern Ireland Environmental Agency;
 - Northern Resources Wales;
 - Department of Energy and Climate Change (offshore).



This Project is funded by the
European Union



A project implemented by
Human Dynamics Consortium

The installations and aviation operators are working with verifiers certified by the UK Accreditation Service (UKAS). UKAS is however, a representative body of the Government. On the other hand, the registry is staffed by both the regulators and the operators.

- There are 707 installations and 151 aircraft operators in the country. Staff dealing with the ETS (permitting, compliance, registry) numbers 25 people, while the head office has 6 employees.
- Information technology is used for the approval of applications. There is an electronic reporting system that delivers assurance and conducts automatic checks, all with high security and guaranteed confidence.
- The Environmental Agency strategy for the Phase 3 includes a project plan with six employees, and? ten contractors. It is still necessary to conduct workshops for the new sectors so that the operators can be trained to comply with the current situation.

Netherlands – Alex Pijnenburg

- The National Accreditation Body is responsible for issuing accreditations to the verifiers, and they exchange information with NEA. Operators are reporting to the NEA and surrendering allowances, while NEA is issuing permits and provides free allocation to the operators. Trading partners are directly communicating with NEA.
- NEA started to operate in 2005 as a competent authority for emission trading. It is an independent Agency of the Ministry of Environment. Main tasks of NEA are:
 - Supervising administrative process of the ETS compliance cycle (allocation, permits, inspections and sanctions, maintenance of emission trading registry);
 - Renewable energy.
 - Until this year NEa also coordinated the national NOx emissions trading system (this system has now been terminated)
- There are 25 ETS experts employed with the NEA, with the administrative support it comes to around 35 people. There are 460 installations in the country, and also 25 aircraft operators. Almost half of the installations are agricultural and energy distribution installations, while 58% of the contribution of ETS emissions come from the energy distribution.
- The third phase of EU ETS is prepared by a project team which consist of project leader and four specialists, one legal adviser, 2 administrative supporters and between ten and 20 external validators, which were hired to support the validation of the Monitoring Plans.
- Main issues in monitoring plans in Netherlands include:
 - Uncertainty assessment ;
 - Sampling plans (representative sampling) ;
 - Sample frequency;
 - Laboratory analysis;
 - Applying correct tiers, improvement principle;
 - “Forgetting” small emissions sources or source streams;
 - Unclear data-flow arrangements.

Germany – Alexander Handke

- The German Emission Trading Authority (DEHSt) of the Federal Environmental Agency comprises two departments divided into sections:
 - Department E1 – Industrial Installations, Emission Reduction Projects, Customer Service and Legal Affairs:



- Section E 1.1 - Steel Industry, Refineries, Data Concepts and Central data Quality Assurance;
- Section E 1.2 – Mineral processing, Pulp and Paper, Non-ferrous Metal and Carbon Black Industries;
- Section E 1.3 – Communication and Customer Service;
- Section E 1.4 – Emission Trading legal Office;
- Section E 1.5 – Administrative Procedures, Verification, Financing;
- Section E 1.6 – Emission Reduction Projects;
- Department E2 – Energy Installations, Aviation, Registry and Economic Aspects:
 - Section E 2.1 – Energy Industries;
 - Section E 2.2 – Chemical Industry and Industrial Combustion Installations;
 - Section E 2.3 – Economic Aspects of Emission Trading, Monitoring, Evaluation;
 - Section E 2.4 – Registry Administration;
 - Section E 2.5 – Information technology, IT Quality Control;
 - Section E 2.6 – Aviation.
- In phase I and II of the administrative structure concerning Monitoring and Reporting in Germany, the entire allocation and assessment was conducted through the Federal Environmental Agency to the Federal States' Authorities. However, in phase III (2013-2020) the Agency and the Authorities are collaborating together regarding approval of MP, AER assessment and enforcement and sanctioning.
- There are 1,923 installations in Germany of which 84% of total annual emissions are made by only 176 category C installations (more than 500,000 kt CO₂eq), while 4% of total emission is made by 1292 low emission installations.
- Advantage of IT applications is that all filled electronic templates are imported into the installation database and automatically checked. Also, errors and omissions are reduced in this way, providing efficiency for operators, verifiers and competent authority.
- It was also important to present typical errors in MP, since they constantly occur. One of the main problems when receiving a plan is an incomplete plan, usually with missing sources and/or streams. Often occurring are contradictions between monitoring methodology and additionally delivered documents, usually due to missing a comprehensible description of estimation methods. On the other hand, there are typical errors in assessment of AERs, having the most common one missing sources and/or streams. Incorrect calculation factors, calculations, rounding and typing errors should not be neglected as well.
- The conclusion of Germany's experience were lessons learnt. Assessment of MPs and assessment of AERs are two sides of the same coin, stating that AERs are only as good as the underlying approved MP is.

