

# Fourth ETS MRV Compliance Review Final Report

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# Fourth ETS MRAV Compliance Review

## Final Report: For distribution to Member States

- Confidential -

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# Executive Summary

## Background

The European Union's (EU) greenhouse gas (GHG) allowance trading scheme was enacted and implemented in the Member States (MS) to allow the scheme to start in January 2005. Installation level monitoring and reporting is one of the pillars of the system, as required by Article 14 of the EU Emission Trading System (EU ETS) Directive (Directive 2003/87/EC).

Regulation relating to the monitoring, reporting and verification of emissions has been updated recently. Commission Regulation 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 has applied to emissions from 1 January 2013 onward. This Regulation, also known as the Monitoring and Reporting Regulation (MRR) repeals Decision 2007/589/EC and replaces it, providing a similar structure of monitoring and reporting, with further detail in places. It is supported by a series of guidance documents.

In parallel, Commission Regulation 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 came into force on the same date as the MRR. This Regulation, known as the Accreditation and Verification Regulation (AVR) is complementary to the MRR. The AVR provides regulation on the verification elements of the EU ETS compliance cycle, and builds on regulation on accreditation of verifiers, introduced by Regulation (EC) No 765/2008.

## Objectives and scope

The European Commission has carried out three projects evaluating the implementation of the compliance cycle in the states participating in the EU ETS since 2006. This report relates to the compliance evaluation for the 2013/14 compliance cycle and has used a comparable methodology and reporting format to the previous evaluations, to allow for more straightforward comparison. This evaluation complements other initiatives to share information between MS and competent authorities on the topic of Monitoring, Reporting, Accreditation and Verification (MRAV), including the Compliance Forum, WGIII and other activities.

The report covers 28 EU Member States (MS) and Norway, Iceland and Liechtenstein. These countries are referred to as MS for the purposes of this report. The findings of this report are dependent on the information provided during interviews with a range of stakeholders in these MS.

The openness and level of detail in the answers provided differed between MS, and this report includes some additional comments from MS when available. The project team also provides further context for the results as appropriate.

Readers should note that this report represents the work and opinions of the Ecofys and Ricardo-AEA and is not necessarily a reflection of the views and opinions of the European Commission.

## Methodology

In the initial stages, the project team worked with the Commission to determine the priorities for this evaluation and key issues by topic. Therefore a topic, such as Monitoring, will cover several issues, but is not necessarily all aspects. These key issues were then translated into a questionnaire, for the purposes of the detailed assessment, the structure of which follows largely the compliance cycle:

Questionnaire topics	
Permitting	Reporting (continued)
• Submission of permit application and monitoring plan	• Content of annual emission report
• Connection to other permits	• Review share and approach
• Content of monitoring plan	• Determination of the emission figure
• Content of standardised/simplified monitoring plan	• Format and submission of annual emission report and verification reports
• Assessment of permit application and monitoring plan	Verification
• Notification of changes and updating of permit and monitoring plan	• Obligations of the verifier
Monitoring	• Verification activities and procedures
• Annex I and the definition of combustion	• Findings of, concluding and reporting on the outcomes of verification
• Tier requirements and categorisation	• Simplified verifications
• Measurement based methodologies	Inspection
• Biomass	• Inspection procedures
• Uncertainty assessment	• Who does inspect
• Unreasonable costs and technical feasibility	• Findings and conclusions
• Sampling plans	Accreditation
• Frequency of analyses	• Appointment of National Accreditation Bodies/National Certification Authorities
• Laboratories	• Information exchange
• Inherent and transferred CO2	• Accreditation of verifiers
• Data gaps	• Surveillance and extraordinary assessments of verifiers
• Global warming potentials	• Reassessment of accreditation certificate
• Aviation	• Cross-border accreditation
Reporting	Electronic reporting
• Consistency with other reporting schemes	Enforcement
• Reporting on improvements to monitoring methodology	Competent Authority organisation
	Sector specific and general findings

Following a training and calibration session, the project team interviewed representatives from all MS concerned using the questionnaire. Data was collected from the following authorities:

- Competent Authorities
- National Accreditation Bodies/National Certification Authorities
- Verifiers

In addition, case information was gathered for approximately five installations or aircraft operators in each MS and across a range of sectors. This documentation, which covered the 2013/2014 compliance period, was used to support the assessment.

The information gathered in the questionnaires was collated and then aggregated and analysed to provide information about non-compliances in MS, recommendations for improvements that can enhance compliance with the MRR and AVR, and examples of good practise. These recommendations and analysis were recorded by topic and also by MS.

## Key findings by topic

The introduction of the MRR and AVR has provided some clear improvements from the MRG. However, these improvements are often spread unevenly across countries, depending on their level of implementation previously. Broadly speaking, new regulatory elements changed the practice of about half of the countries, whereas the other half often had a broadly suitable approach in place before. Examples of this split impact included the degree to which the quality and extent of information in the permit application or MP submission improved, impact of the AVR on verifiers' understanding of the general obligations of the verifier, and enforcement practices. However, all MS agreed that the guidance provided by the Commission is very helpful.

Variation between implementation practises in different MS has reduced as a result of the MRR and AVR. However, there are still areas where significant variation is observed, such as with the use of electronic reporting formats and processes. For some of these areas, MS who have not made progress are keen to see the Commission take a further lead in providing a more centralised approach. A more centralised approach could constitute best practice provision, shared experiences etc.

The introduction of the AVR showed a particularly marked improvement in accreditation provision, as did the introduction of the new rules about uncertainty and unreasonable costs.

Discussions with the different actors in the MRAV chain seem to indicate that the system is working well, however, it is important to note that well-oiled processes do not necessarily always ensure that accuracy will prevail. There was some evidence that suggests that some errors were still being made during the verification cycle. Non-conformities were particularly highlighted during the process of recommendations to improve the MP, however, some should have been identified and resolved earlier. This is a cause for concern, and an indication that CAs should not be complacent and NABs/NCAs should be particularly strict about verifier quality and approach.

Several MS indicated that the recent financial crisis had created additional problems for some operators, including reduced operational hours or bankruptcy that was not reflected in a reduced or altered MRV obligation, or for which there was insufficient guidance. However, it should be recognised that the MRR and AVR already contain considerable scope for proportional approaches to MRV including special derogations for installations of low emissions and small emitters in aviation, reduced requirements for minor and de minimis source streams, consideration of technical feasibility and unreasonable costs and provisions for simplified monitoring plans.

The interviews indicated that non-compliance was more likely to occur where staffing was limited. In these circumstances, some MS had to choose to prioritise some areas for compliance over others. Whilst non-compliance cannot be sanctioned, it is recommended that further support for MS and sharing of information should be considered in order to help MS with less capacity achieve a higher level of compliance.

In several instances, such as in relation to CEMS in a MP, or during the NAB surveillance of verifiers, MS use technical experts, consultants and a variety of other external bodies to supplement their capacity and gaps in technical expertise. This approach is a sensible way to overcome shortfalls in resources.

Many MS quoted issues related to the timing of the availability of certain information such as guidance documents etc. as a barrier to achieving better compliance or clarity about an approach. This issue, whilst relevant in some cases in the 2013/14 compliance cycle, should not remain a cause for non-compliance or lack of clarity as Phase 3 progresses. Some MS still request further documents and support, whilst others specifically request that no further guidance or changes be provided until Phase 4.

The new MRR and AVR appear to have spread responsibilities well between CAs and also NABs and verifiers in a way that spreads the burden of requirements in a helpful manner and ensures independence for certain functions. MS's National Accreditation Body are existing bodies, which helps ensure continued efficiency and helps to minimise the overall costs of the MRV administration.

The report investigated sector-specific elements, and several Member States highlighted challenging sectors: aviation, steel, refineries, ceramics, primary heat and power and waste incineration. However, there was no clear pattern or common cause for concern for each of these sectors, and therefore it is important that these individual issues are followed up on, but there appears no cause for any sector-wide investigation.

Twenty of the MS interviewed indicated that they would like to see further support from the Commission to help support them in their compliance efforts. The areas where support was requested fell into several general categories: harmonisation, regulatory changes, templates, further guidance on particular issues, and additional assistance through e.g. a helpdesk, and translation services. The Commission is invited to take note of these specific requests, some of which were requested by several parties, particularly a helpdesk, access to training and more practical and specific examples.



It is also important that MS continue to make active use of the sharing platforms and processes for peer learning on MRAV practises that are already available such as the Compliance Forum Task Forces, the Compliance Conference and the peer review process.

In previous compliance cycles, the need to harmonise was acute. The introduction of the AVR and MRR has improved the situation enormously in this regard, and further improvements are now much more specific either by Member State or a very detailed stage in the compliance cycle.

## Findings for the Member states

The fiches in Annex II provide more detail on the situation in each individual MS, but it is clear that there are some MS that are much better staffed than others, and also have more resources to allocate to adherence with the MRR and AVR. The Commission should consider the variation between MS in both resources and level of compliance and use this information to target further support.

## Detailed recommendations

This section highlights the key findings from the different sections of the report and then lists the specific recommendations.

### **Permitting and monitoring plan approval**

More than half of the MS use the monitoring plan template provided by the Commission. The guidance from the Commission on the content of the monitoring plans was considered helpful by the vast majority of MS, although a minority also provide some form of additional guidance. Simplified monitoring plans are not very widely accepted, with 21 MS not allowing these, and there could be scope for expanding the uptake of this provision. The circumstances in which simplified monitoring plans are allowed vary significantly between MS.

The approach to the review of monitoring plans is also varied. In the majority of MS, all MPs were approved and permits issued by the time they were interviewed. Several MS were not compliant in this regard, however it is evident that they were aware of the issues and resolving them.

The concept of significant change varies between MS, while most use the Commission's list as a guide, several go further. Whilst most MS require the MP to be reissued, only some require a permit update, and the time within which notification is required varies significantly between MS. The treatment of temporary deviations from the MP is also very divergent. On one hand, some MS are reluctant to allow any deviations from the MP, whilst in others a temporary deviation is allowed regardless of time, provided the change is not planned to be permanent.

## Monitoring

The majority of the MS found the definition of combustion clear, and most MS are doing some type of check to ensure that it is being applied appropriately, or had already undertaken a check in Phase 2. The provisions outlined in Article 26 of the MRR have led to greater harmonisation across MS in the application of the highest tier requirements for Category B and C installations (as outlined in Annex II of the MRR), and the application of at least the minimum tier requirements permitted for Category A installations and for source streams that are commercial standard fuels (Annex V).

The review has found that use of the fall-back methodology is very limited across all MS and that emissions determination via a tiered approach is the predominant monitoring methodology adopted by operators in their MPs and approved by MS CAs.

The uptake of CEMS is relatively low, and is mostly associated with N<sub>2</sub>O emissions. The increased uptake of CEMS relates to the change in ETS scope rather than the introduction of the MRR. The low uptake for CO<sub>2</sub> emissions is generally related to cost-efficiency considerations.

The uptake and use of biomass, bioliquid and biofuel source streams varies across MS, with some MS stating little or no experience of operators using biomass and other seeing common usage of biomass by operators in many industry sectors. This is reflected in the polarisation of MS responses, as to whether the introduction of the preliminary emission factor (PEF) has made MPs including biomass source streams more transparent to CA staff and whether this had led to greater CA confidence that emissions associated with the fossil fraction of biomass source streams are being accounted for correctly.

Several MS highlighted that although the definition of biomass in the MRR is clearer and should lead to a more harmonised approach across the EU, the CA(s) have had challenges in ensuring that the sustainability criteria enshrined in the RES Directive are being met by operators using bioliquids and/or biofuels and seeking to apply an emission factor of zero.

MS were split in their opinions on whether or not the MRRs simplification of uncertainty assessments has reduced the burden on CAs and/or operators. However, the vast majority of MS agreed that the new guidance has helped the process of completing the uncertainty assessment. Generally, there appears to be a lack of operator knowledge in how to construct an uncertainty assessment in line with the requirements and permitted simplifications outlined in the MRR. Often the CA is called upon for assistance. The nature and robustness of the uncertainty assessments vary greatly between MS.

Twenty-three MS confirmed that the new determination method for unreasonable costs has led to greater consistency in the approach within their MS. Around half of MS have used the Commission's unreasonable cost tool and have found the tool to be useful.

MS employ different methods and resources in the checking of claims of technical infeasibility, with no single resource cited by the majority of MS. It is encouraging that CAs typically take a considered

approach in reviewing technical infeasibility claims, seeking inputs from either external experts or referring to other technical resources (e.g. reference documents) where the complexity of the case exceeds the expertise of CA staff.

The majority of MS have confirmed receipt and approval of sampling plans either from all, or the significant majority, of affected operators. There has been broad uptake and usage of the Commission's Guidance Document GD5 on sampling and analysis. A small number of MS have produced additional MS-specific guidance to operators regarding sampling and analysis.

There were a range of experiences with the frequency of analysis approach, including the Dutch Emission Authority's tool, which merits further attention. 24 MS confirmed that the MRR clarified the requirements for the CA regarding the determination of calculation factors via analysis. 14 MS confirmed that the provisions of Articles 23 and 65 clarified the intended approaches concerning the treatment of temporary changes to the MP and data gaps. 19 MS noted that the simplification of the fuel density measurement requirements for AOs had reduced the burden on the CA(s) or AOs.

Around a third of MS (12) cited experiences of operators transferring inherent CO<sub>2</sub>. None of these MS highlighted any particular issues faced by the CA or operators regarding the determination of emission factors including inherent CO<sub>2</sub> or emissions accounting when transferring inherent CO<sub>2</sub>. As such, the project team infers that the requirements of Article 48 of the MRR are clear to MS CAs.

MS are taking a common approach and utilising all necessary resources available to them in the identification and subsequent communication with new operators assigned to the MS in the Commission's aircraft operator list. However, the identification of new AOs can prove to be difficult for the CA due to the incompleteness of the data on the Commission's aircraft operator list compiled by Eurocontrol. Establishing initial communication with new AOs assigned to the MS has also proven difficult for a large number of MS CAs, as the CA(s) have often struggled to make contact with non-commercial AOs and smaller commercial AOs. The treatment of AOs as regards to timing and expectations of scope for AERs in the 2013/14 cycle showed wide variation.

## Reporting

Twenty MS used reporting templates that ensure compliance with the requirement to provide relevant codes of other reporting schemes, 11 MS were non-compliant in this regard.

Nineteen MS use a translated version of the Commission template for the AER and verification reports, whilst 11 provide an AER in their electronic reporting system and one MS developed its own template in in standard office software. Twenty-two CAs do not provide guidance on completing the AER templates beyond the Commission's guidance, indicating that the Commission's guidance has been valuable in this regard. 11 MS are concerned that the reporting templates do not provide sufficient information to prepare their Article 21 reports. There are a variety of approaches taken to reviewing the AERs with nine MS lacking any formal review procedures. It would be beneficial for these MS to consider introducing some type of structured review procedure. There is wide variation in

the way consistency checks are carried out, particularly in the cases where only some submissions are checked.

Nineteen MS have translated the Commission's template for improvement reports. The majority of MS (24) require improvement reports in accordance with the time intervals defined in the MRR, however, there are a range of other dates also used. 26 MS require improvement reports related to verification reports by 30 June the same year, in compliance with the MRR. The majority of the verifiers' recommendations related to operators' procedures including their risk assessment, with improvements to the MP related to small source streams also relatively common. It seems clear that the new requirement for reporting on improvements is a valuable addition to the compliance cycle that will help to improve the quality of the monitoring and reporting process.

There is a gradual shift towards electronic submissions, however, several MS use a combination of hard copy and electronic versions, in particular to retain signed copies and to make allowances for smaller operators. 16 MS use IT systems for MP approval and/or for reporting purposes. The majority of CAs do not use IT reporting tools to perform automated checks, however, automated checks are performed by a significant number. As a result, despite the progress in the increased use of IT, there is still potential for an even greater use of electronic reporting. Theoretically a wider implementation of IT will improve consistency and could also reduce costs for operators and CAs.

### **Verification**

While verifiers from seven countries indicated that the AVR has not led to overall processes changing, the majority of verifiers noted several general areas of improvement, including formalising the verification process, and adding more details to ensure a harmonised approach. The principle of continuous improvement has led to an increased number of improvements being identified, and cross-border accreditation has been welcomed. The detail of the AVR has helped verifiers, but the more harmonised assurance now provided has sometimes also resulted in an increase in the amount of time required for verification.

For verification purposes, the Commission has developed a verification report template, which has a role in harmonising the verifier's external report and confirming coverage of verifier obligations. This template is used by at least 11 MS. Verifiers from 26 MS found the Commission's guidance useful to their work, indicating that this guidance has been used very widely. Verifiers from 10 MS found that the pre-contractual approaches have helped formalise their work at the early stages and verifiers from 11 MS indicated that the requirements for time allocation helped them justify additional time to clients. All verifiers indicated that they use some type of checklist for verification activities. Verifiers from 21 MS stated that independent reviews of their verification reports were already carried out before the AVR required this to be the case. In the majority of cases, simplified verifications were not carried out, with the exception of some small emitters in the aviation sector.

There is scope for verifiers to share information better between each other, and also to make better use of the Task Forces and sharing mechanisms that already exist between CAs. CAs should consider the need for verifiers to share more information, and consider how to use existing channels to do so.

### **Accreditation**

Twenty-seven MS have appointed a NAB, whilst four others have not appointed a NAB or NCA and rely solely on cross-border accreditation. In this regard, all MS are in compliance with the AVR. One MS only has appointed an NCA which has only certified one natural-person verifier, limiting the impact of this approach on the 2013/14 compliance cycle. 20 MS appear to have effective information exchange between their NAB/NCA and CA and in many cases it goes beyond the submission of formal reports. 21 MS submitted a work programme in time to their CA, and 17 of these were considered sufficient.

The work programmes provided by NABs to CAs within the deadline were often incomplete in regards to anticipated time and place of verifications. Verifiers were often contracted only after the deadline for notifying their NABs and provided the information to the relevant NAB through updates. Yet, this updated information was not always passed on to relevant CAs. CAs would value regular updates, which is beyond the current requirement of the AVR.

Various reasons were given for the lack of timely notification, however, this should be tightened up in future compliance cycles. Updates from verifiers, where provided, were usually very helpful, containing much more detailed information.

Similarly, management reports were deemed broadly satisfactory with some areas of improvement. Although at the time of interviewing, only two MS had filed issues with their NABs regarding verifiers' performance, it seems eight more intend to notify the NAB at a later date. 14 of the NABs received notifications from all of their accredited verifiers on planned verification activities, with another eight receiving notifications for more than half.

Exchange of information between NABs and CAs on work programmes where verifiers are operating across borders does not appear to satisfy the requirements of the AVR. All NABs maintain a database of accredited verifiers on their website and for the majority of NABs updates take place as soon as the accreditation status of a verifier changes. Yet, for the remaining four NABs updates take place at varying frequencies ranging from only weekly updates to as frequent as every 24 hours or even 3 hours. 20 NABs/NCA provided additional information to verifiers about their processes, in addition to the AVR and Commission guidance notes. There is some variation in the length of the validity of accreditation certificates (four or five years) which might need to be checked in some cases.

Nine of the NABs interviewed used the Commission AVR guidance note as the basis for procedures for checking verifiers' competences whilst 17 NABs have established their own procedures, based on EN ISO 14065, as is the AVR requirement. These checking procedures resulted in refusal to accredit verifiers for phase 3 in some cases, which indicates that, at least to some degree, they are being

implemented seriously. Procedures are in place for appeals. All 25 NABs confirmed that they carry out surveillance on an annual basis, and 22 NABs/NCA confirmed that they use additional technical experts for this task. There have been two cases where verifiers encountered an initial lack of fair treatment when operating in a MS that was not where they were accredited.