Day 2 – Zagreb, Croatia, 11 September 2014.

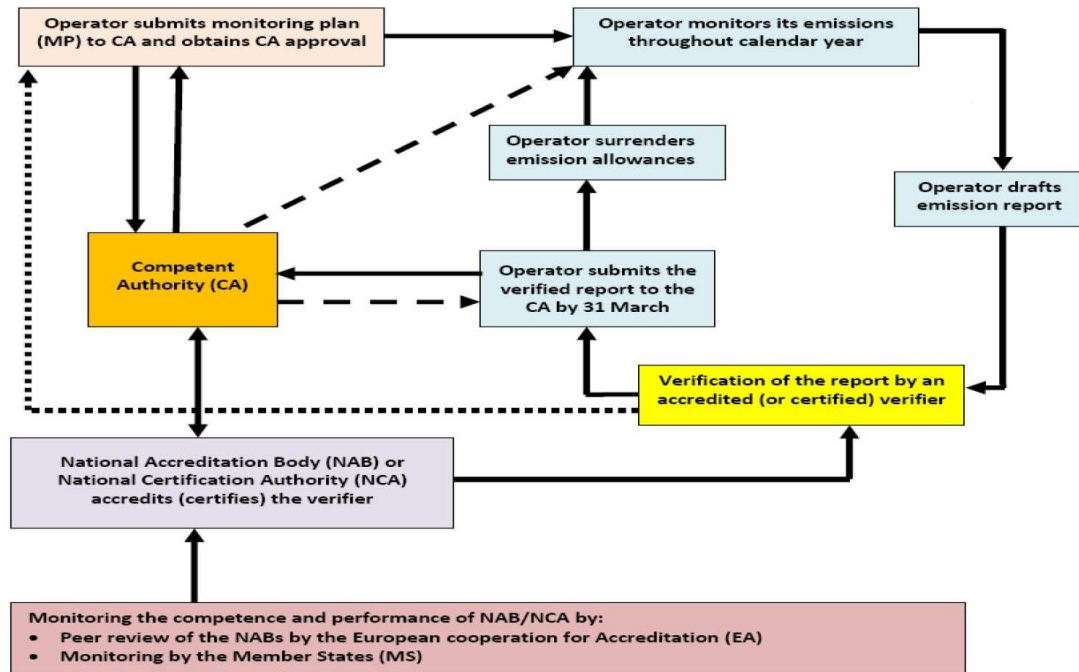
The Accreditation and Verification Regulation and its Implementation – Machtelt Oudenes

- Previous legislation had minimum requirements on verification, and no legal framework on accreditation. Also Accreditation and Verification differed from state to state in the European Union. For example, some states implemented the accreditation process by accreditation bodies, while others by the competent authority. Thus, initiatives were taken to create a uniform platform for accreditation and verification procedures.
- Today, Accreditation and Verification are used according to European standards. Verification is done in accordance to AVR and EN ISO 14065 which specifies principles and requirements for



bodies that undertake validation or verification of greenhouse gas (GHG) emissions. Accreditation is done with accordance to the AVR and EN ISO/IEC 17011 that specifies general requirements for accreditation bodies assessing and accrediting conformity assessment bodies.

- The EU ETS Compliance cycle was schematically presented,



Picture 6

- Principles of verification according to Articles 6 and 7 of AVR include:
 - Reliability of verification;
 - Independence of the verifier;
 - Professional scepticism;
 - Reasonable level of Assurance.

The verification process was briefly described as a circle with the starting point of the strategic analysis (conducting after a pre-contract stage), ending with the issuing of the verification report with entering the data in the registry and addressing outstanding issues and recommendations for improvement. Main verification requirements in this case include the risk analysis, verification plan, and process analysis, addressing misstatements, internal verification documentation, drafting the verification report, independent review, and issuing the verification report.

- Verification opinion statement can either be satisfactory or non-satisfactory. When it is satisfactory, it is free from material misstatement, and it can be verified with or without comments. When verification opinion statement is verified with comments, it has outstanding issues that are to be reported in the verification report. Regarding misstatements, the competent authority can decide to conservatively estimate emissions. Also, recommendations were provided for improvement. Thus, in the next year of verification, a follow-up on non-conformities and recommendations must be addressed in the improvement report.
- Verifiers must be accredited by National Accreditation Body (NAB). Scope of accreditation determines in which group of operator's activities the verifier may carry out verification.



Accreditation process and monitoring of verifiers is carried out in line with the EU ETS specific requirements in the AVR and EN ISO/IEC 17011. Accreditation certificate is valid for maximum of five years, and if the verifier is not complying with the AVR, NAB can impose administrative measures, suspension or withdrawal of accreditation.

- Information exchange is a very important issue because of major changes in the accreditation framework and access to foreign verifiers to the market. Thus, information exchange between NABs and competent authorities should be improved, since AVR requires the NAB and competent authority to cooperate and exchange information.
- Accreditation and Verification Guidance material was presented, including user manual and explanatory guidance. The user manual includes templates, key guidance notes, aviation verification guidance, quick guides and frequently asked questions. The guidance then goes furthermore into details, providing information on verifier's procedures, monitoring, information exchange, etc. The guidance material is available on the website of DG CLIMA.
- First priority of further implementation is setting-up the EU ETS specific accreditation procedures, meaning that the verifiers needs to be accredited before issuing verification report. It is also important to set up internal processes within the competent authority to deal with the improvement reports and other issues relevant for the authorities such as information exchange with NABs.

Specific issues in guidance documents – Machtelt Oudenes

- As explained by the presenter, verification ensures that the emissions have been monitored and reported in accordance with the MRR. Scope of verification according to the Article 7(4) of AVR includes:
 - Completeness of the report and compliance with Annexes of MRR;
 - Compliance with the approved MP and the permit requirements for installations;
 - The data in the report is free from material misstatements;
 - Information in support of data flow activities, control system and procedures to improve the performance of the monitoring and reporting.
 - If the verifier has identified non-compliance with the MRR, it must report this in the verification report.
- All sections of the MP have to be checked including completeness, correct implementation and data flow and control activities. If MP is approved, it must be checked whether it is up to date, and whether the changes, if applicable, are significant or not.
- In the pre-contract stage, the verifier must determine the time needed to properly carry out the verification. It is important to take into account following factors regarding time allocation:
 - Complexity of the installation and MP;
 - Materiality level;
 - Location of information and data;
 - Complexity and completeness of the data flow and control system.
- EU ETS process analysis was explained in details, covering substantive data testing and checking the implementation of MP. Depth of substantive testing is determined by the risk analysis and assessment of data flow, control activities and procedures. Following issues have been addressed regarding process analysis:
 - Data flow and control system;
 - Procedures and evaluation of the control system;
 - Analytical procedures and data verification;



- Monitoring methodology.
- For doing an appropriate verification, site visits are required. They are carried out at one or more stages of the verification process. Activities that are included in site visit are:
 - Interviewing staff and reviewing documents;
 - Checking boundaries, data flow and source streams;
 - Obtaining physical evidence through observing measurement equipment, processes and control activities.
- Visits can cover more locations for installations. However, there is also a risk analysis of site visits that determines several issues regarding the verified installation, such as number of site visits, stages of verification process, visited locations, activities during site visits, attendees of the site visit, etc. There are also cases in which the verifier can waive a site visit, mostly in cases where all relevant data can be accessed remotely.

Practical Experiences with Accreditation & Verification in Germany – Alexander Handke

- Since the beginning of the EU ETS in Germany, independent third-party verification has been required. In Phases I and II, different forms of recognition of verifiers have been used, where the majority of the verifiers were single persons. However, since AVR required a change in the system, today accreditation is the main form of recognition of verifiers, who are not verification bodies. German NAB, Deutsche Akkreditierungsstelle GmbH (DAkkS) started its first assessment of applicants for EU ETS verifiers in December 2012, and the accreditation procedures were finished in 2013, having 17 verification bodies accredited, and one single person verifier certified in Germany. Also, three verification bodies have been accredited by NAB from other MS. The administrative structure for MRVA in Germany was schematically presented. Operators submit AER and VR to DEHSt which exchanges information with the National Certification Body, the National Accreditation Body (DAkkS) and the National Accreditation bodies of MS. These three receive applications from verifiers and/or from verification bodies, when a verifier is granted to carry out a verification of a given installation it then starts to communicate with the operator. DEHSt and DAkkS have established a close cooperation since 2012, both supporting the implementation of the accreditation scheme for verifiers according to EN ISO 14065 and AVR. Also, they both agreed to organise annual workshops for verifiers, the first one to be held in November 2014.
- Assessment of the VR is part of the assessment of the AER, reading the Verification Report is the starting point for all reviews of AERs carried out by DEHSt inspectors. The quality of the verification is evaluated in 3 „grades“:
 - Satisfactory – No further action required;
 - Sufficient – Report to NAB required;
 - Insufficient – Report to NAB or complaint required.
- In 2013, none of the AERs received the “not verified” statement. Around 1700 installations were verified as satisfactory, while around 220 installations were verified as satisfactory with comments. 700 verified AER received recommendations for improvement. However, the main issue is that 17 verifiers appears to be an insufficient number regarding the number of installations. Also, regarding competent authorities and the results from the 2013 AER/VR review, Germany had positive experiences with the verification activities.