### **Coordination and communication**

There has been a trend towards centralisation of responsibilities compared to Phase 2, but there still is great variety in the number of CAs in each MS and coordination approaches. 15 MS have one CA, and 16 MS have more than one. Of those with multiple CAs, four MS have more than 50 CAs. In all but one MS with multiple CAs, there is one coordinating CA. However approaches to sharing work and coordination differ. Most MS have some procedures for communication within their one CA, or between CAs, which include daily exchanges, meetings once or twice a year, workshops and central information sharing locations. There appears to be room for improvement in terms of communication between CAs where more than one CA is involved. Some lessons might be learned from the good communication observed in all MS between the CAs and the NAB. However, it is not the case that multiple CAs generally perform the MRV tasks worse than single CAs. There are some situations where more centralisation of tasks to CAs may help efficiency and some MS have changed the division of tasks between CAs to reflect these efficiencies.

All but one MS have implemented specific measures for ensuring their staff's competence. These provisions vary in their level of detail, ranging from on the job training, to specific internal competence requirements combined with specific training on relevant topics. There is merit in sharing best practise in relation to training as good, competent staff are central to being able to manage the complex details of the MRV requirements.

### **Inspection and Enforcement**

The approach to inspections varies widely, with 14 CA carrying out inspections as part of their duties concerning other permits and 14 carrying out EU ETS-specific inspections. Five MS have intentions to carry out EU ETS specific inspections but have not done so yet. The level of knowledge of the inspectors is also varied as there is no consistent approach to ensuring that inspectors have EU ETS-specific expertise. In some MS, the approach to inspection also varies between regional CAs.

Nineteen MS indicated that the introduction of the MRR has not resulted in significant changes to their enforcement processes, which is not surprising as enforcement is not an area specifically addressed by the regulation. Challenges with enforcement have primarily arisen in cases of bankruptcy or in relation to foreign-owned aircraft operators. The level of penalties and the choice of related infringements also vary, however, the existence of a range of significant penalties across the MS demonstrates that the majority take enforcement seriously and convey this clearly to the operators.

## Recommendations

Each section lists more broadly applicable recommendations, while recommendations specific only to an individual MS are included in the respective fiches. In some places in the report some observations are provided about potential actions that the Commission could also take to further enhance the MRAV cycle. Although the purpose of the report is to make recommendations to the MS, where recommendations given by interviewees to the Commission seemed more generally supported, these are also provided for information purposes.

## Next steps

The information provided in this report, including the summary of findings per MS can be used by MS to improve compliance, and by the Commission to follow up with the relevant MS as appropriate.



## Glossary

AER – Annual Emission Report – plural AERs

AD – Activity data

AO – Aircraft Operator – plural AOs

AVR – Regulation on Accreditation and Verification under the EU ETS, Commission Regulation No. 600/2012

CA – Competent Authority – plural CAs

CEMS – Continuous emissions monitoring system(s)

DEHSt – German Emissions Trading Authority

EA – European co-operation for Accreditation

EA-6/03 – EA Document for Recognition of Verifiers under the EU ETS

EEA – European Environmental Authority

EFTA – European Free Trade Association

EC – European Commission

EU ETS – EU Emissions Trading System

GD – Guidance Document

GWP – Global Warming Potential

GHG – Greenhouse gases

IED – Industrial Emissions Directive

IPCC – Intergovernmental Panel on Climate Change

IR – Improvement Reports, plural IRs

MP – Monitoring Plan, plural MPs

MRAV – Monitoring, Reporting, Accreditation and Verification

MRG – Commission Decision establishing guidelines for the monitoring and reporting of GHG emissions pursuant to Directive 2003/87/EC of the European Parliament and of the Council (Monitoring & Reporting Guidelines)

MRR – Regulation on Monitoring and Reporting under the EU ETS, Commission Regulation No. 601/2012

MRV – Monitoring, Reporting & Verification

MS – Member States, in the context of this projects all 31 countries participating in the EU ETS, i.e. the EU Member States, Norway, Iceland and Liechtenstein. Italy is not included in the draft report, making the total 30.

NAB – National Accreditation Body, plural NABs

NCA – National Certification Authority, plural NCAs

NEA – Dutch National Emissions Authority

PEF – Preliminary emission factor

RES – Renewable energy sources

VR – Verification Report, plural VRs



## Country abbreviations

AT – Austria  
BE – Belgium  
BG - Bulgaria  
CZ – Czech Republic  
CY – Cyprus  
DE – Germany  
DK – Denmark  
EE – Estonia  
ES – Spain  
FR - France  
FI – Finland  
GR - Greece  
HR - Croatia  
HU - Hungary  
IE - Ireland  
IS – Iceland  
IT – Italy  
LI - Liechtenstein  
LT – Lithuania  
LU - Luxemburg  
LV - Latvia  
MT – Malta  
NL - Netherlands  
NO - Norway  
PL – Poland  
PT - Portugal  
RO - Romania  
SE - Sweden  
SI - Slovenia  
SK - Slovakia  
UK – United Kingdom

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# 1 Introduction

## 1.1 Background

The European Union's (EU) greenhouse gas (GHG) allowance trading scheme was enacted and implemented in the Member States (MS) to allow the scheme to start in January 2005. Installation level monitoring and reporting is one of the pillars of the system, as required by Article 14 of the EU Emission Trading System (EU ETS) Directive (Directive 2003/87/EC).

Decision 2007/589/EC establishing guidelines for the monitoring and reporting of greenhouse gas emissions (henceforth 'the MRG') contains such provisions for the monitoring, reporting and verification of greenhouse gas emissions covered under the EU ETS Directive. The MRG were used throughout Phase 1 and Phase 2 of the EU ETS and have provided an important foundation for sound Monitoring, Reporting & Verification (MRV) practices at the level of operators, verifiers and competent authorities.

However, experience in Phases 1 and 2 of the EU ETS demonstrated some areas where monitoring, reporting and verification practises could be improved. These changes would ultimately increase the reliability of the EU ETS by, amongst others, improving the consistency of approaches across MS and clarifying areas that allowed too much room for interpretation. During Phases 1 and 2, initiatives to encourage information exchange between MS and best practises were able to stimulate improvements. However, new regulation was required to make further progress.

Commission Regulation 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 has applied to emissions from 1 January 2013 onward. This Regulation, also known as the Monitoring and Reporting Regulation (MRR) repeals Decision 2007/589/EC and replaces it, providing a similar structure of monitoring and reporting, with further detail in places. It is supported by a series of guidance documents.

In parallel, Commission Regulation 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 came into force on the same date as the MRR. This Regulation, known as the Accreditation and Verification Regulation (AVR) is complementary to the MRR. The AVR provides regulation on the verification elements of the EU ETS compliance cycle, and builds on regulation on accreditation of verifiers, introduced by Regulation (EC) No 765/2008.

As in the previous phases, installations are required to have an emission permit as well as an approved monitoring plan (MP) and to monitor and report their emission data during the year. The annual procedure of monitoring, reporting and verification and all processes connected to these activities is referred to as the "compliance cycle".

Provisions relevant to the compliance cycle have changed over time, due to the increased scope of the EU ETS as well as to improve the system based on experiences gained. Decision 2004/156/EC, the first version of the MRG and applicable for the first trading (2005-2007) period, was superseded by Decision 2007/589/EC applied in the second trading period (2008-2012). Aviation was included in the system from 2010 onwards with regards to monitoring and reporting, surrender of allowances took place for the first time in 2013 with regards to emissions in 2012. EU-wide requirements for accreditation bodies were introduced by EU Regulation 765/08.

A number of other changes have affected the third trading period (2013-2020). These include the revised ETS Directive 2009/29/EC including a number of new activities and gases. A summary of the main changes affecting Phase 3 of the ETS, including the main changes found in the MRR and AVR are provided in Section 2 of this report.

The number of states participating also increased over time. In the first trading period, 25 states participated in the scheme at first; in 2007, Bulgaria and Romania joined the EU and subsequently also the EU ETS. Three members of the European Free Trade Association (EFTA), Liechtenstein, Norway and Iceland joined the scheme in 2008, at the start of the second trading period.<sup>1</sup> In 2013, Croatia joined the EU and began participating in the EU ETS on 1 January 2013. Therefore, the MRR and AVR are now applied within the EU ETS, to 31 countries.

## 1.2 Why evaluate the implementation of the compliance cycle?

As EU ETS is a market based instrument, trust in the market plays a vital role. This trust is based on the perception of quality and robustness of the compliance cycle which should ensure that all emissions reported are real and match the quantity actually emitted, usually referred to as "a tonne is a tonne". In general, most stakeholders perceive the robustness of the ETS to be good. This success brings the risk of complacency, as it may easily lead to a situation where supervision, control and oversight become less of a priority since 'everything has always worked well'. A regular evaluation of these steps therefore plays an important role.

Differences in national implementations and interpretations are necessary to ensure an effective national operation of the scheme, and were apparent during Phase 1 and Phase 2. The use of a variety of approaches does not necessarily compromise the robustness of the system. At the same time, it is not easy to understand whether and how the various different national approaches achieve this goal. Furthermore, the MRR and AVR have only been in use for one compliance cycle, introducing new areas for compliance. Therefore, at this time, it is particularly important to assess the degree to which these new regulations have been implemented appropriately and consistently within, and between Member States (MS).

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<sup>1</sup> For reasons of simplicity, these countries will, in the following, be referred to as "MS" - although this abbreviation is normally used only for the EU Member States.

The European Commission has carried out three projects evaluating the implementation of the compliance cycle in the states participating in the EU ETS since 2006. This report relates to the compliance evaluation for the 2013/14 compliance cycle and has used a comparable methodology and reporting format to the previous evaluations, to allow for more straightforward comparison. This evaluation complements other initiatives to share information between MS and competent authorities on the topic of Monitoring, Reporting, Accreditation and Verification (MRAV), including the Compliance Forum, WGIII and other activities.

### 1.3 Objectives and scope

The objective of the project and evaluation leading to this report was to evaluate the implementation of the 2013/2014 EU ETS compliance cycle at Member State level. This project evaluated compliance with the regulatory requirements of the MRR and AVR and analysed Member State's specific provisions in respect to EU ETS monitoring, reporting, verification and accreditation. This report provides a scrutiny of the results of key areas of interest to the Commission, highlighting good practice, shortcomings, inconsistencies among MSs, and makes suggestions inter alia for operational measures addressing identified compliance issues and improvements aiming at further harmonisation and increased efficiency.

The focus of this work lies on the assessment of the implementation of the new Commission Regulations. The project team worked with the Commission to determine the priorities for this evaluation, therefore a particular topic, such as Monitoring, will cover several key issues, but is not necessarily a comprehensive overview of all aspects of that topic.

The report covers 28 EU Member States (MS) and Norway, Iceland and Liechtenstein. These countries are referred to as MS for the purposes of this report. The findings of this report are dependent on the information provided during interviews with a range of stakeholders in these MS, according to the methodology in Annex I. The openness and level of detail in the answers provided differed between MS, and this report includes some additional comments from MS when available. The project team provides additional context for the results as appropriate. One MS would only provide written responses to its Questionnaire and did not comply with the case selection request. As a result, some analysis of the situation in this MS is not as thorough as in other MS.

Readers should note that this report represents the work and opinions of the Ecofys and Ricardo-AEA and is not necessarily a reflection of the views and opinions of the European Commission. In some cases, comments or requests from one or a minority of MS are included to show the diversity of views, but do not automatically imply action is necessary at this stage at the Commission level.



## 1.4 Structure of the report

This report is set out along two axes. The main body of the report provides a detailed analysis of the findings of the evaluation according to each stage of the compliance cycle. Annex II provides a country-by-country analysis in the form of country fiches. These fiches describe the implementation of the AVR and MRR from a national perspective.

Following this introduction, Section 2 presents the key changes introduced by the MRR and AVR; Section 3 covers Permitting and monitoring plan approval; Section 4 – Monitoring; Section 5 – Reporting; Section 6 – Verification; Section 7 – Accreditation; Section 8 - Competent Authority Coordination and Communication; and Section 9 - Inspection and Enforcement. Section 10 provides findings on cross-cutting themes by sector, as well as general findings or observations that do not relate to a particular part of the compliance cycle. Section 11 summarises the findings from the review. The Annexes provide more detailed information about the methodology (Annex I) and the country analyses (Annex II).

## 2 The compliance cycle in Phase 3

Phase 3 of the EU ETS commenced on 1 January 2013 and marks the continuing development of the EU's central mechanism for cost-effectively reducing industrial greenhouse gas emissions.

A major revision, approved in 2009, harmonises rules across MS and makes Phase 3 significantly different from Phases 1 and 2<sup>2</sup>. The high-level changes to the EU ETS include:

- A single, EU-wide cap on emissions determined top-down as opposed to the previous system of cap setting which began from the national level
- Auctioning, as opposed to free allocation, as the default method for allocating allowances. In 2013, more than 40% of allowances will be auctioned, and this share will rise progressively each year
- For those allowances still allocated for free, harmonised allocation rules apply which are based on ambitious EU-wide benchmarks of emissions performance
- More industrial sectors and greenhouse gases are included
- 300 million allowances set aside in the New Entrants Reserve (NER) to fund the deployment of innovative renewable energy technologies as well as carbon capture and storage through the NER 300 programme.

Next to the revised EU ETS Directive 2009/29/EC Phase 3 of the EU ETS is underpinned by a number of new and revised regulations, including two new regulations dealing with MRV, these being:

- *Regulation (EC) No 176/2014 amending Regulation (EC) No 1031/2010 in particular to determine the volumes of greenhouse gas emission allowances to be auctioned in 2013-20*
- *Regulation (EC) No 389/2013 establishing a Union Registry pursuant to Directive 2003/87/EC of the European Parliament and of the Council, Decisions No 280/2004/EC and No 406/2009/EC of the European Parliament and of the Council*
- *Regulation (EC) No 421/2014 of the European Parliament and of the Council amending Directive 2003/87/EC establishing a scheme for greenhouse gas emission allowance trading within the Community, in view of the implementation by 2020 of an international agreement applying a single global market-based measure to international aviation emissions*
- *Commission Regulation (EU) No 1123/2013 on determining international credit entitlements*
- *Regulation (EC) No 601/2012 on the monitoring and reporting of greenhouse gas emissions pursuant to Directive 2003/87/EC of the European Parliament and of the Council (the "Monitoring and Reporting Regulation" or "MRR")*
- *Regulation (EC) No 600/2012 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 (the "Accreditation and Verification Regulation" or "AVR").*

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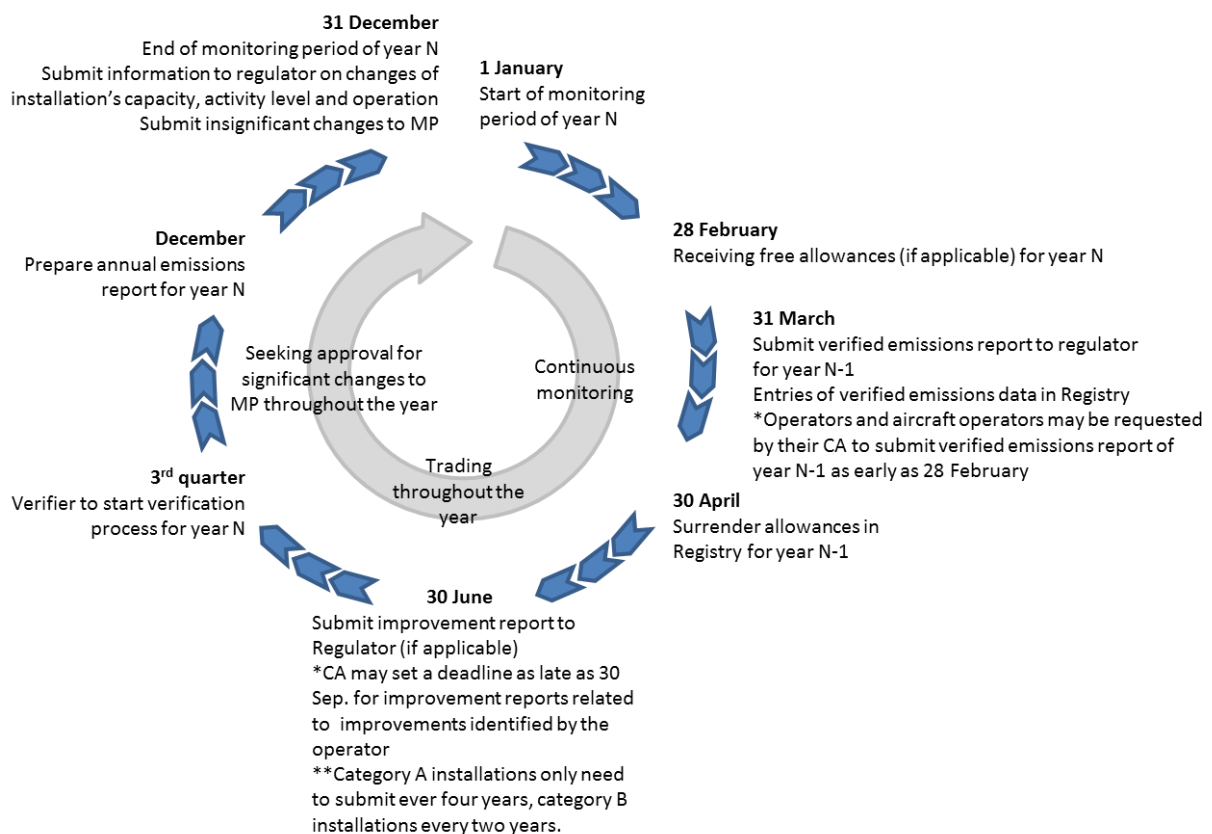
<sup>2</sup> For more information, see [http://ec.europa.eu/clima/policies/ets/index\\_en.htm](http://ec.europa.eu/clima/policies/ets/index_en.htm)

The MRR replaces the previous Monitoring and Reporting Guidelines (MRG) and the AVR is a new regulation for Phase 3.

## 2.1 The compliance cycle

Emission reporting periods under the EU ETS are based on the calendar year between 1 January and 31 December. However, the EU ETS MRV compliance cycle includes both preparatory activities, undertaken by parties prior to the reporting of emissions by operators, as well as a number of compliance activities following the submission of annual emission reports (AERs).

Key compliance cycle steps and timing are shown in Figure 1.



**Figure 1. Principal EU ETS MRV compliance cycle steps and timing (Source: Ecofys)**

Accreditation is an integral part of the overall MRV compliance cycle that runs on a different time schedule than the activities depicted in Figure 1. The MS appoints the National Accreditation Body (NAB) who will be responsible for EU ETS accreditation activities. The steps for accreditation defined in the AVR are the accreditation application, triggered when a prospective verification body applies,

and the subsequent accreditation process, in which the NAB assesses the application and performs witness activities on the applicant entity. If the verification body fulfils all relevant requirements as confirmed in the accreditation process, the NAB issues an accreditation certificate to the verifier.

During the period for which the certificate is valid, typically, but not longer than 5 years, the NAB will perform surveillance activities on each verifier it has accredited at a timetable the NAB determines. A NAB may also be asked by another MS' NAB to help confirm that the verifier continues to meet the requirements and performs procedures according to the AVR. The verifier can apply to be reassessed before the accreditation certificate expires.