Practical Experiences with Accreditation & Verification in United Kingdom – Naomi Walker

- EU ETS institutional framework of UK was previously explained, as well as the number of installations (707 plus additional 151 aircraft operators). The questions that the competent authority is asking regarding the VR are the following:
 - Has the verifier completed the operator details section accurately and does the site category they have listed match the reported emissions?
 - Do the details in the 'emissions details' section match the details reported by the operator?
 - Is the list of source streams/detail of methodology used / emission factors used listed by the verifier consistent with the MP and the details submitted in the AER?
 - Additional questions regarding site visits.
 - Has the verifier stated 'no' for any of the "compliance with EU ETS Rules" or "compliance with Monitoring & Reporting Principles"?
 - Does the Officer agree with the verification opinion and findings in Annex 1?
 - Do the findings in Annex 1 match the overall opinion?
 - Does the information in Annex 2 seem correct?
 - Is there sufficient information in Annex 3?
- Common mistakes made by verifiers in the UK usually are no identification of non-conformities. Thus, it is important to maintain strong communication with verifiers, for example, having regular annual meetings.

Croatia's experience in Accreditation of Verifiers according to HRN EN ISO 14065:2013 Regulation (EU) No 600/2012 – Anita Marekovic

- A short introduction was made by the presenter regarding Chapters IV, V and VI of the Regulation 600/2012. Chapter IV of the Regulations deals with the accreditation and the accreditation process, stating the objectives and the scope of the accreditation. Chapter V is defining requirements concerning accreditation bodies, including peer evaluation and mutual recognition of verifiers. Chapter VI of the Regulation is defining information exchange and it includes the accreditation work programme and management sector report, information exchange on administrative measures, databases of accredited verifiers as well as the notification made by verifiers.
- In February 2014, the Croatian Accreditation Agency (HAA) introduced the new accreditation scheme with the extension of the scope of activities to the accreditation verifiers in accordance with established procedures. The scheme was presented to the participants defining thirteen HAA activities.
- The accreditation process in Croatia consists of four steps; application, assessment, decision on accreditation and surveillance. The application form is retrieved from Annex AS5. The accreditation process is conducted under the accreditation criteria, which is defined according to EU Regulations, ISO standards, Commission's Guidelines and National Law. Regarding the assessment, the first step is the selection of assessors, which is done according to the scope of accreditation and register of assessors, afterwards an assessment team is appointed. The team is firstly reviewing documents, then if possible making a preliminary visit after which an official visit or on-site assessment is conducted. After summarising the result, reports are written.
- Decision on accreditation is done by the accreditation committee that is reviewing application documents, reports and all the following documentation needed to write the accreditation committee report. Along with the report, the committee also drafts recommendations, after which a final decision on accreditation can be made. After deciding on the accreditation, the accreditation certificate is issued. Surveillance of accreditation includes monitoring of the



continued fulfilment of accreditation requirements, frequency of monitoring (in Croatia it is 12-18 months), and extension of the scope and assessor's report. There are three accredited verifiers in Croatia.

Croatia's experience with the implementation of AVR – Visnja Grgasovic

- ETS was applied in Croatia from 2010 to 2012. In this period, monitoring and reporting on emissions from installations was conducted, and the emission reports had to be verified. Ministry of Environmental and Nature Protection issued authorisation for verification procedures, and training has been provided for future verifiers. From January 2013, Croatia joined the EU ETS and therefore has implemented the AVR in full.
- Croatian legislation regarding ETS was briefly described, and legal acts were listed with the provision of several articles. These acts include the Environmental Protection Act, Air Protection Act, Commission Regulation 600/2012 and Commission Documents. Commission Documents in Croatia include:
 - Combined M&R and A&V guidance on reviewing AER and VRs;
 - Verification report template-installation;
 - Verification report template-aviation;
 - Exemplar AVR verification installations;
 - AVR Key guidance note no. II.1-Objective and scope of verification guidance ;
 - AVR Key guidance note no. II.6-Verification report;
 - AVR Key guidance note No II.7-Competence.
- The Competent Authority in this case is the Ministry of Environmental and Nature Protection which is cooperating with other ministries and the accreditation body, as well as exchanging information with other MS competent authorities and NABs regarding application, permitting and free allocation. However, Croatia is facing numerous challenges regarding the AVR. As usual, there is a lack of human resources and inter-sectoral cooperation. Operators' knowledge must be risen to a higher level as well.

The Verifier Perspective – Goran Janekovic

- As explained by the verifier, verification is an act of confirming emission figures impartially, independently and objectively, and it is always done by competent persons. There are five principles of verification:
 - Impartiality;
 - Competence;
 - Factual approach to decision making;
 - Openness;
 - Confidentiality.
- The presenter explained what actually the verifier does. He or she looks at the annual emission reports, monitoring plan and other supporting documents such as risk analysis, uncertainty assessment and procedures. Then relevant data needs to be checked, including measurements and production data, bills, database and other. It is important to visit the installation and have a site view of the current and actual situation. After applying criteria for conclusion on emission report, the verifier issues his own report.
- The presenter further discussed about reasonable assurance, stating that emission report has to be free from misstatements, and the level of assurance is in this case provided by the verifier. Also very significant is materiality. Materiality level is defined for installation categories, 5% for A



and B category, and 2% for C category installations. It is good to know that material misstatements are a reason for negative verifier's opinion. Both verifier and the operator have to identify risks, both inherent and control risks. An example of risk analysis was shown to the participants, with explanation of process or activity, incident, type of risk, inherent risk, and control measures.

- From the verifier's perspective, verification is a serious commitment, investing time and financial resources, but it is also building experience. It is a responsible job, acting socially for public interest, and financially for liability coverage. Nevertheless, accreditation is a process with a required quality system, where personnel competence is regularly challenged and where documentation needs to be comprehensive.

Needs Assessment and Road Map – Imre Csikós and Monique Voogt

- Before the conclusion, the EU ETS Compliance Cycle was revised once again, putting an emphasis on the road map and an action plan. A policy road map describes a route to achieve a policy objective. An action plan is a further elaboration of how to implement a roadmap:
 - Identify intermediate steps and deliverables;
 - Identify entities involved, their responsibilities and capacity needs;
 - Establish timelines;
 - Understand interdependency of different actions, milestones.
- A question was asked of what specific needs does each country has? Representatives of each country of the participant was given short time to explain the ETS situation in the country. Here are the statements from the country's representatives:

Albania - Had an expert mission two months ago and identified its ETS operators. Current challenges lie in the identification of responsibilities of the competent authorities. Suggested expert missions:

- Workshops for competent authorities, with focus on setting priorities in transposition of MRR and AVR.

Serbia - Currently running an IPA project in which Germany, France and Austria are supporting the establishment of the EU ETS system in Serbia. Further IPA projects are expected on implementation of the MMR and on formulating the national climate change strategy. Suggested expert missions:

- Capacity building workshop for the larger industrial operators, with specific case studies at installation level;
- Peer-to-peer support for the accreditation body;
- In-house session with large industrial operators to complete monitoring plan.

Bosnia and Herzegovina - In a special situation as pre-candidate country, with no defined programme for the EU integration, no coordination mechanism and no national Agency for Environment. Suggested expert missions:

- Introductory workshop on general ETS awareness raising.



Kosovo* - Last year began to prepare its national inventory report, the national Climate Change Strategy and formulation of several laws, including the ETS Directive. The list of ETS installations has been identified. Suggested expert missions:

- Support in preparation of legislation;
- Preparation of workshops for operators.

Croatia - Eligible for TAIEX missions until mid-2015. Suggested expert missions:

- Dedicated verification trainings, similar to the UK verifier workshops. Target audience of 5 verification bodies, the energy the inspectors (approx. 20 persons in total).

The Croatian team will formulate a proposal and discuss further details (plan, timeline) with ECRAN at the next meeting in The Hague (23-25 September).

The former Yugoslav Republic of Macedonia - Similar needs as identified by Serbia. Suggested expert missions:

- Tailor-made workshop with the operators and the competent authority to learn directly from each other;
- Develop a guideline for operators to complete the monitoring plan;
- Capacity building on accreditation.

The country team will formulate its specific needs and discuss further details (plan, timeline) with ECRAN at the next meeting in The Hague (23-25 September).

Montenegro - In an early preparatory phase. The number of installations is yet unclear, but operators that have been identified are actively involved. Staff for the competent authority yet has to be employed, so training might be too early. Suggested expert missions:

- Action plan for ETS requirements on implementation in the longer term.



V. Evaluation

Statistical Information

1.1	Workshop Session	EU ETS Regional Training on the MR and the A&V Regulations
1.2	Facilitators name	Imre Csikós (ECRAN)/ Monique Voogt (ECRAN)/Melita Zdilar (Ministry of Environmental and Nature Protection)/Milena Grgic (Croatian Environmental Protection Agency) /Alex Pijnenbrug (NEA NL) / Naomi Walker (Environmental Agency of UK)/ Alexander Handke (DEHst – D) / Machteld Oudeness (ECRAN)/ Goran Janekovic (ECRAN)/ <u>Anita Marekovic</u> (Croatian Accreditation Agency)/ Visnja Grgasovic (Ministry of Environmental and Nature Protection - HR)
1.3	Name and Surname of Participants (evaluators)	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. Improved understanding of the details of the Monitoring and Reporting (MR) regulation as well as of the Accreditation and Verification (A&V) regulation of the European Commission.	(86%)	(14%)	
2. Insight in the approaches and experiences in the implementation of both regulations in EU Member States and candidate countries.	(67%)	(33%)	



My Expectations	My expectations were met		
	Fully	Partially	Not at all
3. Better understanding of the required human and institutional resources for the implementation of the two regulations as part of an ETS system conform the EU ETS requirements.	(71%)	(29%)	
4. Insights in the lessons learned, the risks involved and the bottlenecks of ETS implementation.	(74%)	(26%)	