## 2.2 Overview of the main changes in the compliance cycle

### 2.2.1 Monitoring and reporting

Pursuant to the European Commission's Guidance document<sup>3</sup> (GD) No. 1, the MRR has been developed with the view to enhancing EU-wide harmonisation of approaches beyond those already achieved through MS implementation of the MRG. It also takes into account several good practices found in the MS. Guidance document No. 1 enumerates the following new elements compared to the earlier MRG:

- The central role of the monitoring plan for the whole MRV system has been further emphasised.
- The requirements for choosing the appropriate and required tier (the tier hierarchy) have been amended.
- Important clarifications have been introduced regarding the role of written procedures.
- The MRR has introduced new rules for the process of updating the monitoring plan. Furthermore the principle of continuous improvement of the monitoring plan has been strengthened by the MRR, including a requirement to react to recommendations of the verifier. A simplification has been introduced, requiring that only significant changes to the monitoring plan, as defined in the MRR, must be approved by the Competent Authority.
- So-called "supporting documents" must now be submitted to the competent authority (CA) together with the monitoring plan. These documents provide evidence for meeting the specific tiers, including an uncertainty assessment as appropriate, and the risk assessment necessary to establish an appropriate control system concerning the data flows of the installation.
- Some terminology has changed ("calculation factors" as an overarching term for emission factor, net calorific value, oxidation factor, conversion factor, biomass fraction, carbon content) and introduction of the "preliminary emission factor".

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<sup>3</sup> Commission guidance documents can be found at [http://ec.europa.eu/clima/policies/ets/monitoring/documentation\\_en.htm](http://ec.europa.eu/clima/policies/ets/monitoring/documentation_en.htm)

- The possibilities to combine the various allowed monitoring approaches have improved, i.e. calculation-based approaches (standard and mass-balance methods), measurement-based approaches and the “fall-back” approach (i.e. no-tier methodology). In particular, measurement-based approaches have been put on equal footing with calculation-based approaches including in relation to minimum tier requirements.
- The MRR has added clarification concerning the interpretation of unreasonable costs.
- The MRR has introduced flexibility to allow several new approaches in the determination of the uncertainty of the measurement, including reliance on national legal metrological control where appropriate and possible. The MRR has strengthened measures for securing regular maintenance, calibration and adjustment of metering equipment.
- The MRR uses the same definition for biomass, biofuels and bioliquids as the Directive on Renewable Energy Sources (RES-D). The sustainability criteria established by the RES-D must be applied where relevant in order to apply an emission factor of zero to such biomass.
- For cases where calculation factors are to be determined using laboratory analyses, the MRR contains two major new elements: The requirement to have a dedicated sampling plan approved by the CA, and clarifications for criteria by which a laboratory can be regarded as equivalent to an EN ISO/IEC 17025 accredited laboratory.
- The rules around transferred and inherent CO<sub>2</sub> have been updated.
- The interplay with the verification, as regulated by the new AVR, has been significantly improved. In particular, the rules for the data flow and control activities of operators have been elaborated and the improvement principle establishes a feedback loop from the verifier’s findings to the operator’s monitoring plan.
- The MRR sends a strong signal for harmonisation, as it has laid a basis for the Commission to provide electronic templates for monitoring plans, emission reports and other communication between operators, verifiers and competent authorities. Those templates are published together with the series of guidance documents. MS may, however, provide their own guidance and/or templates or use more advanced electronic reporting systems (e.g. web-based systems), if they incorporate all the requirements of the Commission’s templates.

### 2.2.2 Accreditation and verification

The AVR outlines the obligations of MS, NABs and verifiers in relation to the accreditation of third party verifiers and verification of reported CO<sub>2</sub> emissions. For fundamental accreditation principles the AVR refers to “Regulation (EC) No 765/2008 setting out the requirements to accreditation and market surveillance relating to the marketing of products” and focuses on accreditation related aspects that are EU ETS specific. For example, the AVR defines the required competences that an appointed accreditation body needs to have, prescribes an accreditation process and elaborates on the competences that verifiers need to demonstrate in order to become accredited. As regards verification, the AVR provides further clarification on the various verification steps, types of checks to be performed and documentation to be maintained as part of the verification process. In comparison to the requirements of the EU ETS Directive for Phases 1 and 2, the AVR provides much more

detailed and stringent requirements and provides the basis for harmonised approaches on accreditation and verification across MS.

Some highlights of the changes as compared to Phases 1 and 2 are:

- Accreditation of verifiers needs to be carried out by the MS' appointed National Accreditation Body,
- Certification of verifiers that are natural persons needs to be governed by a MS' appointed National Certification Authority,
- Mutual recognition of foreign verifiers, i.e. verifier accredited in a MS other than the MS in which they provide their services, has been clearly recognised,
- Involvement of an independent reviewer is now a requirement,
- Definition of, requirement to maintain and if requested by the CA to provide, internal verification documentation,
- Clear list of the required steps and tasks as part of the verification plan.

The changes outlined in sections 2.2.1 and 2.2.2 constitute a significant change in the regulatory environment for competent authorities and other parties, although they have been signalled well in advance. This evaluation seeks to explore the extent to which countries have been able to comply with these regulations in the 2013/2014 cycle.

### 3 Permitting and monitoring plan approval

The MRR provides rules on the way in which operators should apply for a permit and prepare and submit a monitoring plan. The subsections in this section are as follows:

- 3.1 Submission of monitoring plan and permit application
- 3.2 Use of Templates and Guidance for the MP
- 3.3 Assessment of the monitoring plan application
- 3.4 Notification of changes and updating of permit and monitoring plan.

#### 3.1 Submission of monitoring plan and permit application

*As per MRR Art. 12, an operator or an aircraft operator shall submit a monitoring plan to the competent authority for approval. This is typically done as part of the permitting process and MS have flexibility as to whether the EU ETS permits are linked or separate from other permits.*

In the majority of MS (25), the implementation of the Industrial Emissions Directive (IED) and the EU ETS involve separate permits. In four MS combined permits are issued. In two MS, it depends on the particular situation whether separate or combined permits are issued, for example a simplified pollution permit with GHG permit for combustions activities with less than 50 MW is issued and a combined GHG and IED permit for other types of activities.

Generally, operators are submitting MPs to the relevant CA for approval in all MS as expected. The submissions are either an integral part of the permit application or included as an annex to the EU ETS related permit application.

13 MS stated that they did not see a significant change regarding the extent and quality of information obtained in the permit application or MP submission, which is at least partially due to requirements they already had in place in Phase 2. Seventeen MS confirmed that MRR requirements led to better quality information being obtained overall, such as more information on risk assessment, uncertainty assessment or on internal management and control procedures (e.g. data flow diagram or sampling plan).

Two MS made a point of highlighting concerns operators had with the MP requirements. One MS with multiple CAs noted that local CAs had some issues with operators who wanted to continue reporting as per Phase 2 and ignored the changes in legislation. This caused disagreement and the ministry had to assist the local CAs to ensure that operators adhered to the requirements of Phase 3. In addition, one MS declared that – even though this approach led to a better quality of the MP – the Commission’s template asks for too much information which contradicts the principle of self-control in the MS and that operators are still not used to providing this level of detail. However, the desire for

harmonisation and quality outweighs these issues. These MS are seeking to comply, but also gave examples of how they are trying to be responsive to their operators.

### 3.1.1 Completeness of the monitoring plan

*According to MRR Article 12, the MP shall consist of a detailed, complete and transparent documentation of the monitoring methodology of a specific installation or aircraft operator and shall contain at least the elements laid down in Annex I MRR.*

As stated above, operators are usually submitting MPs to the relevant CAs. The majority of MS (22) confirmed that, unless MRR Art 47(3) applies, they have received all relevant uncertainty analyses, risk assessments and evidence of commensurate procedures required in accordance with MRR Art 12. However, one of these MS noted that all its installations are installations with low emissions and hence, submission of uncertainty analyses, risk assessments and evidence of commensurate procedures is not requested as per MRR Art 47 (3). Seven more reported that these documents have been submitted to the CA at least in most cases, but not all.

An item of concern, which is noted in the respective fiches in Annex II, is that two MS could not confirm whether they have been received in all cases or not as this aspect of the work is the responsibility of local/regional authorities and expressed that the central CA has not the capacity to review all submissions again and did not provide the information following the initial interview.

However, in some other MS with multiple CAs, the central CA performed spot checks on all documents received, emphasising that the submission of these documents is a binding requirement.

### 3.1.2 Standardised and simplified monitoring plans

*According to MRR Art 13 (1) MS may allow operators and aircraft operators to use standardised or simplified monitoring plans. Where simplified MPs are allowed, MRR Art 13(2) requires that a simplified risk assessment is carried out to see whether the use of a simplified MP is justified or not.*

In the majority of MS (21), operators or aircraft operators are not allowed to submit simplified monitoring plans (according to MRR Art 13). In some cases this appeared to be because the MS had not yet taken the time to develop one, but was considering it for the future. The conditions under which operators are allowed to use simplified MPs in the 11 MS that allow them, for example:

- In four MS it only applies to installations of low emission; in one of these MS the same Commission's template for MPs is used but installations of low emission are allowed to fill in less information
- In two MS it applies to low emission and simple combustion installations
- In two other MS it only applies to aircraft operators
- In another two MS different templates are provided for the submission of simplified or standardised MPs. In one of them a checklist was developed for determining which template should be used in each case



- Another MS noted they would allow it but no operator has submitted a simplified MP so far.

The risk assessment and hence the justification for using a simplified MP is either done by the CA (4) or the operator (5).

### 3.1.3 Summary of findings

The interviews showed that, generally, operators are submitting MPs to the relevant CA for approval in all MS. In addition, the majority of MS expressed that MRR requirements helped in getting more information (e.g. on risk assessment or internal data management) and also led to a better quality and/or consistency of the information obtained, though some operators appear to be resistant to the new requirements.

Many MS encountered issues with regards to the (timely and complete) submission of uncertainty analyses, risk assessments and evidence of commensurate procedures required in accordance with MRR Art 12. While most of the MS were able to finally resolve these issues, one MS was not able to be compliant with MRR Art 12 as the requested documents had not been received by the CA.

Most MS are not taking full advantage of the flexibility to allow simplified monitoring plans. In some cases, installations of low emission, for example, are required to use the same template but fill out less detail, which can cause confusion, which is also discussed in later sections of the report.

#### 3.1.3.1 Recommendations

There are a few recommendations for this topic listed below.

##### Recommendation R 1

- Four MS are advised to provide guidance to their operators on the minimum requirements for installations with low emissions and provide assistance as necessary in order to harmonise the information obtained from these installations and ensure compliance with the MRR.

##### Recommendation R 2

- The MS should be reminded of importance to ensure that their operators submit relevant uncertainty analyses, risk assessments and evidence of commensurate procedures together with the MP unless MR Art 47(3) applies.

#### 3.1.3.2 Good practices

- In some MS with multiple CAs, the central CA performed spot checks all documents received from the other CAs, emphasising that the submission of these documents is a binding requirement and facilitating a consistent approach across CAs.

### 3.2 Use of Templates and Guidance for the MP

In 20 MS, the monitoring plan template published by the Commission is used. Eight MS confirmed that they use their own template, which incorporates all requirements of the Commission template, as was confirmed by spot-checks conducted by the project team. A further three MS reported that they developed a MP template that includes some additional elements, besides incorporating all of the Commission’s requirements.

In general, the MS makes the use of the Commission or the MS MP template mandatory. Only one MS suggests that operators use the template published by the Commission, but its use is not mandatory. However, in this case, about 40% of the operators use the Commission template, whereas 60% use their own format with a structure the following Annex I of the regulation or the Commission template. This potentially creates additional burden on the CA to ensure all elements are covered, however some verifiers noted that the flexibility provided by this MS was helpful. The assessment of the MP is discussed further in the next section.

Reasons for deviating from the MP template published by the Commission included that the template did not fit into existing electronic reporting systems of the MS, or that the CA responded to operator requests that they not be given another mandatory template.

MS generally found the Commission template for MP useful. For almost the half of the MS, it did not cause any issues or barriers. When asked, 13 MS reported issues with the Commission MP template, as listed in Table 1.

**Table 1: Problems encountered in the Commission’s monitoring plan template**

Encountered Problem	MS [No.]
For simple installations the Commission’s template requirements are too onerous and it was not clear what the minimum requirements are for filling in the template for these operators	4
Sometimes it was either not possible to fill in the right data or template gave error messages when filling in	3
Instructions from the Commission on how to use the template were not clear	2
Not possible to define natural gas as a commercial standard fuel, even though only one gas supplier in MS	1
Not possible to change emission factor in the Commission’s template	1
Minor mistakes in translations, which led to misunderstandings	1

In general, all MS found the guidance documents provided by the Commission helpful. 20 MS reported using it regularly. Two MS highlighted that guidance documents no. 3 (biomass) and no. 4 (uncertainty analysis) were particularly helpful. Three MS mentioned using Commission’s guidance primarily for cross checking whether own national guidance is in line with commission views. Two of these ask the operators to use the national guidance as this is more specific to national templates and/or more detailed. Four MS noted that they chose to move forward with their own interpretation

of requirements and began changing their system and templates before the Commission guidance was finalised. At least two of these MS have been involved in the development of the guidance, which is why the national guidance is in line with the Commission guidance and provides only additional content where further details are required for the nation electronic reporting systems. Also, these MS should nevertheless advise their operators to use the Commission guidance, where it provides additional information to the national guidance on the interpretation of the MRR requirements, for making relevant changes to their MPs within the process of reviewing their monitoring methodology.

MS that did not use the guidance, or not fully, reported this was due to creating their own MS-specific guidance, language barriers (i.e. no translation into national language available) and/or due to the timing of final guidance being issued some MS did not review all of it in time for beginning to build MP templates, drafting instructions to operators and/or developing strategies for MPs for approval.

In addition, several MS expressed that - given the large amount of Commission's guidance documents - there might be ways of reorganising or providing decision tree schemes in order to make the guidance more user friendly or to have a small number of concise documents which contains the most important points. Five MS indicated that Commission's guidance was useful but could still be improved, such as through more concrete examples.

The interview team found that a large number of MS (18) do not provide any additional guidance on completing the monitoring plan templates, while others do. This additional guidance is either given in integrated form in the template itself, or in separate documents. Some MS do both, they have integrated some guidance into the template and complement this with separate documents with further guidance.

If not developed to address MS-specific IT systems, the decision of the MS to provide additional guidance was mainly driven by three factors: Seven MS were following queries from operators or aircraft operators, five MS were trying to clarify the Commission's guidance by giving some further explanations and four other MS tried to express their interpretation of MRR requirements.

Eight MS are using the Commission's "Exemplar checklist for assessing installation MPs", which is discussed in the next section. Three MS reported that they are using the Commission's checklist as guideline without following it in detail and one MS stated that it is going to use the checklist in the future. At least three MS noted that they had already proceeded with developing their own checklist before the Commission's Exemplar checklist was adopted. Two MS reported language barriers, especially for regional or local authorities, as no translation of the checklist into the national language was provided by Commission and the central CA of the MS has not translated it yet e.g. due to time or capacity constraints, and recommendations for translation have been added to the relevant fiches in Annex II.

Seven MS developed their own checklists based upon the MRR and/or the Commission checklist and three MS use the Emissions Trading Scheme Workflow Automation Project (ETSWAP), which includes

completeness checks. One issue of concern is that another four MS reported that they are not providing their CA staff with any checklists for the MP approval at all.

### 3.2.1 Summary of findings

The Commission MP templates were generally seen as helpful, and the vast majority of MS (20) are using the Commission template for MPs and where the use of the Commission template is not mandatory, the MS developed templates based upon the Commission template. By this, a harmonised approach is facilitated throughout the MS.

Also, the Commission guidance documents have been perceived as helpful by all MS and have been used to a large extent. However, some MS expressed that it would be helpful to have them organised in a more user friendly way, have additional practical examples and/or to further clarify some topics. Some MS already tried to address these issue themselves by providing additional guidance on a national level.

#### 3.2.1.1 Recommendations

##### Recommendation R 3

- All MS that experience problems with a Commission template or requirements should proactively seek clarification and/or provide a suggested fix to the Commission when the issue is identified.

##### Recommendation R 4

- The Commission, and/or individual MS, may wish to update the guidance documents with more practical examples, clarifying some key issues, and/or repackaging the information to make it easier for the reader to quickly find the relevant information for a particular issue.

##### Recommendation R 5

- MS that issued national guidance on the MP should nevertheless advise their operators to use the Commission guidance, where it provides additional information on MRR requirements related to the MP. This will enable operators to make relevant changes to their MPs while reviewing their monitoring methodology.

## 3.3 Assessment of the monitoring plan application

*Article 12 of the MRR relates to the content and submission of the MP. Annex I to the MRR sets out minimum requirements for the content of the MP.*

In the majority of MS (26) the assessment of permits and MPs is done by the same entity, whereas in five MS multiple authorities are involved in the assessments. Where multiple authorities are engaged, the segregation of duties and the coordination between the different authorities varies. For example: (a) local authorities have responsibility for issuing permits and approving MPs and the ministry

performs checks to ensure a harmonised approach or (b) one entity type handles the responsibility for issuing the permits and the other approves the MPs.

The extent to which MPs are assessed in the process of approval can differ considerably among the MS. Most MS (27) conduct completeness checks. However, some authorities are checking everything in detail, while others provide only general completeness checks.

When explored in further detail, MS reported the most common checks carried out on uncertainty analyses, risk assessments and evidence of commensurate procedures specifically are manual completion checks without using a checklist (14), or based on checklists (7) as well as technical accuracy checks on uncertainty analyses (15) and risk assessments (13) provided by operators. In addition, the project team noted that:

- One MS mentioned that uncertainty analyses are checked in detail and is therefore often the reason for asking for further information from operators before the MP is approved.
- One MS explained that quality and extent of checks may vary depending on which local or regional authority is performing the check. This is because resources and competence of CAs may differ on a regional level.
- The CA of one MS communicated that colleagues from the statistical service from the ministry of finance are asked for help regarding the checks as they have a better expertise than the CA staff for this purpose.

Once received and checked, MS retain uncertainty analyses, risk assessments and evidence of commensurate procedures in different ways, most commonly as an electronic file (56%), with 23% in hard copy, and 18% within an electronic reporting system.

The project team noted that two MS mentioned they sometimes complement MP review with onsite visits. One MS with multiple CAs noted that the scope of checks performed during the approval of MPs may vary greatly depending on the authority doing the assessment.

The extent and quality of checks performed during the MP approval process varies significantly throughout the MS. 17 MS indicated that they perform detailed checks on every single element of the MP and another seven reported to follow the Commission checklist. Yet, the checks applied by four MS are limited as they do not look into whether the MP meets all relevant requirements of the MRR. For another two MS the review process was reported to follow the Commission checklist by some regional CAs but could not be confirmed for all regional CAs. In one MS now review takes place as the CA prepares the MPs. The use of an IT system for receiving permit applications, MP, AERs and VRs usually goes along with a more detailed checks as automated plausibility checks and defined procedures facilitate more detailed checks. While no MS was found to apply insufficient checks on the submitted MPs, further measures for harmonisation and consistency, specifically for MS not using any check lists and defined procedures, should be implemented.

Where MS allow the use of simplified MP, checks on the evaluation of the required risk assessment and the justification for using simplified MP are not always performed in a common manner across MS. Only two MS indicated that they use a checklist or provide internal guidelines to their CA staff.

One MS stated that the evaluation of risks is carried out by using historical emission data from Eurocontrol Support Facility and Commission's guidance document no.6. Another MS declared that while there is no guidance, the competence of the staff performing the checks is ensured by regular meetings of the permitting unit.