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	 (43%)	 (57%)				
2 The quality of the workshop was of a high standard	 (61%)	 (35%)	(4%)			
3 The content of the workshop was well suited to my level of understanding and experience	 (48%)	 (35%)	(17%)			
4 The practical work was relevant and informative	 (52%)	 (29%)	 (19%)			
5 The workshop was interactive	 (52%)	 (43%)	(5%)			
6 Facilitators were well prepared and knowledgeable on the subject matter	 (70%)	 (17%)	(13%)			
7 The duration of this workshop was neither too long nor too short	 (36%)	 (36%)	 (28%)			
8 The logistical arrangements (venue, refreshments, equipment) were satisfactory	 (61%)	 (30%)	(9%)			
9 Attending this workshop was time well spent	 (70%)	 (16%)	(4%)			



Comments and suggestions

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

Workshop Sessions:

- Excellent
- The best presentations: Goran Janekovic (Ekoneg) and Milena Grgic (Croatian Environmental Agency)
- To organise a workshop with exercises (practical contents)
- Goran Janekovic and Milena Grgic were excellent
- Good timing , interesting and good and knowledge speakers / facilitators

Facilitators:

- Excellent
- Good, understandable, interesting, informative
- Ms Milena Grgic (very good)
- Excellent
- Very interesting, friendly, informative

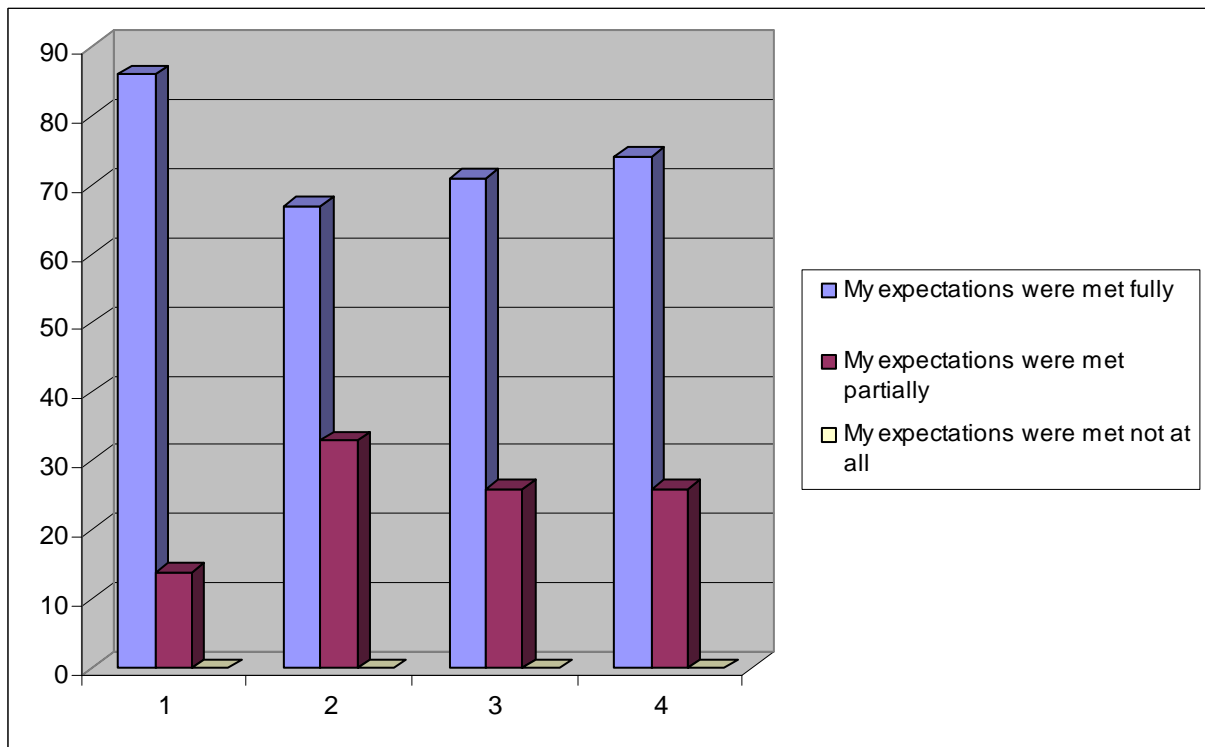
Workshop level and content:

- Excellent
 - From my point of view very educational
 - Very good
 - From Croatian point of view, i.e. me personally, we are only partially experienced with EU ETS MRVA. It was great. Maybe for other (for non-EU countries this was too complicated).
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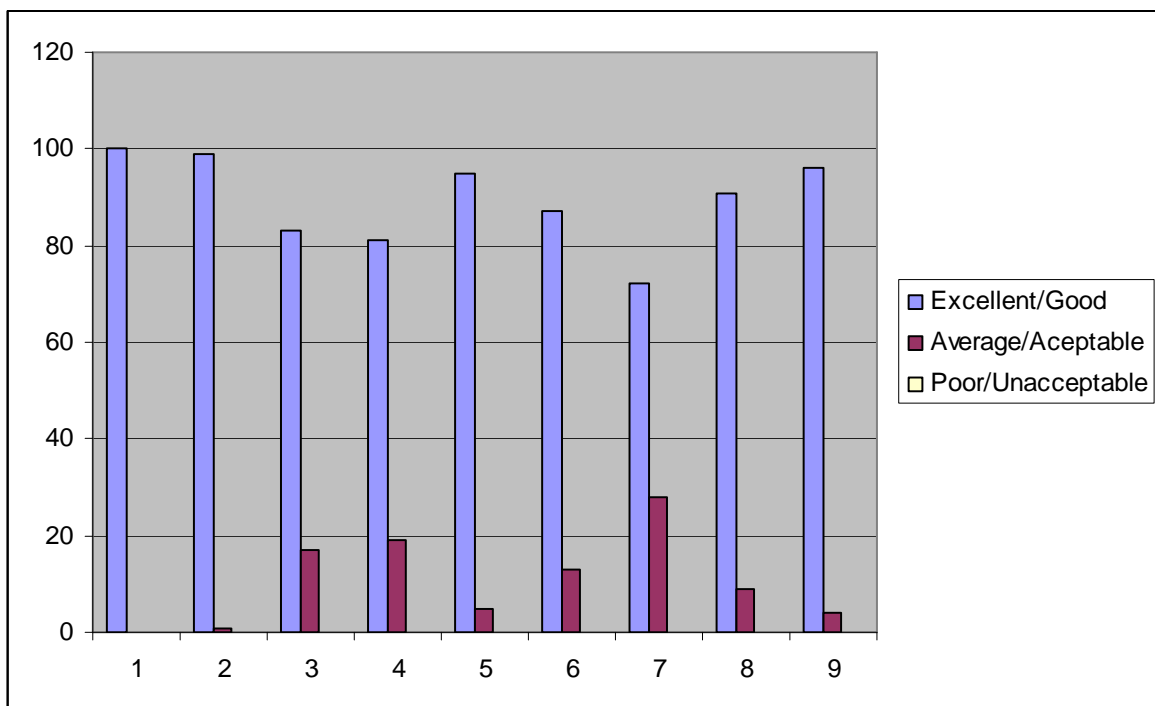


EXECTIONS OF PARTICIPANTS

1. Improved understanding of the details of the Monitoring and Reporting (MR) regulation as well as of the Accreditation and Verification (A&V) regulation of the European Commission.
2. Insight in the approaches and experiences in the implementation of both regulations in EU Member States and candidate countries.
3. Better understanding of the required human and institutional resources for the implementation of the two regulations as part of an ETS system conform the EU ETS requirements.
4. Insights in the lessons learned, the risks involved and the bottlenecks of ETS implementation.



- 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

September 10th 2014 (Day 1 of seminar): Monitoring and Reporting

10 th of September, Zagreb, Croatia				
Start	Finish	Topic	Speaker	Sub topic/Content
08:30	09:00	Registration		
09:00	09:15	Formal opening, word of welcome	Assistant Minister of Environmental and Nature Protection: M.Sc Marija Šćulac Domac	
09:15	09:30	Introductions to ECRAN, the seminar and participants	Monique Voogt, ECRAN	<ul style="list-style-type: none"> • Introduction to ECRAN and objectives of the seminar • What may be expected from the presentations • Introductions to speakers and audience
09:30	09:45	ECRAN support activities	Imre Csikós, ECRAN	<ul style="list-style-type: none"> • Needs assessment: institutional capacity requirements • Priority setting and roadmaps • Expert missions on ETS implementation
09:45	10:15	Overview of EU ETS	Monique Voogt, ECRAN	<ul style="list-style-type: none"> • Elements and requirements of EU ETS implementation • Legal and regulatory requirements • ETS in the frame of the EU <i>acquis</i>
10:15	10:30	Coffee Break		
10:30	11:00	The EU ETS Compliance Cycle and the function of MRVA	Monique Voogt, ECRAN	<ul style="list-style-type: none"> • MRVA Compliance Cycle • Roles and responsibilities of parties involved • The regulatory framework, guidance and templates • EU ETS Cycle: Needs, steps and elements
11:00	12:00	Monitoring and Reporting Regulation and	Alex Pijnenburg, Dutch Emissions Authority (NEa)	<ul style="list-style-type: none"> • The Monitoring and Reporting Regulation • Monitoring principles and