With exception of four MS, all MS expressed that operators and/ or CAs encountered some issues in the MP approval process given the amount of new requirements of the MRR. In particular, topics which have been explicitly perceived as difficult by operators and/ or CAs were risk assessments and uncertainty analyses, the transfer of inherent CO<sub>2</sub>, the applicable tiers, biomass-related issues as well as the definition of unreasonable costs. These findings further support the feedback regarding making guidance more accessible to users and ensuring operators understand the requirements.

To supplement the interviews, the project team also reviewed all files available for selected cases in each MS. Generally, the case assessments supported the findings in the interview itself. The following list highlights a few examples of MP issues found by interviewers during case assessments:

- An operator entered that it was a category A installation in an early version of the Commission's MP template that was not fully protected, although the estimated annual emissions were around 120,000 tCO<sub>2</sub> (Category B). This lowered the tier requirements for the operator in the MP and AER. The AER for 2013 confirmed emissions of 101,000 tCO<sub>2</sub>. The issue was not picked up by CA before this interview and AER had been verified as satisfactory by the verifier. The CA will be reviewing the case/issue and may raise a complaint against the verifier. The CA explained during the interview that an early version of the Commission's MP template was not fully protected and allowed operators to either accidentally or intentionally change the internal workings of the template. The CA now finds it difficult to dissuade operators from using this superseded template.
- Fall-back methodology was applied incorrectly. Although section 12 of the Commission MP template was completed with text, it appears not to be a real/proper justification of unreasonable cost or technical infeasibility.
- The MP does not include details of the measurement devices used, within a calculation approach, if the meters are under national metrological control. In the MS concerned, the maximum permissible error for measuring instruments under national legal metrological control is 3% for natural gas meters. In the cases reviewed, all such source streams were correctly approved with an AD tier of 2 (+/-5%).
- MP for N<sub>2</sub>O plant: sheet H on N<sub>2</sub>O was not filled out, but a separate file describing the methodology in more detail was submitted.  
Procedures for improving monitoring methodology hardly filled out or not sufficiently addressed.

### 3.3.1 Timing of MP approval

Few MS stated that they had all MPs approved and permits issued by end of 2012. The majority of approval and permitting work was done either in early 2013 or in the second half of 2013. In some MS the work continued even until the first half of 2014 or beyond.

The project team found that, in 20 MS, all MPs were approved and permits issued by the time of the interview. Two MS noted that MPs were approved and permits issued but specific elements of some remained unresolved so far and a temporary agreement was in place.

However, this means that the MRR Art 11 (1) deadline had not been met in eight MS. In seven MS, some MPs and permits were not approved/ issued at the time of the interview or not approved/issued in their entirety, while in one MS no MP and permit is approved/ issued yet, which is a clear non-compliance. One MS highlighted that issues arose mainly with aircraft operators who represent only about 11% of ETS-operators but are responsible for ca. 85 % of that country's emissions.

The reasons for not having all MPs approved and permits issued were, above all, discussions on installation specific issues with operators as well as administrative issues. As more items have to be checked as compared to Phase 2, MS reported they needed more time than they initially expected. This means that non-compliances were caused primarily by time constraints due to Phase 2 ramp up or lack of understanding of new requirements by the operator, and does not necessarily indicate that the MS were unaware that they are non-compliant, or that they would still be non-compliant in the future. However, in a few cases, noted in the relevant fiches in Annex II, there appear to be longer-term MS capacity issues of concern.

### 3.3.2 Summary of findings

In the majority of MS (25) the assessment of MPs is done by the same authority that is also responsible for the issuance of permits. However, the extent and quality of checks performed during the MP approval process varies significantly throughout the MS, which is a potential issue for further harmonisation. The majority of the MS reported that they perform detailed checks on every single element of the MP either based on their own procedures or based on the Commission checklist. .

The project team further found that the extent and the quality of checks performed on supporting documents, such as uncertainty analysis and risk assessments, differs considerably throughout the MS as well, and that responsibilities were not always clearly defined within a MS. This bears the risk that these documents are either not checked at all (because of missing assignment of responsibilities) or not to the necessary extent (because of missing quality standards for the checks performed by CA staff).

The most important finding with regards to the assessment of MPs throughout the MS was that there are still some MS in which not all MPs have yet been approved by the CA at the time of the interview, which represents a non-compliance with the requirements of MRR Art 11 (1). However, a deeper analysis of the respective cases showed that all MS affected were aware of this fact and most non-compliances remained unresolved so far because of time constraints, e.g. ongoing dialogue with the operator.



### 3.3.2.1 Recommendations

**Recommendation R 6**

- The eight MS in which there were still some MPs not approved by the CA (at the time of the interview) should take all necessary action to finalise the approval process in order to become compliant with the requirements of MRR Art 11(1) for all installations and review their processes as necessary to avoid non-compliance in the future.

**Recommendation R 7**

- MS that are not yet performing checks on the MPs based on a defined checklist, should either use the Commission's Exemplar Checklist or develop their own checklists ensuring that at least all points according to MRR Annex I are checked during the MP approval process, this is particularly beneficial for MS with multiple CAs conducting reviews.

**Recommendation R 8**

- Remind the five MS in which the risk assessment and the justification for using a simplified MP is done by the operator of the necessity to ensure that the CA is performing a review in order to assess whether this approach is appropriate or not.

**Recommendation R 9**

- As a good practice, all MS should strive to complete their issuance of permits and approval of MPs more quickly and in time for the start of compliance cycles.

**Recommendation R 10**

As a good practice, remind all MS in which different authorities are responsible for the issuance of permits and the approval of MPs of the necessity to ensure that the authority responsible for the MP approval performs cross-checks with the permit in order to ensure information given in the permit and the MP application are consistent.

### 3.3.2.2 Good practices

- One MS asks colleagues from the statistical service from the ministry of finance for help regarding the checks on uncertainty analyses, risk assessments and evidence of commensurate procedures as they have a better expertise than the CA staff for this purpose.
- Two MS highlighted that they used risk-based approaches outlined in their internal guidance for the level of scrutiny an MP receives to help balance risk and work flow.

## 3.4 Notification of changes and updating of permit and monitoring plan

*According to MRR Art. 15 (1) operators or aircraft operators shall notify the competent authority of any proposals for modification of the monitoring plan without undue delay. However, the competent authority may allow the operator or aircraft operator to notify changes that are not significant as per MRR Art. 15 (3) and (4) by the end of the same year.*

The interview team found that, in 25 MS, all changes listed in Art. 15(3) or (4) are duly considered to be significant. Furthermore, the CAs of five MS reported that their lists of significant changes exceed



the requirements of Art. 15 (3) and (4). The CA of another MS declared that there is no distinction between changes and significant changes as the MP is an annex to the permit and the national legislation requires any change related to permit documents needs a formal application.

In the majority of MS (22) significant changes prompt an update of the permit, whereas in nine MS they do not. In one MS only some significant changes also require an update of the permit.

The interpretation of the term “without undue delay” (according to MRR Art. 15 (1)) differs considerably between MS. While some MS require operators to report significant changes upfront, others require the notification within a prescribed timeframe once the change occurred. The table below gives an overview on the different interpretations and national requirements regarding the notification of significant changes.

**Table 2: Interpretation of "without undue delay" as per MRR Art. 15 (1) among the Member States**

Interpretation/ obligation that applies in MS	MS [No.]	MS [%]
If possible before the change occurs, otherwise asap	11	36.7
Without undue delay = as soon as possible	7	23.3
Changes have to be notified beforehand within prescribed timeframe (10-60 days)	5	16.7
Changes have to be notified after they come into effect within prescribed timeframe (8-30 days)	4	10.0
No specific timeframe prescribed but follow MRR requirements	2	6.7
No definition of “without undue delay” and no specific timeframe prescribed	2	6.7

The interview team found that nine MS also require the operator to notify the CA as soon as possible for insignificant changes. In eight MS, changes which do not require approval by the CA should be reported to the CA by 31 December of the same year, two MS also require a notification once a year but by another date. Another MS requires operators to report changes either in June (for the first semester) or in December (for changes occurring in the second semester). The remaining ten MS said they have no specific date by which insignificant changes have to be reported to the CA.

Only one MS is clearly not meeting the requirements of MRR Art. 15 (1) as it reported that the notification of insignificant changes has to be done by the 31 January of the following year.

The majority of MS (17) reported that all changes are immediately updated in a central database in which all documents related to ETS installations of the respective MS are stored. In two MS, only changes that require an update of the MP during the year are documented in the database and

another MS only includes changes that require approval into the database. One MS only updates its database once a year. Eight MS stated that they do not have a central database for storing all installations’ data in one place.

The most common communication channels for granting approval of changes in the different MS are formal letters (19 MS), a status update in the IT system or database (eight MS) and emails (seven MS).

A large number of MS (16) do not provide any instructions for the notification of changes to the CAs. Six MS provide information upon request, either via a helpdesk or through personal contact; and three other MS make regularly updated information available on the CA website. Only seven MS provide templates or guidance documents for the notification of changes.

**3.4.1 Temporary changes**

*According to MRR Art. 23 temporary changes to the monitoring methodology are allowed where it is for technical reasons not feasible to apply the tier in the monitoring plan as approved by the competent authority. However, the operator has to notify the temporary changes without undue delay to the CA (MRR Art. 23 (2)) and shall take all necessary measures to allow the prompt restoration of the tier in the monitoring plan as approved by the competent authority (MRR Art. 23 (1)).*

What is considered a temporary deviation from the MP varies from MS to MS. The table below shows the definitions and/or the maximum length of a temporary deviation according to the MS’ interpretations.

**Table 3: Max./min. length of temporary deviation according to the different MS**

Definition/ max. length of temp. deviation acc. to MS	MS [No.]	MS [%]
Independent of min/max length, whenever change is not planned to be permanent	11	40.0
Deviation that lasts up to six months	4	13.3
Deviation that lasts shorter than a year	2	6.7
Deviation that lasts up to 3-4 months	2	6.7
Deviation lasts up to 2 months	2	6.7
Deviation that lasts shorter than a months	2	6.7
Not known as no such cases yet, will be case-by-case decision	6	20.0

### 3.4.2 Summary of findings

The interviews showed that, in the vast majority of MS (25) all changes listed in Art. 15(3) or (4) are duly considered to be significant; and that in most of these MS significant changes also prompt an update of the permit. Generally speaking, in most of the MS the interpretation of “without undue delay” (according to MRR Art. 15(1)) is “as soon as possible”, whereby some MS require operators to report significant changes upfront and others within a prescribed timeframe, once the change occurred. Only one MS is not compliant with the requirements of MRR Art 15(1) as it requests operators to report insignificant changes until 31 January of the following year.

Furthermore, the interview team found that some MS have not yet established a central database in which all ETS relevant documents are stored and changes updated. This bears the risk that changes are not always properly documented which may lead to doubts or even mistakes during the assessment of the annual emission reports. In addition, a central database ensures that all staff involved in the compliance work has access to all relevant data.

#### 3.4.2.1 Recommendations

##### Recommendation R 11

- The MS that are currently not storing all relevant data in a central database and updating this database in case of changes, such as to the monitoring plan, needs to build up such a database and ensure that all changes notified to the CA are documented therein.

## 4 Monitoring

The Monitoring and Reporting Regulation defines the monitoring requirements for both installation operators and aviation operators under the EU ETS. Operators and aircraft operators are required to carry out their obligations, related to the monitoring and reporting of greenhouse gas emissions under Directive 2003/87/EC, in accordance with the articles and annexes contained within the MRR.

The subsections within this section are arranged in the following order of topics:

- 4.1 - Annex I and the definition of combustion
- 4.2 - Tier requirements and categorisation
- 4.3 - Measurement based methodologies (CEMS)
- 4.4 - Biomass
- 4.5 - Uncertainty assessments
- 4.6 - Technical feasibility and unreasonable costs
- 4.7 - Sampling plans
- 4.8 - Frequency of analyses
- 4.9 - Laboratories
- 4.10 - Inherent and transferred CO<sub>2</sub>
- 4.11 - Data gaps
- 4.12 - Aviation.

### 4.1 Annex I and the definition of combustion

*The 2009 amendment of Directive 2003/87/EC broadened the definition of combustion, as defined in Article 3(t) of the directive, to include forms of combustion that previously were not within all Member State's interpreted scope of the EU ETS.*

The project team found that the majority of MS have checked that operators are applying the broadened definition correctly within their Phase 3 MPs.

- Ten MS stated that some form of checking was done by the CA or another MS body, often checking the operator's MP against other EU ETS data held for the operator (e.g. benchmarking) or against other environmental permit information.
- Eight MS have undertaken a visual check of the MP looking to see that the definition has been applied correctly.
- Four MS rely on the verifiers to check that the operator has applied the correct broad scope of combustion.
- Three MS have already undertaken inspections of operators where the application of the broadened definition was checked.
- Three MS stated that they had applied the broadened definition prior to the introduction of Phase 3 and that checks had already been carried out in the past (under Phase 2).

- Two MS plan to undertake inspections of operators in the future, where the application of the broadened definition of combustion will be checked.
- Three MS stated that no checks had been carried out in this regard under Phase 3.

The project team found that the majority of CAs (20) found the definition clear. Three MS stated that the definition was not clear, either for the CA and/or the operators, with one MS highlighting that the definition is perhaps not clear enough, based on the large number of challenges to the definition received by the CA from operators. Another MS highlighted that the lack of clarity was due to its operators not having a good command of English and the Commission's documentation not being available in their national language.

There was no clear consensus on whether the definition was less or more burdensome for CAs and operators, with four MS expressly stating it was less burdensome and three MS stating it was more burdensome. One MS highlighted cases in its MS where that the broadened definition of combustion had allowed operators to now use the main fiscal gas meters to monitor activity data (AD) under Phase 3, rather than relying on sub-meters as under Phase 2. This is seen as positive by the CA and operators concerned, as the main fiscal gas meters are better / more frequently maintained compared to the sub-meters. Another MS highlighted that it could be more or less burdensome for the operator depending on the activities being undertaken at the installation, linked to the possible number of small emission sources.

In general, the project team found that most MS (27) have not seen a need to develop guidance to operators on the broadened definition of combustion. Four MS have developed some guidance to operators, and one MS developed a central guidance note and provided the guidance note to regional CAs.

Of the four MS that produced guidance for operators, two MS based their guidance on the Commission's guidance and made some form of amendment or addition to it, such as translating the guidance into the national language or adding country-specific examples. As such, it seems that most MS have used the Commission's guidance, in one way or another, as the basis for communicating the requirements to operators.

#### **4.1.1 Summary of findings**

The majority of the MS found the definition of combustion clear, and most MS are doing some type of check to ensure it is being applied appropriately, or had already undertaken a check in Phase 2. However, the project team found that the perception of the broadened definition of combustion as being less or more burdensome for the CA was subjective and dependent on the approach taken in the MS under Phase 2. MS that applied a broad definition of combustion under Phase 2 stated that the broader definition was now less burdensome for the CA, presumably linked to the requirements of the Directive now being in line with their interpreted scope of the EU ETS. Conversely, MS that applied a narrower interpretation of combustion in Phase 2 reported that the broadened definition of

combustion was more burdensome for the CA, linked to the additional tasks the CA(s) took to communicate and/or check that operators had applied the broadened definition correctly in their Phase 3 MPs.

#### 4.1.1.1 Recommendations

##### Recommendation R 12

- Linked to **Recommendation R 77** regarding inspections, the project team recommends that the Compliance Forum Task Force on Monitoring and Reporting considers good practice guidance on carrying out ETS-related inspections, which also addresses checks on whether the broadened definition of combustion is applied appropriately.

#### 4.1.1.2 Good practice

- *One of the roles of the verifier under the Accreditation and Verification Regulation is to check that an operator's CA approved MP complies with the requirements of the MRR. As such, it is considered good practice for verifiers to include check that operators have applied the broad definition of combustion and included all appropriate source streams and emission sources.*

## 4.2 Tier requirements and categorisation

*Article 26 of the MRR, and the annexes referenced in that article, outline the minimum tier requirements that operators shall apply in determining the activity data and calculation factors for monitored source streams.*

Article 26 of the MRR is aimed at harmonising the approach taken by MS CAs in enforcing the requirements for category B and C to meet the highest tiers as outlined in Annex II of the MRR.

MS have differing opinions on whether Article 26 has resulted in more category B and C installations meeting the highest tier requirements:

- More:
  - Six MS stated that the requirements of the MRR had resulted in more category B and C installations now meeting the highest tier requirements as outlined in Annex II of the MRR.
  - One MS stated that the requirements of the MRR had resulted in more category A installations now meeting the minimum required tiers.
- No effect:
  - Eight MS stated that the requirements of the MRR had not had any effect on the number of category B and C installations meeting the highest tier requirements as outlined in Annex II of the MRR.
  - Three MS stated that the requirements of the MRR had not had any effect on the number of category A installations now meeting the required tiers.

- Three MS stated that the requirements of the MRR had not had any effect on the tiers applied by operators (all installation categories), stating that the tier requirements were already met under Phase 2.
- Mixed or unknown:
  - Seven MS stated that they did not have the statistics to be able to tell if there had been a change in applied tier levels by operators and/or they had not checked.
  - One MS response indicated that there were regional variations, with some regions noticing an increase in the number of category B and C installations now meeting the highest tier requirements and other regions not noticing a change – i.e. the required tiers were already being met under Phase 2.

Eleven MS stated that none of its operators were in a transitional period and working to an improvement plan. Ten MS have less than 20% of operators in a transitional period and working to an improvement plan. Nine MS were not aware of the statistics regarding the number of operators working to an improvement plan at the time of the interview, and did not provide additional clarification afterward. In these eight cases, the project team could not necessarily confirm whether the MS was aware of these requirements and was following up with operators on improvement plans, or the interviewee was not aware of the statistics.

#### 4.2.1 Fall-back methods

*Where an operator is applying the fall-back methodology (as per Article 22 of the MRR) for one or more source streams, all the conditions of Article 22 are to be met by the operator. In approving the MP, the CA should be checking all these conditions are being met by the operator.*

Twenty MS stated that there are currently no cases where an operator is applying the fall-back methodology. All other MS indicated limited use of the fall-back methodology, typically used by fewer than five installations per MS.

Where the fall-back methodology is applied, it is not always clear to the project team (from the CA's response) whether the CA(s) have checked all conditions of Article 22 are being met by the operators. (See Table 4)

**Table 4: MS checks of operators applying the fall-back methodology**

Condition of Article 22 being checked:	MS indicating this check is being done by the CA:
<b>Only (a)</b> unreasonable cost / technical infeasibility claim (Art. 22(a))	6
<b>Only (b)</b> that each annual determination of the annual emissions is in accordance with the ISO Guide to the Expression of Uncertainty in Measurement	0
<b>Only (c)</b> overall uncertainty thresholds are being met (within the thresholds permissible for cat A, B and C installations)	3
<b>All</b> checks as per Article 22 of the MRR	1
Other detail given / no confirmation of checks performed	4

Of the twelve MS with operators applying the fall-back methodology, only one MS confirmed that they check all the conditions of Article 22 of the MRR are being met by the operator. Other MS highlighted that they do check condition (a) and/or condition (c) of Article 22, though no MS expressly stated that they check condition (b).

Four other MS simply provided details on the number of installations applying the fall-back methodology in the MS without any further elaboration of the measures taken by the CA(s) in checking that the operator’s methodology compliances with the requirements of Article 22 of the MRR.

**4.2.2 Natural gas**

The majority of MS (26) stated that the removal of the monitoring simplifications for natural gas (previously permitted as a *commercially traded fuel* in Phase 2 under the provisions of section 2.2 of the MRG 2007) had not presented any issues for operators in meeting the required tiers for major and minor source streams. Five MS reported some issues for operators using natural gas, such as not being able to meet the highest tier requirements outlined in Annex II of the MRR (where previously, under Phase 2, the operator used natural gas invoice data). In such cases, the uncertainty of the measurement device meant that the overall uncertainty of the tier required under the MRR cannot be met. In all of these MS, the issue only affected a small number of operators.

A point of concern that is noted in the relevant MS fiche, provided in Annex II of this report, is that one MS stated that they assume that operators provide an analysis that natural gas source streams exhibit a 95% confidence interval of not more than 1% for the specified calorific value to the regional CAs for approval in line with Article 31(1)(d), however, this is not checked by the central CA.



#### **4.2.3 Installations with low emissions applying a higher tier**

The project team found that just over half of MS (17) had no cases where they had required an installation with low emissions to apply a higher tier (than that submitted in the MP application) in the knowledge that this higher tier could be achieved "without additional effort" on the part of the operator. Eleven MS said that they had rarely/occasionally required such operators to apply a higher tier and two MS said that they had required operators to apply a higher tier on a frequent to very frequent basis.

In the 17 MS that stated no cases, it was not always clear from the MS' response if the lack of cases was due to the fact the CA(s) were not checking for this, or whether the operator was already applying the higher tier.

The observed difference in the frequency with which MS CAs have required an installation with low emissions to apply a higher tier than the minimum tier required indicates a lack of harmonisation across MS in checking this as part of the MP approval.

#### **4.2.4 Issues with joint emissions total of source streams**

As part of the MP review and approval, the majority of MS (24) stated that they did not come across any instances where the MP application had to be rejected or amended linked to the joint emissions total of source streams in a given category (de-minimis or minor) exceeding the permitted total. Seven MS said that they were aware of cases where the MP application had to be amended or rejected and resubmitted linked to this issue. One MS highlighted that they relied on the Commission's monitoring plan template to undertake this check. One MS stated that it has had difficulties in interpreting Article 19 of the MRR in conjunction with the set-up of the Commission's MP template for installations, regarding this requirement. The MS concerned could not provide any further insights into the nature of its difficulties.

#### **4.2.5 Issues with exceeding the low emitter threshold**

The project team found that the majority of MS (17) have not come across instances where an installation with low emissions (as per Article 47 of the MRR) has exceeded the low emitter threshold.

Seven MS said they have had such cases, with four of the seven MS highlighting cases where the operator's low emitter status was retained through the provision of evidence that the threshold had not been exceeded in the past five reporting periods and would not be exceeded again. Four of the seven MS highlighted cases where the low emitter status was revoked, as the operator could not demonstrate past or continuing adherence to the low emitter threshold.

#### 4.2.6 Summary of findings

The provisions outlined in Article 26 of the MRR have led to greater harmonisation across MS in the application of the highest tier requirements for category B and C installations (as outlined in Annex II of the MRR), and the application of at least the minimum tier requirements permitted for category A installations and for source streams that are commercial standard fuels (Annex V).

The review has found that use of the fall-back methodology is very limited across all MS and emissions determination via a tiered approach is the predominant monitoring methodology adopted by operators in their MPs and approved by MS CAs. However, MS should be undertaking more rigorous checks of the fall-back methodologies when applied by operators, despite the low utilisation of the fall-back methodology and, therefore, perhaps the low prioritisation given to checks in such cases.

A small number of MS and operators are currently overcoming issues with meeting the highest tier requirements for natural gas source streams. However, the project team considers that the issues are MS-specific and relate to MS legislation and requirements, rather than to perceived issues with the MRR.

##### 4.2.6.1 Recommendations

###### Recommendation R 13

- The nine MS that were not aware of the statistics regarding the number of operators working to an improvement plan (as per Article 26 of the MRR) should be reminded of the importance to follow up with operators on the implementation of these plans.

###### Recommendation R 14

- As good practice, 17 MS should confirm that they check, during approval of the MP, if installations with low emissions could achieve a higher tier than that submitted in the MP application and permitted by the MRR "without additional effort".

### 4.3 Measurement based methodologies (CEMS)

*Article 40 of the MRR outlines the requirements for operators to adopt the use of a measurement-based monitoring methodology (CEMS) for the monitoring of N<sub>2</sub>O emissions, as per Annex IV, and the option for operators to adopt CEMS for the monitoring of CO<sub>2</sub> emissions. Articles 41 – 46 of the MRR outline CEMS-specific requirements around: applied tiers, measurement standards and laboratories, determining emissions, data aggregation, missing data and corroborating calculations.*

The project team found that the uptake of CEMS across MS is relatively low:

- Eight MS have no operators using CEMS.
- Twenty one MS have at least one but fewer than 10 operators using CEMS.
- One MS has greater than 10 operators using CEMS.

- One MS is unsure of the possible number of operators using CEMS, as the data are retained by regional CAs and not aggregated to the MS level at the time of the interview, although the MS advised the project team that the central CA is undertaking a survey of all regional CAs to capture such data.

Seven of the MS, where CEMS are used by some operators, highlighted that the only application of CEMS in the MS was due to the requirement to measure N<sub>2</sub>O emissions using CEMS. Five other MS provided information indicating that CEMS were adopted by operators required to use CEMS to measure N<sub>2</sub>O emissions *and* by operators choosing to use CEMS to monitor CO<sub>2</sub> emissions, such as for refineries, power plants or waste incineration.

Nine MS reported that the number of operators using CEMS had changed under the requirements of the MRR for Phase 3, while 12 MS said there was no change. However, in supplementing their response, the majority of these 21 MS stated that the change was due to the inclusion of the nitric acid production sector into the EU ETS. Therefore, the disparity in the answers given appears to be the result of the change in the Directive, and not the MRR, that brought nitric acid production into the EU ETS and therefore was the reason behind the increase in the number of operators using CEMS.

The majority of MS stated that they apply the standards for measurement-based methodologies, regarding quality assurance and measurement requirements, as per Article 42 of the MRR (EN 14181 and EN 15259). A non-compliance issue noted in the appropriate fiche is that one MS still applies its own standards for the quality assurance and measurement requirements of CEMS. However, Article 42 of the MRR states that national standards should only be used as a substitute where international EN standards are not available.

The project team found that MS take different approaches regarding retaining evidence to show that all laboratories carrying out measurements or calibrations of CEMS systems are either EN ISO/IEC 17025 accredited or meet the equivalence requirements of a non-accredited laboratory (Article 34). (See Table 5)

**Table 5: Approach taken by MS with regard to retaining evidence on laboratory accreditation**

Approach	Number of MS adopting the approach
Log of EN ISO/IEC 17025 accredited laboratories used by operators using CEMS retained by CA(s)	15
Operator sampling plans retained by CA(s)	7
Evidence that non-accredited laboratories meet the equivalence requirements	5
Log of non-accredited laboratories used by operators using CEMS retained by CA(s)	2
Rely on verifiers to check the accreditation of the laboratory	1

When asked about the MS' experiences in approving MPs where the operator is using CEMS, 11 MS said that they did not have any specific experience to highlight in approving such MPs, because of the small number of operators using CEMS within their respective MS. Of those MS that did highlight some experience in approving MPs incorporating CEMS, common experiences included:

- Eight MS stated that the approval of such MPs was a significant challenge for the CA involved. In most cases, the difficulty arose because the operator could not meet the highest tiers required by the MRR.
- Three MS highlighted that they have accepted the use of lower tiers by operators on the basis of technical infeasibility in applying the highest tiers required by the MRR.
- Three MS employed external experts / consultants to assist in the determination of MPs incorporating CEMS to resolve issues with the MPs as submitted by the operators.

#### 4.3.1 Summary of findings

While the uptake of CEMS across MS is relatively low, there has been an increased use of CEMS mostly due to inclusion of N<sub>2</sub>O in the EU ETS and not the increased use of CEMS for monitoring CO<sub>2</sub> emission sources. Several MS found that the approval of such MPs was a significant challenge. In most cases, the difficulty arose because the operator could not meet the highest tiers required by the MRR.

Based on the responses from MS, the project team can conclude that operators using CEMS for CO<sub>2</sub> monitoring are not able to cost efficiently meet the MRR control standards and do not see CEMS as being more attractive for monitoring CO<sub>2</sub> emissions due to the requirements of the MRR and the associated cost of implementing a system.

##### 4.3.1.1 Recommendations

- There are no general recommendations to raise in relation to this topic, however issues specific to a single MS have been noted in the appropriate fiche.

## 4.4 Biomass

*Articles 38 and 39 of the MRR outline the specific requirements regarding the treatment of biomass under the EU ETS, including situations where an operator may apply a no-tier methodology for determining AD or calculation factors for biomass source streams and the requirements around determining biomass and fossil fractions and the preliminary emission factor for mixed source streams.*

When asked what experience MS had in applying the new definition of biomass (as per Article 3(20)), ten MS stated that they had little or no experience or issues to highlight; often linked to the fact that few operators are using biomass in their MS.

Similarly, seven MS stated that operators are only using solid biomass and as such had no experience to highlight regarding applying the sustainability requirements for bioliquids and biofuels in line with the sustainability criteria outlined in the RES Directive.

Of those MS with some experience to highlight regarding biomass, bioliquid and/or biofuel source streams, two MS stated that they felt that the sustainability criteria in the RES Directive for bioliquids and biofuels were clear, clarified the requirements and would lead to a more harmonised approach across the EU. However, three MS stated the opposite; that the CA(s) or operators have had difficulties understanding the sustainability criteria and that this has led to some difficulties in approving MPs incorporating bioliquids and biofuels. In these cases, it appeared to the project team that the MS’ difficulties were related to the CAs’ unfamiliarity with the sustainability criteria and the new requirements of the MRR. As such, this is an issue that is likely to dissipate over time, as familiarity with the requirements and CA competence levels increase.

Two other MS have developed MS-specific guidance, additional to the Commission’s guidance on biomass (Guidance Document GD3), around how to appropriately evidence that the sustainability criteria are met when using bioliquids and biofuels.

As shown in Table 6, the project team found that MS had mixed experiences regarding:

1. Whether introducing a preliminary EF for biomass source streams has made MPs more transparent for installations using biomass, and/or
2. It led to greater confidence that the emissions associated with the fossil fraction of mixed fuels, with greater than 3% fossil fraction, were being accounted for correctly compared to Phase 2.

**Table 6: MS responses on CA confidence following introduction of a preliminary EF for biomass source streams**

Response	Number of MS providing this response
Yes / Improved CA confidence	8
Yes / Unchanged CA confidence	4
Yes / Less CA confidence	1
No / Unchanged CA confidence	10
No / Less CA confidence	2
N/A	5
Unknown / Unable to say	2

Sixteen MS have approved the use of analytical techniques or standards for determining the biomass fraction of biomass source streams under Phase 3. Most of these MS have approved EN 15440 and the methods permitted in line with the standard - these being the selective dissolution method, the manual sorting method and the <sup>14</sup>C method. Two MS have allowed the use of the standard factors for waste tyres developed by the German Emissions Trading Authority (DEHSt). One MS has permitted

the use of American standard ASTM D6866:2005. Two MS could not provide any further insights into what kind of techniques or methods they have approved.

Several MS raised an issue with operators in the cement sector using waste tyres and a national standard carbon content/emission factor not being available to determine the associated emissions from combusting the tyres in line with a tier 2 approach. As mentioned above, two MS have permitted operators to use factors developed by the DEHSt. Alternatively, the MS concerned could have permitted such operators to use the factor provided in Annex VI of the MRR or to require the operator to (1) either assume the absence, (2) provide an estimation method to the CA for approval, or, (3) use MS factors developed under Phase 2.

In Monitoring and Reporting FAQ 2.3, the Commission has also set out its advice to MS to develop national default values for waste tyres.

When asked if MS competent authorities had encountered instances where an operator had claimed unreasonable cost or technical infeasibility in applying the tier requirements for the determination of the biomass and fossil fractions, 17 MS stated that they have not had encountered such claims by operators. Of the nine MS that indicated they had received such claims, seven stated that the CA requested the operator to submit an estimation technique for approval by the CA. One MS reported that it rejected the claim of the operator because the justification made by the operator was not explained correctly<sup>4</sup>. Two MS also had a case where the solution adopted was to apply the standard emission factor values and biomass fractions published by the Commission.

#### 4.4.1 Summary of findings

The uptake and use of biomass, bioliquid and biofuel source streams varies across MS, with some MS stating little or no experience of operators using biomass and other seeing common usage of biomass by operators in many industry sectors. This is reflected in the polarisation of MS responses, as presented in Table 6, as to whether the introduction of the PEF has made MPs including biomass source streams more transparent to CA staff and whether this had led to greater CA confidence that emissions associated with the fossil fraction of biomass source streams are being accounted for correctly.

Several MS highlighted that although the definition of biomass in the MRR is clearer and should lead to a more harmonised approach across the EU, the CA(s) have had challenges in ensuring that the sustainability criteria enshrined in the RES Directive are being met by operators using bioliquids and/or biofuels and seeking to apply an emission factor of zero.

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<sup>4</sup> Working with the operator, the CA later approved the claim made by the operator on the grounds of unreasonable cost.

#### 4.4.1.1 Recommendations

- No recommendations to raise in relation to this topic, however issues specific to a single MS have been noted in the appropriate fiche.

## 4.5 Uncertainty assessments

*Articles 28 and 29 of the MRR outline the conditions for determining activity data using either measurement systems under the operator's control or outside of the operator's own control. One of the conditions of using either type of measurement system is that the operator must undertake an uncertainty assessment of the measurement system to ensure that the uncertainty threshold of the relevant activity data tier is met.*

*Recital (7) of the MRR states that "To further minimise the burden on operators and aircraft operators, simplification with regard to the uncertainty assessment requirement, without reducing accuracy, should be introduced. Considerably reduced requirements with regard to uncertainty assessment should be applied where measuring instruments are used under type-conform conditions, in particular where measuring instruments are under national legal metrological control."*

The assessment and management of uncertainty is a key monitoring principle underpinning the EU ETS and is vital in ensuring the consistency, comparability, accuracy and robustness of emissions monitoring by EU ETS operators and AOs across all MS.

The MRR has sought to clarify and simplify the undertaking of uncertainty assessments by operators under Phase 3 of the EU ETS. When asked if the simplification of the uncertainty assessment requirements had reduced the burden on the MS CA(s) and operators, the responses from MS were split:

- 14 MS said yes, it had reduced the burden on the CA(s) and/or operators.
- Nine MS said no, it had not reduced the burden on the CA(s) and/or operators.
- Six MS said they were unaware if the simplification has had any material impact on reducing the burden on the CA(s) and/or operators.
- Two MS said that the simplification had reduced burden in some cases and not in others, linked to whether the operator could undertake a simplified uncertainty assessment for measurement systems outside of the operator's control.

Analysis of the responses provided by the nine MS stating that the simplification of the uncertainty assessment requirements had not reduced the burden on the CA indicates that, typically, the perceived burden is either:

1. The CAs' perception of the burden on its operators, linked to the number of queries the CA(s) received, or continues to receive, from operators on how to complete their uncertainty assessment.

2. Related to issues that operators have faced in obtaining evidence from the trade partner regarding the applicable uncertainty of measurement instruments not under the operators control (see below).
3. Linked to the CA's lack of familiarity or lack of technical expertise in being able to effectively and efficiently review and approve the uncertainty assessments with a reasonable level of confidence.

As outlined in point 2 in the above list, operators in a small number of MS have had issues with obtaining evidence of the applicable uncertainty from the trade partner responsible for measurement instruments not under the operator's control and either:

- Not subject to national legal metrological control (Route CT-3 in section 3.1.2 of the Commission's Guidance Document GD4).
- Subject to national legal metrological control requirements that are less stringent than the tier required by the MRR (Route CT-2 in section 3.1.2 of the Commission's Guidance Document GD4).

The project team understands that in such cases the CA should require the operator to take corrective action, such as installing a measurement instrument under the operator's control and undertaking an uncertainty assessment of the measurement instrument in line with Article 28 of the MRR.

The project team found that the majority (24) of MS felt that the Commission's guidance on uncertainty assessments has helped to improve the process of operators completing, and the CA(s) approving, uncertainty assessments. Five MS felt that the guidance was not clear in some areas or was difficult for the CA(s) or operators to understand the intended approach to be taken.

MS CA practices regarding the checking of uncertainty assessments are not harmonised regarding the nature and robustness of the checks undertaken, as well as the resources used to perform the checks. The approaches and resources used include:



**Table 7: Approaches and resources used for checking uncertainty assessments**

Approach	Resources
<ul style="list-style-type: none"> <li>• Risk based approach (i.e. perform checks or more detailed checks on larger emitters)</li> <li>• Follow the Commission’s Guidance on Uncertainty Assessment (GD4)</li> <li>• Other MS body assists CA with checking the UAs</li> <li>• Recalculation/calculation check</li> <li>• Check against the maximum uncertainty thresholds for the tiers applied in the Phase 3 MP or MP application</li> <li>• Sense check (no recalculation)</li> <li>• Submission check</li> <li>• Ad-hoc checks by CA staff (no procedure)</li> <li>• Rely on verifiers to check during verification of the AER</li> </ul>	<ul style="list-style-type: none"> <li>• Commission Guidance Document on Uncertainty Assessment (GD4)</li> <li>• Check against Phase 3 MP or MP application</li> <li>• Check Phase 2 uncertainty assessment</li> <li>• Check against national standards (if measurement devices are under NMC)</li> <li>• UAs of other ‘similar’ installations</li> </ul>

Five MS expressly stated that they do not currently have procedures outlined for the checking of uncertainty assessments. In two of these MS, the CA(s) rely on the verifiers to check the uncertainty assessment as part of the verification of the AER.

The majority of MS (24) felt that the requirements for uncertainty assessments for measurement instruments under "type-conform" conditions (e.g. national metrological control) were clear. Three MS felt that the requirements were not clear and the comments made by these MS indicate that confusion amongst operators arises because they are unaware of the national metering uncertainty thresholds.

When asked if MS CAs had any country-specific issues in approving MPs including instruments under type-conform conditions:

- 18 MS said that they had not encountered any issues.
- 11 MS said that they had encountered issues.
- One MS was not aware if there were any issues.
- Two MS said that the question was not applicable in their MS as the interviewee was not aware of any national meteorological control requirements in their MS.

Of the 11 MS that highlighted issues with instruments under type-conform conditions, five MS had issues because the maximum permissible error in service for natural gas meters under NMC conditions in the MS is too high to allow operators to meet the uncertainty threshold of the highest tier for activity data (tier 4, +/- 1.5%). However, the project team is aware that in such cases the CA should be requiring the operator to obtain a more accurate meter/metering system to meet the tier

or be asking the operator to provide a justification of unreasonable cost of technical infeasibility to the CA, to allow the CA to approve the use of a lower tier as permitted by the MRR.

#### 4.5.1 Summary of findings

Approximately half of MS feel that the simplifications for uncertainty assessments for measurement devices under national legal metrological control, both for measurement systems under the operator's control and not, have reduced the burden on the CA and/or operators.

However, operators in a small number of MS have had issues with obtaining evidence of the applicable uncertainty from the trade partner responsible for measurement instruments not under the operator's control and either:

- Not subject to national legal metrological control
- Subject to national legal metrological control requirements that are less stringent than the tier required by the MRR.

Generally, there appears to be a lack of operator knowledge in how to construct an uncertainty assessment in line with the requirements and permitted simplifications outlined in the MRR. In many cases this has resulted in CAs having to assist operators in developing or improving their uncertainty assessments in line with the MRR requirements, adding to the burden on the CA.