10th of September, Zagreb, Croatia				
Start	Finish	Topic	Speaker	Sub topic/Content
		Principles		<ul style="list-style-type: none"> requirements Distinguishing categories of installations, source streams and emission sources Monitoring methodologies Tier approach and uncertainties
12:00	12:45	Croatia's experiences with implementation of the MRR	Melita Zdilar, Ministry of Environmental and nature protection and Milena Grgić, Croatian environmental protection agency	<ul style="list-style-type: none"> Main considerations for the implementation Experiences in Croatia and lessons learned Communication with other stakeholders Resources needed
12:45	13:45	LUNCH		
13:45	14:30	The Monitoring Plan	Alex Pijnenburg, Dutch Emissions Authority (NEa)	<ul style="list-style-type: none"> Monitoring Plan requirements and standard elements Lessons learned in implementation and operation The MP template
14:30	15:15	The Annual Emissions Report	Naomi Walker, Environment Agency of the UK	<ul style="list-style-type: none"> Emissions report requirements Roles and responsibilities of various parties Verification and improvement
15:15	15:30	Coffee break		
15:30	16:30	Practical experiences with monitoring and reporting	Naomi Walker (UK Environment Agency), Alex Pijnenburg (Nea), with inputs from Alexander Handke (DeHst)	<p>Set of 3 presenters to show various experiences:</p> <ul style="list-style-type: none"> Time planning and resource needs for the CA The process of validation of the MP Common mistakes in monitoring plans Lessons learned on emission monitoring and reporting



10th of September, Zagreb, Croatia				
Start	Finish	Topic	Speaker	Sub topic/Content
16:30	17:00	Needs assessment in implementation of M&R Regulation	Facilitated by Imre Csikós & Monique Voogt	<ul style="list-style-type: none"> • Prioritising needs per Accession State • Needs for expert missions
17:00	17:15	Wrap-up 1 st day / outlook 2 nd day	Monique Voogt, ECRAN	

11th of September 2014 (Day 2 of seminar): Accreditation and Verification

11th of September, Zagreb, Croatia				
Start	Finish	Topic	Speaker/trainer	Sub topic/Content
08:30	09:00	Coffee		
09:00	09:15	Opening and agenda	Monique Voogt, ECRAN	
09:15	10:15	The Accreditation and Verification Regulation and its implementation	Machtelt Oudenes, ECRAN	<ul style="list-style-type: none"> • Principles of verification and use of (international) standards to ensure uniform treatment • Lessons learned in phases I and II • The Accreditation and Verification Regulation • The Guidance and templates for A&V • Roles and responsibilities within A&V • Main verification steps: strategic analysis, risk analysis, verification plan, site visit • The verification report and the improvement report
10:15	10:30	Coffee break		
10:30	11:15	Outline of specific issues in the guidance documents, templates and other	Machtelt Oudenes, ECRAN	<ul style="list-style-type: none"> • More detailed overview of scope of verification • Time allocation • Elements to check during the process analysis (data flow, control activities, data



11 th of September, Zagreb, Croatia				
Start	Finish	Topic	Speaker/trainer	Sub topic/Content
		tools to the AVR		testing, uncertainty assessment) <ul style="list-style-type: none"> • Site visits
11:15	12:00	Practical experiences with accreditation and verification	Alexander Handke, German (DEHSt) - German Emissions Trading Authority, with inputs from Naomi Walker (UK Environment Agency) and Alex Pijnenburg (Nea),	<ul style="list-style-type: none"> • The process of verification and accreditation seen from the CA perspective • Time planning and resource needs • Common mistakes by verifiers as seen by the CA • Lessons learned on the accreditation and verification process
12:00	12:45	Accreditation of verifiers	Anita Mareković, Croatian Accreditation Agency	<ul style="list-style-type: none"> • Accreditation process and monitoring of verifiers • Role of the national accreditation body • Administrative measures on verifiers
12:45	13:45	Lunch break		
13:45	14:30	Croatia's experiences with implementation of the AVR	Visnja Grgasovic, Ministry of Environment and Nature Protection of Croatia	<ul style="list-style-type: none"> • Main considerations for the implementation • Experiences in Croatia and lessons learned • Communication with other stakeholders • Resources needed
14:30	15:15	The verifier perspective	Goran Janekovic, Energy Research and Environmental Protection Institute (Ekonerg)	<ul style="list-style-type: none"> • Steps in the verification process • The concept of reasonable assurance and materiality • Risk analysis • Drafting the verification report
15:15	15:30	Coffee break		
15:30	16:15	Needs assessment in implementation of MRAV	Facilitated by Imre Csikós & Monique Voogt	<ul style="list-style-type: none"> • Prioritising needs per Accession State • Needs for expert missions



11 th of September, Zagreb, Croatia				
Start	Finish	Topic	Speaker/trainer	Sub topic/Content
16.15	16.30	Summary of the seminar and wrap-up	Monique Voogt , ECRAN	



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ANNEX II – Participants

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ANNEX III – Presentations (under separate cover)

Presentations can be downloaded from

http://www.ecranetwork.org/Files/Presentations_EU_ETS_Zagreb_September_2014.rar



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