Compounding the issue, there also appears to be at least a lack of CA confidence in approving uncertainty assessments and, at most, a lack of technical competence within the CA to be able to effectively and efficiently review and approve the uncertainty assessments.

##### 4.5.1.1 Recommendations

###### Recommendation R 15

- As good practice, remind MS of the necessity to check the uncertainty assessments as part of the MP approval process.

###### Recommendation R 16

- The five MS that do not currently prescribe a procedure for the checking of uncertainty assessments should develop a procedure to ensure consistency in the CA's reviews and approval of the assessments.

###### Recommendation R 17

- As good practice, MS should consider providing further training and guidance on how to undertake uncertainty assessments to verifiers and CAs (and even operators).

## 4.6 Technical feasibility and unreasonable costs

*Articles 17 and 18 of the MRR outline the requirements for competent authorities to review and determine the validity of the operator's or aircraft operator's claims and justifications concerning*

*technical feasibility and unreasonable costs. Article 17 outlines the requirements for operators to outline a justification to the CA, for approval, as to why applying a specific monitoring methodology in line with MRR requirements is technically not feasible. Article 18, on unreasonable costs, includes the methodology to be applied by the CA in reviewing unreasonable cost claims. The methodology is also enshrined in the Commission’s ‘unreasonable costs determination tool’.*

Most (23) MS reported that the new determination method for unreasonable costs (as outlined in Art. 18) had led to greater consistency in the determination of unreasonable cost claims within their MS. Furthermore, of the seven MS that did not believe it led to greater consistency, three MS said it was because they had not had any unreasonable cost claims thus far under Phase 3 requirements. Two MS felt that the methodology was difficult to understand or led to a greater level of administrative burden on the CA to review and approve such claims in line with the revised methodology. One MS did not express an opinion.

The majority of MS have had experience of using the Commission’s unreasonable cost tool, showing good uptake and utilisation of the tool, and the majority found it to be useful or the question was not applicable. Specifically:

- 16 MS said “yes”, the tool was useful.
- Three MS said “no”, the tool was not useful.
- Nine MS stated the question was not applicable as they had not received such claims or the tool had not been used by the CAs.
- Four MS were unaware as the assessment was undertaken by another body (not participating in the review).

The project team found that MS use a variety of resources to assist the review and approval of claims that applying a specific monitoring methodology is technically not feasible. (See Table 8)

**Table 8 Methods used by MS to assist the review and approval of claims of unreasonable costs**

Answer given	No. of MS
CA technical expert(s)	9
Other technical expert(s)	7
Industry technical expert(s)	6
Reference documents	3
Other resource	6
None / Not applicable	7

Eighteen MS have not approved any claims on technical infeasibility under the requirements of the MRR. Of the 13 MS that have approved claims of technical infeasibility, the justifications cited by the operators and accepted by the CA(s) included:

- That the sampling of flares (e.g. safety flares at refineries) was not safe
- That the environment (temperature, pressure conditions) and corrosive nature of waste gases meant that it was not possible to place measurement devices into the gas flow

- That the uncertainty of the measurement device didn't meet the uncertainty threshold for the required tier and no other measurement device was available
- That accredited laboratories were not available in the MS or the sample was too volatile to transport to an EN ISO/IEC 17025 accredited laboratory so the use of a non-accredited laboratory was permitted
- That the heterogeneous nature of a fuel or input material meant that it was not possible to determine a representative sample.

#### 4.6.1 Summary of Findings

The majority of MS felt that the new determination method for the determination of unreasonable cost claims by operators was clear and had led to greater consistency in the approval of such claims in their MS. Around half of MS have used the Commission's unreasonable cost tool and have found the tool to be useful.

The project team found that MS employ different methods and resources in the checking of claims of technical infeasibility, with no single resource cited by the majority of MS. The project team were encouraged to see that CAs typically take a considered approach in reviewing technical infeasibility claims, seeking inputs from either external experts or referring to other technical resources (e.g. reference documents) where the complexity of the case exceeds the expertise of CA staff.

##### 4.6.1.1 Recommendations

- There are no recommendations to raise in relation to this topic.

##### 4.6.1.2 Good practices

- In eight MS, the CA utilises external resources in the checking of complex claims regarding the technical infeasibility of implementing a specific monitoring methodology required by the MRR, improving the validity of all such claims approved or rejected by the CAs.

## 4.7 Sampling plans

*Article 33 of the MRR outlines the requirements for operators, who are required or choose to determine calculation factors by analyses, to develop and submit a sampling plan to the CA for approval. The sampling plan must be in the form of a written procedure and contain information on the methodology used for the preparation of samples – including information on responsibilities, locations, frequencies and quantities – as well as the methodology for the storage and transport of samples.*

*The MRR also outlines the requirements for representative sampling and for the sampling plan to be adapted, and resubmitted to the CA for approval, where analytical results indicate that the heterogeneity of the fuel or material significantly differs from the information on heterogeneity in the existing sampling plan for that fuel or material.*

Twenty seven MS confirmed that, where required, sampling plans had been submitted by operators to the CA for approval. Four of the 27 MS highlighted that there were a small number of exceptions to this, where the CA(s) was<sup>5</sup> working with the operator to complete a sampling plan or to bring the submitted sampling plan in line with the requirements of the MRR.

Two MS highlighted that the CA(s) had not received sampling plans from operators or were unaware if these had been received.

Two MS were unable to comment as the CAs had not had time to review if all sampling plans had been received at the time of the interview by the project team.

Table 9 shows the approaches MS have adopted for assessing the content and quality of sampling plans.

**Table 9: Approaches used by MS to assess the content and quality of sampling plans**

Assessment approach	No. of MS
Assessment is based on the Commission’s guidance document No. 5	11
CA established own process	8
Other	7
No assessment takes place	1

Of the eight MS that assess sampling plans using a CA established process, the majority indicated that they referred to or based their process on the guidance and exemplars provided by the Commission; showing broad MS usage of the guidance.

Of the five MS adopting an ‘Other’ approach, two MS said that the CA(s) undertook a high level check in providing approval of the sampling plan but that the CA(s) relied on verifiers to check the sampling plan in detail and to check it is effective in practice and to suggest improvements, as required, in the verification report (VR). One MS highlighted that certain sector associations had been active in prescribing a standard and guidance for operators in the sector to follow to facilitate acceptance by the CA.

When asked if MS provided guidance to their operators on how to complete sampling plans, additional to the Commission’s guidance, 16 MS stated that they did not. Six MS did provide additional guidance to operators, in the following forms:

<sup>5</sup> At the time of the interview taking place

- Workshop/training for operators
- Guidance within the electronic reporting system
- Example sampling plans developed by the CA(s)
- Additional guidance document.

When asked why the MS CA(s) had produced additional guidance: two MS said they provided the guidance to clarify certain aspects of the Commission's guidance that weren't clear to their operators; one MS said it developed the guidance to aid operator understanding and reduce the number of potential queries around the completion of sampling plans; one MS developed the guidance within its electronic reporting system as part of a standard practice; and one MS developed its guidance as the CA was not clear on whether the Commission's guidance would be available in suitable time.

#### **4.7.1 Summary of findings**

The majority of MS have confirmed receipt and approval of sampling plans either from all, or the significant majority, of operators. At the time of conducting the interviews with MS, a small number of MS remained unaware whether sampling plans had been received and so appeared to be unaware of the requirement to approve sampling plans.

There has been broad uptake and usage of the Commission's Guidance Document GD5 on sampling and analysis. A small number of MS have produced additional MS-specific guidance to operators regarding sampling and analysis, for various reasons as outlined above.

##### **4.7.1.1 Recommendations**

###### **Recommendation R 18**

- For MS with multiple CAs and where the MP approval lies with another/regional CA(s), the central CA should be advised that the local CAs have received all sampling plans.

##### **4.7.1.2 Good practices**

- Two MS CAs undertake a high level check/approval of operators' sampling plans but rely on the role of the verifier for in-depth checking to reduce administrative burden on CA staff.
- Involving sector associations: One MS highlighted that certain sector associations had been active in prescribing a standard and guidance for operators in the sector to follow to facilitate the acceptance of sampling plans by the CA.
- Six MS provided additional guidance to operators on how to complete sampling plans.

## 4.8 Frequency of analyses

*Article 35 and Annex VII of the MRR outline the minimum frequencies of analyses where the calculation factors for relevant fuels and/or materials are to be determined by analysis. Article 35(2) outlines conditions where the CA may allow a different frequency of analysis, than those presented in Annex VII. These being cases where the operator can demonstrate unreasonable cost in applying the minimum frequency of analysis outlined in Annex VII, or, where the variation in the analytical values for the fuel or material, in the previous reporting period, does not exceed 1/3 of the AD tier uncertainty value. The latter is commonly referred to as the "1/3 rule", and is outlined in further detail in the Commission's Guidance on Sampling and Analysis (Guidance Document No. 5).*

When asked if Article 35 of the MRR and guidance document no. 5 had clarified the requirements around the minimum frequencies of analyses, 23 MS said that they had clarified the intended approach.

One MS stated it was unclear why the derogations from applying the minimum frequencies outlined in Annex VII are permitted, as the derogations permit a revised 'minimum' frequency.

Article 35 of the MRR outlines the minimum frequency of analyses an operator should apply for different fuels/materials. The CA may permit a lower frequency of analysis if the operator can evidence that meeting the required frequency of analysis in Annex VII would incur either unreasonable cost, is technically infeasible or, based on data from the previous reporting period, any variation in the analytical values for the fuel/material does not exceed 1/3 of the AD uncertainty value to which the operator has to adhere.

Contrary to the requirements of Annex VII of the MRR, one MS highlighted that although many of its operators were meeting the required time frequency, as outlined in Annex VII, they failed to meet the required tonnage frequency, leading to confusion amongst operators in this MS. The tonnage and time frequency specifications are linked by the word "and" and so this MS should be advising its operators accordingly that both frequencies must be met.

Four MS said that the MRR and guidance document no. 5 had not changed the CA(s)' understanding and the intended approach was always clear to them.

Eighteen MS have not had any experience in using the Dutch Emission Authority's frequency of analysis tool, published by the Commission, as applications to apply a lower frequency of analyses were not received from operators. Of the 12 MS that indicated experience of reviewing and approving claims under the "1/3 rule":

- All 12 MS highlighted that they had only received a small number of cases (less than five).
- Two MS translated the requirements into their national languages.
- Two MS said that they do not use the tool but follow the methodology used in the Commission's guidance.

- One MS highlighted that such claims were received primarily from installations that are part of the national natural gas network.

Table 10 shows the CA(s) approved analysis basis and frequencies different to those in Annex VII.

**Table 10: Basis for MS to approve different frequency of analyses**

Basis for approving different frequency of analyses	No. of MS
No	13
Yes - 1/3 rule	8
Yes - Unreasonable cost	7
Yes - Other	9

Of the nine MS responses categorised as ‘Yes – Other’, two MS said that they had approved higher frequencies than those outlined in Annex VII of the MRR linked to a request to use an internal / non-accredited laboratory for analysis and one MS has accepted a claim based on technical infeasibility. Two MS reported cases in which the relevant source streams were used too infrequently (once per year, 4 times per year) to meet the minimum frequency. One MS raised a case where deliveries of heavy oil by ship were too infrequent to meet the minimum frequency, where the heavy oil could only be sampled at the point of delivery. However, it is unclear to the project team why the CA did not approval a lower frequency of analysis, based on technical infeasibility, if the heavy oil could only be sampled at the point of delivery.

The project team found that the majority of MS (20) are not aware of the extent to which the revised requirements have led to a change in the frequency of analyses by operators. Table 11 shows the patterns noted by MS that were aware of a change in the frequencies of analyses implemented by operators.

**Table 11: Patterns noted by MS aware of a change in the frequencies of analyses**

Item	No. of MS responding and highlighting the same pattern			
	Extent of the impact (no. of installation affected)	Infrequent (<5% of installations)	7	Moderate frequency (5% - 20% of installations)
Nature of the change in analysis frequency	Increase	6	Decrease	3

#### 4.8.1 Summary of findings

The majority of MS stated that the frequency of analyses requirements outlined in Article 35 and Annex VII of the MRR were clear and have clarified the requirements. As highlighted in this section, there are a small number of MS that have raised issues interpreting the requirements of the MRR around the minimum frequency of analyses. Detailed analysis of these MS responses/issues by the



project team, alongside the MRR and all available Commission guidance, do not point to any failing or inconsistency in the MRR or any Commission guidance document.

#### 4.8.1.1 Recommendations

- There are no recommendations to raise in relation to this topic.

## 4.9 Laboratories

*Article 34 of the MRR sets out the requirements for the use of laboratories in the determination of calculation factors under the EU ETS. The article states that, excepting the derogation permitted under Article 34(2), laboratories used by operators should be EN ISO/IEC 17025 accredited. An operator may use a non-accredited lab, under the provisions of Article 34(2), if it can prove to the satisfaction of the competent authority that using an accredited laboratory is technically not feasible or would incur unreasonable costs, and can demonstrate the non-accredited laboratory meets requirements equivalent to EN ISO/IEC 17025. In claiming the equivalence of a non-accredited laboratory, an operator must provide the evidence outlined in Article 34(3) to the competent authority.*

When asked if the clarifications made in Article 34 assisted the CA in determining the compliance of operators determining calculation factors via analysis:

- 24 MS said that the MRR had clarified the requirements for the CA(s)
- Two MS said that the MRR had not clarified the requirements for the CA(s) (an explanation of the MS reasons is provided below)
- Four MS were not able to comment or the question was considered not applicable.

Of the MS that stated that the MRR had not clarified the requirements for the CA, one MS explained that they felt the MRG was clearer on the requirements around the annual control of non-accredited laboratories. The other MS did not provide further explanation as to why it felt the MRR had not clarified the requirements for the CA.

MS were divided on whether the equivalence of a non-accredited laboratory could be shown more easily based on these clarifications under Phase 3, with eight MS saying “yes” and eight MS saying “no”. A further seven MS said they were unable to comment, having not received such applications for equivalence from non-accredited laboratories.

Regarding whether the requirements had increased the number of applications for equivalence under Phase 3, six MS stated the number of applications either remained constant (no change) or decreased. Only one MS said that the number of applications had increased under Phase 3, but this was most likely linked to an overall increase in the number of installations under the EU ETS rather than the changes in the MRR.

One MS has set-up its own certification system, with its National Accreditation Body (NAB), for non-accredited laboratories undertaking analyses for EU ETS operators, which goes beyond the requirements of the MRR and AVR.

#### 4.9.1 Summary of findings

In almost all cases where the MS have operators determining calculation factors via analysis, the CAs feel that Article 34 of the MRR has clarified the requirements for operators to use laboratories accredited to EN ISO/IEC 17025 for the relevant analytical method(s) in determining the calculation factor(s).

However, there was a split in MS opinion on whether laboratories not accredited to EN ISO/IEC 17025 could more easily be shown to be equivalent. This is perhaps not surprising as the equivalence have purposely been set to be as equally robust as those for EN ISO/IEC 17025 accredited laboratories to ensure the integrity of emissions determinations using calculation factors derived by sampling and analysis of the source stream.

MS noted either stagnation or reduction in the number of applications received from operators concerning non-accredited laboratories wishing to be approved as equivalent to EN ISO/IEC 17025 accredited laboratories.

##### 4.9.1.1 Recommendations

- No recommendations to raise in relation to this topic.

##### 4.9.1.2 Good practices

- One MS has set-up its own certification system, with its NAB, for non-accredited laboratories undertaking analyses for EU ETS operators, which goes beyond the requirements of the MRR and AVR and reduces the administrative burden on the CA by not requiring it to review equivalence claims.

## 4.10 Inherent and transferred CO<sub>2</sub>

*Articles 48 and 49 of the MRR set out the requirements around inherent and transferred CO<sub>2</sub> under the EU ETS. Article 48 sets out the requirements for the emission factor of fuels containing inherent CO<sub>2</sub> to take account of the inherent CO<sub>2</sub>. It also outlines the situations where an EU ETS operator may subtract the emissions when a fuel or material containing inherent CO<sub>2</sub> is transferred out of the*

*installation and the monitoring requirements for the transfer. Article 49 sets out the permitted recipients as well as the monitoring and reporting requirements for transfers of CO<sub>2</sub>.*

Twelve MS referred to specific experiences with the determination of emission factors for a fuels containing inherent CO<sub>2</sub>. Of the 12, four MS highlighted that the only instances of a transfer of inherent CO<sub>2</sub> in the MS was the transfer of waste gases from integrated steel works. Six of the MS confirmed that the CA(s) only permits the subtraction of inherent CO<sub>2</sub>, by the installation where it originates, if the inherent CO<sub>2</sub> is transferred to another EU ETS installation (ETS to ETS). Five other MS indicated they would take this approach if the situation arose in the future under Phase 3. No MS confirmed that they permit the transfer of inherent CO<sub>2</sub> from an ETS installation to a non-ETS installation.

Twenty two MS stated that they have not come across any cases where an operator has subtracted emissions, as a transfer of pure CO<sub>2</sub>, transferred to those installations/networks/sites permitted under Art. 49.

One MS highlighted a case where, because the transferred pure CO<sub>2</sub> was being used as a technical gas by a non-ETS operator, the CA could not approve the subtraction of emissions by the installation where the inherent CO<sub>2</sub> originated. The CA highlighted that, in this case, there was no incentive for the installation to transfer the inherent CO<sub>2</sub> and that this perversely led to the emissions being released rather than being used in a subsequent process. Article 49 of the MRR restricts the transfers of CO<sub>2</sub> to ETS CCS activities as the only permanent storage of CO<sub>2</sub> to avoid loss of emissions from the ETS. In another MS, it was highlighted that operators and verifiers were confused about the proper way of how the inherent and transferred CO<sub>2</sub> (particularly in case of waste gases) should be monitored and reported, and how it should be reflected in the Commission MP and AER templates, especially in cases when no CEMS have been used. The MS concerned are free to suggest innovative technologies and uses of CO<sub>2</sub> in chapter 5 of the Article 21 questionnaire (Q5.10).

#### **4.10.1 Summary of findings**

Around a third of MS (12) cited experiences of operators transferring inherent CO<sub>2</sub>. None of these MS highlighted any particular issues faced by the CA or operators regarding the determination of emission factors including inherent CO<sub>2</sub> or emissions accounting when transferring inherent CO<sub>2</sub>. As such, the project team infers that the requirements of Article 48 of the MRR are clear to MS CAs. Only one MS reported issues in regards to how these emissions should be monitored and reported in the Commission's templates for MP and AER, seeking further input from other MS through the Task Force on Monitoring and Reporting.

Readers should note that issues regarding the determination of the quantity of inherent CO<sub>2</sub> transferred from one installation to another were recently raised at a meeting of the Task Force on Monitoring and Reporting, where one MS has a case where the emissions measurement (based on a measurement-based methodology, CEMS) by the transferring and receiving installations do not tally.

The project team understands that the MS concerned is seeking Task Force input on the application of conservative adjustments (in line with Art. 48(3), sub-paragraph 3) as the deviation between the values cannot be explained by the uncertainties of the measurement systems.

The majority of MS (23) have not come across cases involving the transfer of pure CO<sub>2</sub> to the installations, networks and sites outlined in Article 49 of the MRR. This is not surprising given the infancy of technology around the long term geological storage of CO<sub>2</sub> (carbon capture and storage, CCS) in the EU and globally.

#### 4.10.1.1 Recommendations

- There are no recommendations to raise in relation to this topic.

### 4.11 Data gaps

*Article 23 of the MRR outlines the requirements for an operator to notify the competent authority where, for technical reasons, it is temporarily not feasible to apply the tier in the monitoring plan for the activity data or a calculation factor of a source stream as approved by the competent authority. The article outlines the information the operator shall provide to the competent authority.*

*Article 65 of the MRR outlines the requirements for an operator, where data relevant for the determination of the emissions of an installation are missing, to apply an appropriate estimation method for determining conservative surrogate data. The article also requires that the estimation method adopted by the operator shall be outlined in a written procedure.*

When asked if the provisions of Articles 23 and 65 had clarified the intended approaches to the treatment of temporary changes to the MP and data gaps by competent authorities, 18 MS said that they had clarified the intended approaches and two MS said that they had not.

The two MS that felt the provisions in the MRR did not clarify the intended approaches regarding temporary deviations and data gaps highlighted a lack of MS understanding on how the articles were linked. Both highlighted that the topic was currently being discussed by the Task Force on Monitoring and Reporting and that the 'data gaps' paper developed by the German Emissions Trading Authority (DEHSt) on behalf of the Task Force was being reviewed to check alignment with the MRR. The UK has subsequently developed and presented its own paper to the Task Force on Monitoring and Reporting to express its views on the distinction between Article 23 on temporary changes to the monitoring methodology and Article 65 on the treatment of data gaps.

One MS indicated in its response, that operators are obliged to notify the CA without undue delay regarding temporary changes to the MP and to update the CA every 15 days until the tier conditions in the approved MP are restored. The project team is aware that other MS use the anticipated point

in time when the tier conditions in the approved MP will be restored as a basis for allowing less frequent updates from the operator to the CA on progress.

#### 4.11.1 Summary of findings

The majority of MS (18/20) that provided an answer on whether Articles 23 and 65 had clarified the intended approaches to the CA treatment of temporary changes to the MP (Art. 23) and data gaps (Art. 65), feel that the provisions have clarified the intended approach to be taken by operators and MS CAs.

Readers should note that the two papers put together by DE and the UK on behalf of the Task Force on Monitoring and Reporting are still under review and consideration by the active Task Force members.

##### 4.11.1.1 Recommendations

###### Recommendation R 19

- The two MS that stated that the MRR has not clarified the intended approach to the treatment of temporary changes to the monitoring methodology and treatment of data gaps should continue to engage with the Task Force on Monitoring and Reporting and discuss the two papers put forward by DE and the UK to see if these discussions and papers help to clarify the MRR requirements for the CAs.

## 4.12 Aviation

*Chapter IV of the MRR (Articles 50 – 56) sets out the requirements for the monitoring of emissions and tonne-kilometre data from aviation. Decision No 377/2013/EU of the European Parliament and of the Council brought in a temporary derogation from the EU ETS Directive. For the period 2013-2016, only emissions from flights within the EEA fall under the EU ETS.*

MS take a common approach to the identification of, and initial contact with, aircraft operators (AOs) assigned to the MS. Following publication of the Commission's list, MS review the new list against the previous list and identify new AOs assigned to the MS. Ten MS highlighted in their response that they make contact with Eurocontrol or the Commission to obtain contact details for new AOs.

Eighteen MS said that the simplification of the fuel density measurement requirements, as outlined in Art. 52(6) of the MRR, had reduced the burden on the CA(s) or AOs. Four MS said "no". For three of the four MS, this was because the CA(s) had not noticed any change in the monitoring approach for the relatively small number of AOs assigned to the MS. One MS expressed the view that removing the option to determine fuel density from the temperature density tables, provided previously in the MRG, had not led to simplification per se, as a useful reference source was no longer

available. However, the MS did state that AOs assigned to the MS had not adopted this approach under Phase 2 so did not present an issue for AOs.

The majority of MS (24) said that the requirements for identifying sources of uncertainty and determining fuel uplift (MRR Article 55) were clear for both the CA(s) and AOs. Of the four MS that said “no”: one MS explained that the CA received a lot of queries from AOs on the uncertainty requirements and, therefore, believes the requirements are not clear to AOs in the MS; and one MS stated that the inclusion of de-minimis source streams means that AOs using supplier data for all fuel uplifts still need to use on-board measurement systems and therefore uncertainty information is still required.

The project team found that all MS (27) that administer ‘small emitter’ aircraft operators, as per the definition enshrined in Article 54 of the MRR, allow the use of simplified monitoring requirements and the use Eurocontrol’s small emitter’s tool to estimate their fuel consumption. Two MS highlighted that although they permit the use of simplified monitoring requirements, the aircraft operator must complete the same form within the electronic reporting system though with less detail. Four MS stated that they do not administer any small emitter aircraft operators.

Twenty three MS have access to and use Eurocontrol Support Facility data in the checking of AERs submitted by AOs assigned to the MS. Seven MS do not have access to the Eurocontrol Support Facility but do receive data from Eurocontrol on an annual basis that is used in the checking of AERs by the CA(s). One MS indicated that the question was not applicable as no AOs are assigned to the MS.

The project team found that MS took a range of approaches in advising AOs if they should submit an AER for 2013, and if so, what that AER should contain with regards to full-scope (intra and extra-EU flights) emissions or intra-EU emissions. The adopted approaches included, in order from the most common approach to least common approach:

- The CA(s) advised AOs to submit their 2013 and 2014 AERs by 31 March 2015 in line with EU regulation 421/2014.
- The CA(s) offered AOs a choice of submitting the 2013 AER by the MS implemented deadline in 2014 or to delay the submission until 2015.
- The CA(s) advised AOs to submit the 2013 AER by the MS implemented deadline in 2014. The CA permitted operators to submit a 2013 AER for full-scope 2013 emissions (intra and extra-EU flights) or just intra-EU 2013 emissions (intra-EU flights only).
- The CA(s) advised AOs to submit a full-scope 2013 AER by the MS implemented deadline in 2014.
- The CA(s) advised AOs not to submit the 2013 AER.

One MS required AOs to submit a full-scope and a separate intra-EU 2013 AER to the CA by the MS implemented deadline in 2014.

All MS confirmed that they had not reviewed or approved any monitoring plans including the use of biofuels by an aircraft operator. Two MS highlighted that they were aware of some AOs were currently considering using biofuels and that this may be a future consideration for the CA(s).

#### **4.12.1 Summary of findings**

MS are taking a common approach and utilising all necessary resources available to them in the identification and subsequent communication with new operators assigned to the MS in the Commission's aircraft operator list. However, the identification of new AOs can prove to be difficult for the CA due to the incompleteness of the data on the Commission's aircraft operator list compiled by Eurocontrol; with changes (compared to the previous version) not highlighted and ICAO identifiers often being the only information provided, leading to difficulties in identification of the operator of that aircraft.

Establishing initial communication with new AOs assigned to the MS has also proven difficult for a large number of MS CAs, as the CA(s) have often struggled to make contact with non-commercial AOs and smaller commercial AOs. In such instances, around one third of MS stated that they would approach Eurocontrol or the Commission to seek assistance with contact details for AOs. However, there may also be instances where Eurocontrol or the Commission cannot assist the MS CA with the provision of contact details for non-commercial AOs, due to data privacy restrictions.

In general the majority of MS stated that the simplifications in the MRR for the determination of fuel density measurements and identifying sources of uncertainty regarding fuel uplift had reduced the burden on the CA and AOs.

Seven MS do not have access to the Eurocontrol Support Facility but receive annual data form Eurocontrol to assist with the determination of AERs by the CA(s).

Most MS highlighted that the uncertainty around the timing and nature of the derogation decision for aviation (EU regulation 421/2014, of 16 April 2014) had led to increased administration for the CA(s), such as in dealing with an increase in queries from AOs seeking to understand if they should report for the 2013 reporting period, and if so, what flights they should report. However, readers should note that participants at the Compliance Forum 5th EU ETS Compliance Conference welcomed the derogation in so far that it has provided a period of stability for the aviation sector under the EU ETS and therefore stability for the CAs also.

#### **4.12.1.1 Recommendations**

##### **Recommendation R 20**

- Recommendation to the Commission: The aircraft operator list should be updated more regularly and be made available to MS CAs for review more frequently to avoid AOs being 'unregulated' for a prolonged period of time.

**Recommendation R 21**

- Recommendation to the Commission: Whenever changes are made to the aircraft operator list, these should be clearly highlighted as changes in updated versions of the Commission list and notified to MS as soon as possible.

**Recommendation R 22**

- As good practice for all MS, where errors are found in the published aircraft operator list, MS should inform Eurocontrol of required changes as soon as possible.



## 5 Reporting

This section addresses reporting requirements, including electronic reporting. The subsections within this section are arranged in the following order of topics:

- 5.1 Consistency with other reporting schemes
- 5.2 Format and submission of annual emission reports and verification reports
- 5.3 Review of annual emission reports and verification reports
- 5.4 Submission of improvement reports
- 5.5 Electronic reporting

### 5.1 Consistency with other reporting schemes

*Article 73 of the MRR requires that, where applicable, for each activity listed in Annex I of the EU ETS Directive carried out by an (aircraft) operator, the respective labels of other reporting schemes shall be provided as well.*

20 MS confirmed that their report templates require the relevant codes in order to comply with the requirement and operators, in principle, provide this information. Another eleven CAs are not compliant, as some of the relevant codes, for example NACE, CRF and EPRTTR, are not provided – as either the template does not provide a place for this information to be entered, CAs do not require this information, operators have problems with providing this information or from the template, including the Commission template, it does not become sufficiently clear that it is mandatory to provide this information. The review of cases confirmed this picture.

The central CA of one MS highlighted that they provided information to operators how to state the NACE code as it experienced that operators often provided wrong codes in the past.

#### 5.1.1 Summary of findings

The project team found that in 11 MS relevant reporting codes as required per Article 73 of the MRR are not provided by operators or national templates do not require this information which is a clear issue the MS should address. CAs should provide detailed instructions to their operators to enable them to provide the correct codes while keeping the additional burden as small as possible.

It is important to also note that emissions in the EU ETS are monitored and reported per source stream and fuel input, but cannot always be linked to one specific Common Reporting Format (CRF) category and may serve as input for more than one CRF category. Even for those MS where the reporting of EU ETS data is in line with other systems, such as the CRF, the data cannot be used effectively for reporting national inventories to the UNFCCC due to the specificities in the methodology prescribed by the UNFCCC. Therefore, with any future revision of the reporting

requirements of the MRR it should be reconsidered whether the requirement to report consistently with the CRF brings the desired benefit or whether amendments would/could be implemented cost-efficiently that enable MS to use the retrieved data for reporting their inventory to the UNFCCC.

#### 5.1.1.1 Recommendations

##### Recommendation R 23

- 11 MS need to be reminded of the requirement to ensure consistency of EU ETS reporting with other reporting schemes and should either amend their templates and forms accordingly, or prompt their operators to provide this information, where applicable.

##### Recommendation R 24

- In the four MS where online forms or electronic templates are being used that do not require the relevant reporting codes, MSs should consider implementing an automated provision of the relevant codes based on the information entered by operators on the relevant Annex I activities.

#### 5.1.1.2 Good practices

- The central CA of one MS provided information to operators on how to state the NACE code to operators to minimise errors.

## 5.2 Format and submission of annual emission reports and verification reports

### 5.2.1 Format and content of annual emission reports

*Article 74 of the MRR defines the Commission template as the minimum requirement for any MS-specific file format for annual emission reports and verification reports.*

Over half of the MS (19) use translated versions of the template provided by the Commission, of which two MS made changes; one to facilitate plausibility checks, the other by eliminating some descriptive fields to be filled where information is already captured in the database through earlier submissions as well as supplying a tool which enters certain data from the MP into the AER file. One MS provides a separate Microsoft Word document for installations of low emissions. 11 MS provide an AER form in their electronic reporting system. Another MS developed MS-specific templates in standard Microsoft Office software. Only one MS did not specify any template for its operators for this year but intends to do so for the coming years based on a simplified version of the Commission template, since all its operators are installations of low emissions. Based on the case assessments, the project team found that the majority of AER forms that are different from the Commission template fulfil the minimum requirements of the MRR. This is with the exception of the aspect of consistency of reporting schemes as discussed in section 5.1. The AER forms reviewed contained at

least the same information as the Commission template, with the exception of two MS. In one MS it was not possible from the case assessment documentation to ascertain where each requirement was covered. In the other MS, the simplified AER template provided by the CA does not include a reference to and version number of the relevant approved MP. Lastly, one MS did not provide the necessary material to perform a case assessment.

22 CA do not provide guidance on completing the AER templates beyond the Commission's guidance. Another four MS added guidance in the template itself. Three MS provide additional guidance in separate documents. Another three MS provide guidance in some other form.

15 MS consider the content of the AER templates to be sufficient, e.g. for fulfilling their reporting obligations under Article 21 of the EU ETS Directive. 11 MS elaborated on further details that they see are needed in the AER for their purposes. Most concerns relate to information required by the reporting requirements under Article 21, which are either not provided in the AER or provided in a way that is not compatible with the Article 21 template. While the information provided in the AERs largely satisfies the minimum requirements (with the exceptions described in section 5.1 above), data gaps between what is provided in the AER and what is required to be reported under Article 21 occurred because of (not an exhaustive list):

- CRF categories are not always available since combustion emissions and process emissions are not reported separately. Therefore the AER form should require CRF codes by emission source instead of by Annex I activity.
- In the case of biomass with fossil fraction, operators only submit one NCV for the whole source stream; however, in most cases the NCV of the biomass fraction is different from the NCV of the fossil fraction.
- Data gaps occurred because operators failed to fill in proxy values, which are not always required by the template, creating loopholes in energy consumption data. As such, the use of the mass balance approach (where typically the carbon content is reported), or where emission factors are being reported in t/t or t/Nm<sup>3</sup>, data gaps remain.
- Relevant waste codes are not reported in the AER.
- Often the relevant information is provided in the AER but difficult to aggregate due to lack of an IT system.

Another five MS did not have an opinion yet as they were in the middle of preparing their report in accordance with Article 21 at the time of the interview.

In 26 MS, the evaluated AERs were comparably filled in regards to completeness, level of detail and consistency. In the case assessment for five MS, the following issues have been identified with AER content:

- CRF/EPTR codes are not mandatory fields in the MP/AER. Some operators provide production broken down by NACE codes - but not mandatory and only in a few cases. Verifiers hold the data on CRF/EPTR codes - CA can request it from verifiers.
- AER Commission template has been used, but in some assessed cases some sections are not filled in.
- CRF and EPTR codes were not completed.

- Reference to most current MP version number missing.
- IPCC, NACE code and CRF not collected.

Verifiers at 23 of the verifier interviews stated the opinion that the AER template, as provided by the respective MS, generally contains sufficient information for the verification process.

### 5.2.2 Submission of annual emission reports

*Article 67 of the MRR defines that AER need to be submitted no earlier than 28 February and no later than 31 March each year.*

The majority of MS (22) set the deadline for submissions of verified AER to 31 March. Another 9 MS set a different date in line with the MRR. The different due dates are listed in Table 12:

**Table 12 Submission dates for verified AER**

Submission date	No. of MS
28 February	2
1 March	2
7 March	1
2 <sup>nd</sup> Thursday of March	1
14 March	1
15 March	2
21 March	1
31 March	22

A reason for choosing an earlier date than 31 March each year is usually to allow CAs to have more time to review AERs and VRs. This is of particular importance where the CA is in charge of entering the verified emissions figure into the registry. Two more MS are considering establishing an earlier deadline for the coming years to allow the CAs more time for review.

The vast majority of MS (27) confirmed that all of the submitted AERs were verified by appropriately accredited verifiers. Only two MS confirmed having had a case where the submitted AER was not verified and a conservative estimation of emissions had to be undertaken by the CA. In one case the operator refused to get its AER verified and in the other case the CA detected that a verifier performed two verifications for scopes it was not accredited for. Two MS were not able to confirm as their reviews were not completed yet at the time of the interviews.

### 5.2.3 Summary of findings

The analysis of the provided information shows that there is a broad uptake and utilisation of the Commissions AER template and guidance. MS that developed their own templates usually did so in the context of their national electronic reporting systems. With two exceptions it was found that those templates are in line with the MRR. Some templates, other than forms in electronic reporting systems, have in some instances been unprotected against changes causing some operators to report wrong information that was difficult to detect during the review.

While there are some difference across MS, all due dates for AERs are chosen in line with the MRR. In general, all AERs are found to be verified by an accredited verifier. There have been only very few exceptions. In these cases the CAs acted in accordance to the MRR.

#### 5.2.3.1 Recommendations

##### Recommendation R 25

- MS need to be reminded of the minimum requirements of AER templates and make relevant amendments to ensure consistency with other reporting schemes and to make reference to previous MP version numbers.

##### Recommendation R 26

- MS need to be reminded of the importance of accepting only completed AER.

## 5.3 Review of annual emission reports and verification reports

*While the MRR does not lay out distinct requirements for the review of AERs and VRs by the responsible CA, it is clear that a review of at least a representative share of reports needs to take place for the CA to be able to monitor verifiers' performance and to ensure that operators monitor and report emissions, and verifiers verify reported emissions in accordance to the MRR and AVR. The review of the two documents should typically be one single process, as it requires the cross-checking of information provided in both reports.*

### 5.3.1 Review approach

Ten CA reported that they have not defined any formal procedures for reviewing AERs and VR. The majority of interviewed CAs (19) have defined their own procedures and one CA developed its procedures along the lines of the Commission guidance *Combined M&R and A&V guidance on reviewing AER and VRs* and manifested these procedures in its national regulation for verification.

The majority of CAs (with the exception of two CAs) that have defined their own processes are typically CAs that use an online tool for reporting purposes or elaborate databases which prescribe the review process steps. Another five CAs undertake reviews based on internal checklists. The processes of at least two CAs are subject to continuous improvements. Three CAs are in the process of defining their review procedures.

With the exception of two CAs, all CAs were able to confirm that all submitted AERs and VRs get checked for completeness. In one of the exceptional cases, the review process had not started yet at the time the interview was being held. In the other case, the CA was able to confirm it checks all AERs completeness but only 10% of all VRs. In the most cases where an electronic reporting tool is being used, completion is typically checked by the system before operators and/or verifiers can make submissions.

In terms of checking consistency of AERs and VRs the picture looks different to the completeness check discussed above. There remains room for developing consistent and harmonised approaches across MS. As illustrated in Figure 2, the majority of interviewed CAs (23) also perform consistency checks on submissions received. However, there are at least six CAs that perform checks on less than half of the submissions or no review at all. Other CAs struck a balance between applying a thorough check and checking as many submissions as possible. One CA has chosen for the first year of Phase 3 to perform a basic consistency check on all submissions, not comparing it to other information such as the MP. Another three CAs perform a detailed consistency check of selected AERs, including checks against additional sources of data.

Seven CAs, typically those that make use of an online reporting tool, have checklists in place, which are internalised in their tools. Twelve CAs use templates and/or checklists, usually in Microsoft Word format, to perform their reviews, some of them do so in addition to the protocol provided by the IT system. Only one CA confirmed the use of the Commission guidelines. Nine CAs reported that they either do not use any checklist or template for their reviews or do not yet have such checklists or templates in place.

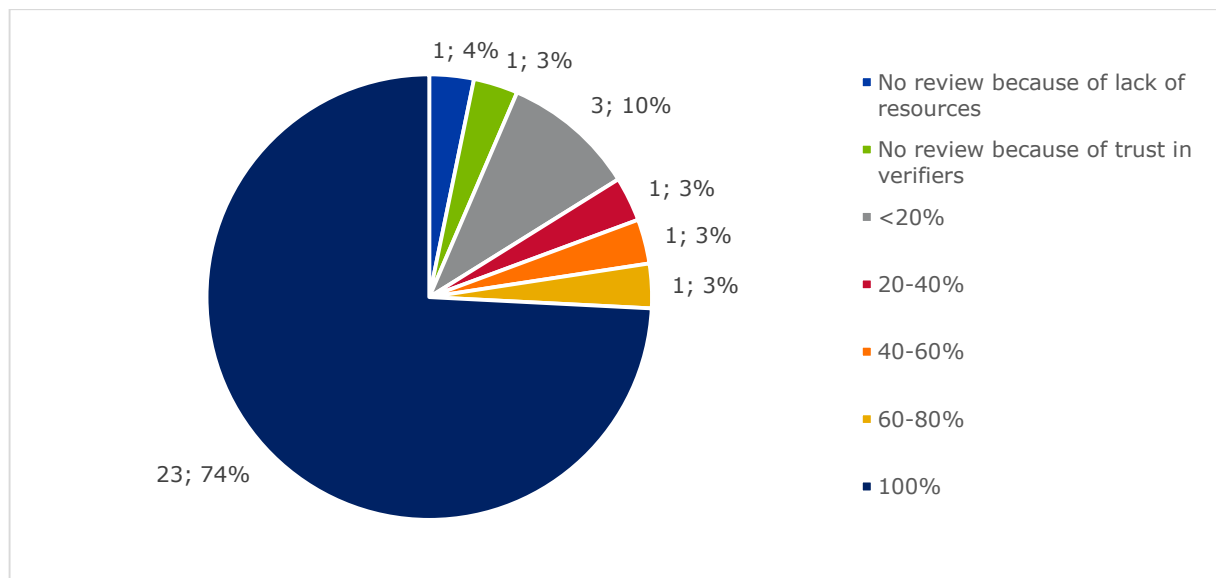


Figure 2 Share of AERs/VR subject to consistency checks

### 5.3.2 Determining the review share

The seven CAs that review only a share of all AERs and VRs have very different approaches to selecting cases.

Four CAs have defined specific criteria for selecting the submissions that are subject to a review. These criteria typically include compliance history of the installation, size, sector and verifier involved and can be as elaborate as the criteria of one CA shown in Figure 3. Another CA applies a risk-based approach and has developed a specific decision flowchart for the review process.

- Late submission of report
- Negative verification opinion
- All category C installations
- Any improvements raised in context of allocation
- Significant increase in emissions
- Exceeding low emitter threshold
- Use of CEMS
- Use of mass-balance approach
- Review a report of each verification bodies
- Sector intelligence
- Operators with poor compliance history
- Review of every installations at least once in 2-3 years

**Figure 3 Selection criteria for reviews**

Another three CA review all AERs to which verifiers provide comments in their verification report, that failed to pass the completeness check or where, for other reasons, discrepancies have been detected. Only one CA confirmed that it uses the Commission tool on risk profiling for AER review. Of the seven CAs that only review a sample, seven CAs confirmed that their process in place allows them to review reports for each installation, either once per trading period or even every 2-3 years, or that they are planning on implementing such a procedure. Another three CAs have no process in place to assure that all installations/aircraft operators will be subject to a review of their reports.

Figure 4 illustrates that the most common review steps taken by CAs are consistency checks of the documents submitted by operators and verifiers directly related to the monitoring, reporting and verification of emissions of the respective reporting period. A large number of CAs (17) go further and cross check other information sources they have at hand, such as allocation and inspections data, to be able to identify unusual deviations requiring more in depth assessments. Other sources of information used are:

- Emission figures in the registry
- Guidance paper from the last Compliance Conference
- Consistency historic emissions
- Method used for data gaps
- Necessity of changes to MP
- Verifier accredited according correct scope
- Plausibility checks in regards to fuel consumption

- Eurocontrol data
- Cross checks with other national reporting systems.

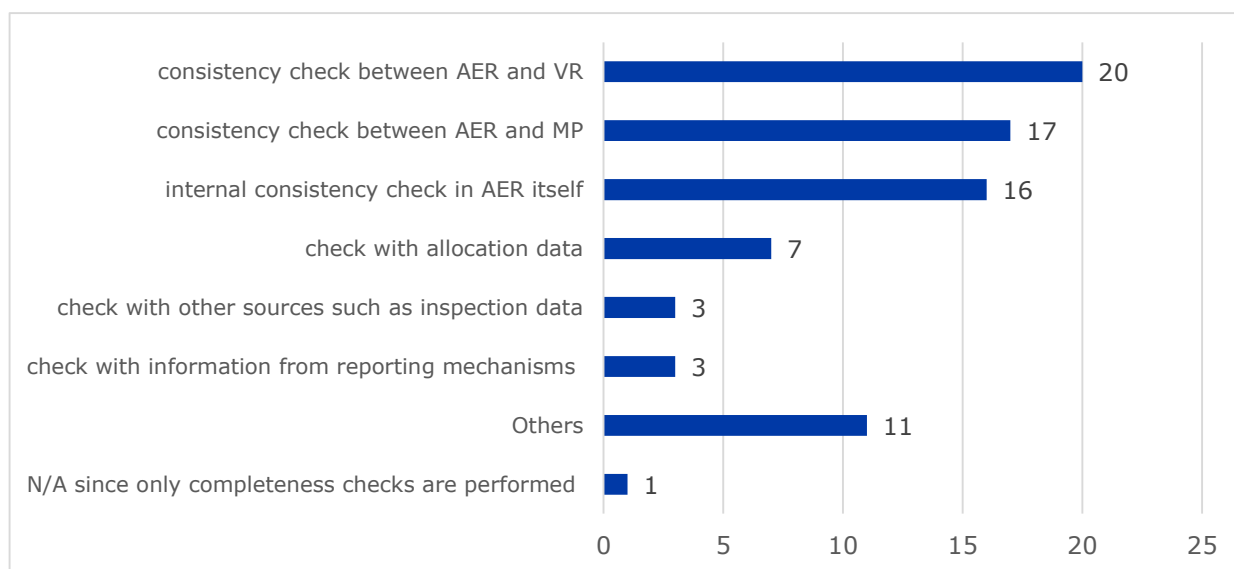


Figure 4: Content related checks on AERs and VRs

19 CAs inform operators of the acceptance of the verified AER or of the necessity to determine emissions either directly or through providing status updated in the electronic reporting system. Another nine CAs only inform operators if emission figures needs to be determined. Four CAs reported that they do not inform operators in any instance. In at least one MS, operators would be able to see that their report has been accepted by the figure entered by the CA in the registry by 30 April.

### 5.3.3 Dealing with errors and determining emission figure

Article 70 of the MRR defines four instances when CAs are obliged to make conservative estimates of operators’ emission figures. It further requires that, when the review of AER and the approval of MP is done by different CAs, that the MS establishes an effective information exchange between those CAs.

When mistakes are detected in AERs and VRs, most CAs make a distinction between immaterial and material errors, with material errors usually being defined as mistakes that affect the emission figure. The majority of MS prefer to refrain from determining emissions in case immaterial errors are being identified in the verified AERs. 15 CAs ask operators to correct the AER, get it re-verified and then re-submit instead of making a conservative estimate of the emission figure in line with the MRR. Another 14 CAs also prefer a practical approach between operator/verifier and CA to resolve mistakes that do



not affect the emission figure, which can be in the form of contacting the operator and asking for a resubmission of the corrected AER. Ten CAs confirmed that material errors, or issues that were not being resolved through a re-verification/re-submission of AERs or a practical solution between operator and CA, will lead to a determination of emission figures. Four CAs elaborated that findings in regards to verifiers will be dealt separately and will involve the respective NAB. One CA does not have a process in place yet, as it had not yet identified any mistakes.

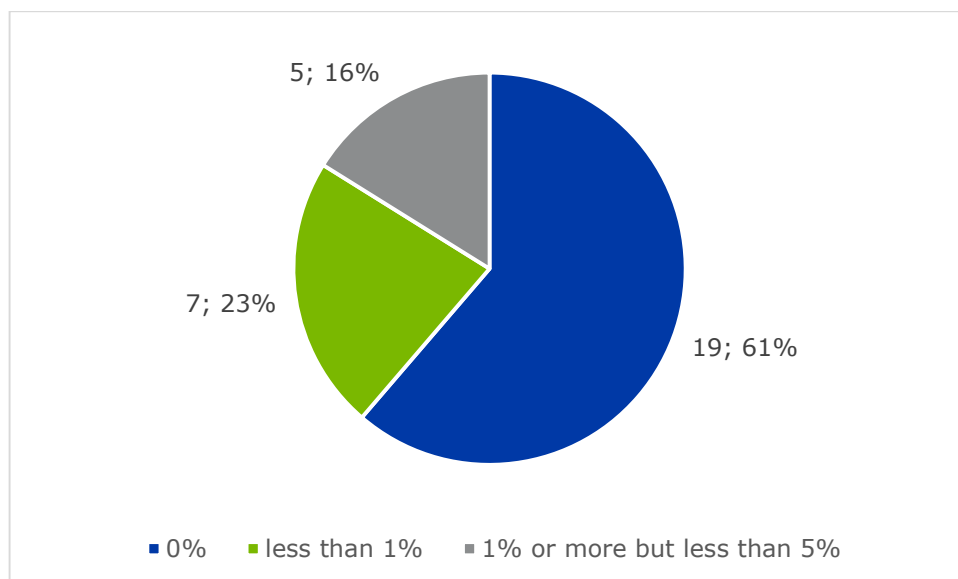
For the majority of MS (19), national legislation provides a sufficient basis for enabling the CA to determine emissions in the instance prescribed by the MRR. In those instances where the procedure of how a conservative estimate is to be derived is not provided in the legislation, CAs usually make use of the Commission guidance or the legislation provides them with the necessary leeway to do whatever they deem necessary in this regard. The remaining 12 MS stated that national legislation does not provide such provisions but in most cases the MRR provide a sufficient basis for them to act accordingly.

15 CAs decide on the approach for determining emissions on a case-by-case basis, considering a variety of information sources, using the Commission guidance and even involving an independent verifier. One CA pointed out that it found the data gap paper with its list of categories and hierarchy of data sources useful in this regard. Five CAs reported that they follow the approach outlined in the Commission guidance. Another CA developed its own approach using historical data and data from another online reporting system on other air pollutants. 10 MS have not had to determine emissions figures yet, or not for a long time, and have no formal approach in place.

In most cases, the introduction of the MRR did not change the procedure of when and how to determine emissions figures. There is also no evidence that the MRR's requirements led to more cases of determination<sup>6</sup>. In most MS the number of determination cases remained below 1%. (See Figure 5)

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<sup>6</sup> For those countries where at the time of the interviews the AERs had been reviewed.



**Figure 5 Percentage share of determination cases of overall number of installations per MS**

Only five CAs reported that the approach to determine emission figures changed due to the MRR. The interpretation of the requirements seems to differ between MS. In one MS where the approach has changed in Phase 3, the involvement of an independent verifiers is still an option, while another MS that used to contract verifiers for making conservative estimates, has abandoned this practice assuming it now has to be done by the CA. For one MS, the MRR has led to more clarity on the instance in which emission figures need to be determined. The MRR has led to more transparency of the determination process for operators in another MS. In one MS regional legislation had prevented the CA from being able to determine emissions in previous phases. The MRR now provides the basis for it.

The key reasons stated by CAs for having to determine emission figures are:

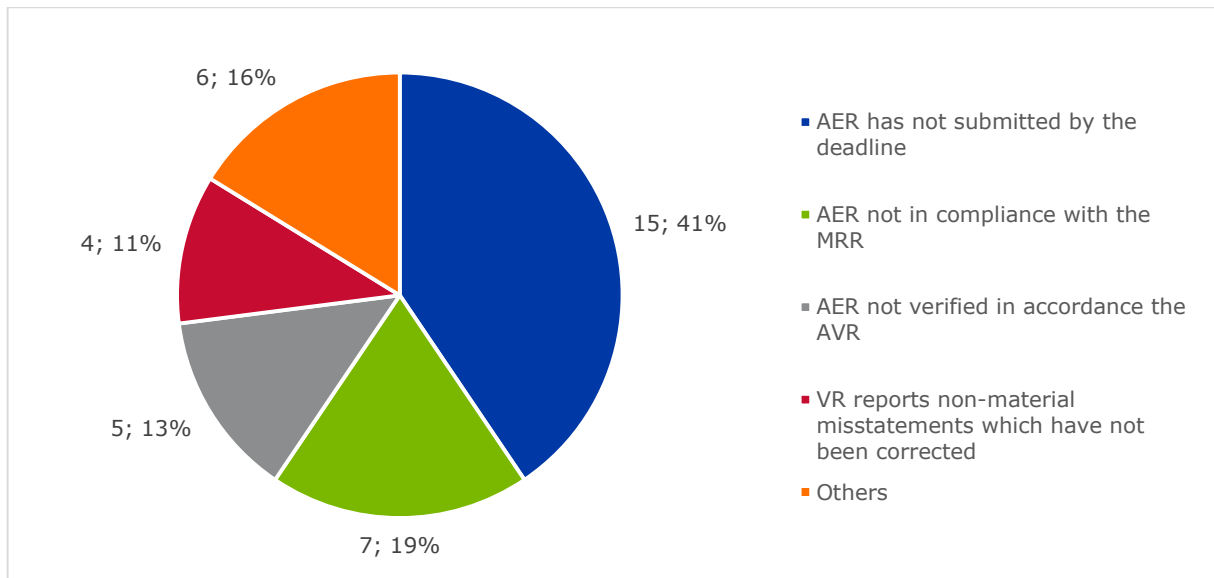
- 15 CAs: No verified AER has been submitted by the deadline.
- Seven CAs: Submitted AER was not in compliance with the MRR.
- Five CAs: AER has not been verified in accordance the AVR.
- Six CAs: VR listing non-material misstatements which have not been corrected by the (aircraft) operator before issuance of the VR.
- Four CAs provide other reasons.

Other reasons mentioned are:

- Bankruptcy
- Non-compliance by the verifier, incl. missing accreditation for respective scope
- Sources identified, e.g. through inspections, that had not been included in MP
- New GWP (global warming potential) to be applied
- Verification report with a negative opinion
- Change of scope for aviation after the reporting year

- Omission of requesting approval of a new MP in line with MP.

Figure 6 depicts the frequency of the provided answers.



**Figure 6 Reasons for determining emission figures**

### 5.3.4 Summary of findings

The project team identified room for improvement in terms of defining procedures for the review of AERs and VRs. While in the nine MS without any formal review procedures, reviews are taking place, the absence of any guidance document or defined review steps means consistency across reviews cannot be assured or in cases where one person is in charge of the review a change in personnel could mean that the existing approach will be lost. Also, most of the MS that are reviewing only a share of all AERs and VRs will need to develop processes to select these cases in a way that it is ensured that all installations’ AERs and VRs get reviewed over a certain period.

The use of an online reporting tool typically facilitates the implementation of coherent consistency checks. In the absence of such IT tools, defining step-wise procedures and using checklists does in a similar manner ensure consistent checks on all submissions and enhances efficiency. Review processes in MS without checklists and defined procedures would benefit from developing such tools both in terms of quality and efficiency.

The project team found that in most MS the MRR did not change the procedure of when and how to determine emissions figures. Also, no effect on the number of cases in which an emission figure had to be of determination was found that could be attributed to the MRR.

#### 5.3.4.1 Recommendations

##### Recommendation R 27

- The MS should task their CAs that are currently in charge of reviewing AERs and VRs but do not have formal procedures defined, or are currently in the process of doing so, with developing formal procedures through writing up guidelines, checklists and/or step-wise work instructions. Also, defining the type of data that are used to cross check information from the AER and VR, such as allocation data, should be defined in order to allow for consistency of the process. This step will initially require additional time and resources but the efficiency gains should outweigh the upfront time investment. Additionally, in case of personnel changes, the expertise of how consistent review should be undertaken will be safeguarded and minimal additional time will need to be spent by the new personnel on defining yet another review approach. Any defined process should always be subject to regular review in order to allow for continuous improvements.

##### Recommendation R 28

- As a good practice, CAs facing resource constraints limiting them in performing all relevant tasks should focus on the quality of reviews, i.e. perform thorough consistency and content checks, rather than aiming at reviewing all submissions each year. Picking a representative sample, e.g. based on a risk-based approach, and ensuring that submissions of eventually all operators are being checked in depth within a certain time period, e.g. within four years depending on the number of installations and aircraft operators and the available resources at the CA, should be the preferred approach for these CA.

##### Recommendation R 29

- The Commission is advised to follow up with those CAs that intend to improve their selection process of reports to be reviewed each year in such a way that ensures that each installations/aircraft operators reports get reviewed at least once within a specific timeframe.

#### 5.3.4.2 Good practices

- Transparency of the review process can be provided by providing an outline of the review process, in particular on the types of checks performed, to operators and verifiers as is currently being done by one CA. Allowing verifiers and operators to understand the checks could also enhance the quality of submissions as more attention can be paid to data, which are subject to additional scrutiny.
- Involving a third party verifier when deemed necessary for making a conservative estimate when determining an emission figure, as is currently being practiced by at least one MS, can be considered good practice.
- In one MS, the approach to determine a conservative estimate of emission figures was defined in national legislation in such a way that it would always lead to a significant overestimation of emissions to provide operators an incentive to report in line with the requirements and on time.

## 5.4 Submission of improvement reports

*Article 69 of the MRR describes two cases for when reports on improvements to the monitoring methodology need to be submitted by operators to CAs and when these are due.*

### 5.4.1 Format of improvement reports

19 CAs provide a translated version of the Commission template No. 7 to operators for their reporting on improvements to the monitoring methodology. Four CAs have their own form within their electronic reporting system. Six CAs developed their own template in standard office software, often based on the Commission template with certain simplifications. Three CAs do not prescribe the use of any template to operators.

In 21 MS, the submission of the two forms of improvement reports happens (or is expected to happen) in a combined submission whenever both types of reports are required. All 19 MS using the Commission template require submission of a combined improvement report. One MS has developed its own improvement report template in standard office software and expects combined submission going forward (although had not yet received any at the time of interview) and one intends to require combined submission in the future.

In five MS separate submissions will be due since the IT-System contains, or will contain, two separate forms for each of the reports. Six MS were not able to report on the form of the submissions yet as no improvement reports had been received at the time of interview and the CA had not specified whether improvement reports should be submitted in a combined form or separately.

### 5.4.2 Reporting improvements when applying lower tiers and fall-back methodologies

The majority of CAs (24) require improvement reports in accordance with the intervals defined in the MRR to be submitted by 30 June. Another six CAs have defined another date as the submission deadline of such reports, of which four CAs and one MS with multiple CAs allow for submissions by 30 September. One CA requires installation of category A to submit the reports already by 30 April and category B and C installations by 31 May. Another CA allows for these reports to be submitted as soon as the operators are able to provide the relevant information.

### 5.4.3 Improvement reports triggered by verifiers' recommendations

The project team noted non-compliances with the MRR's requirement to submit improvement reports triggered by any outstanding non-conformities or recommendations for improvements listed in a verification report.

The majority of CAs (26) confirmed that such improvement reports are due by 30 June the same year and have been submitted within that deadline. However, there are five CA that are not in compliance with the MRR since they allow submission to be made later than by 30 June (either as a general rule

or case-by-case basis). Three CAs found that reports are not always submitted on time. While one CA requires its operators to implement improvement recommendations from verifiers within 10 days, the CA appears to not be tracking the reporting on the implementation of such improvements.

Those CAs (15) that had received IRs at the time of the interview and had reviewed them to some extent identified improvements to operators’ procedures, including risk assessments, to be the most common verifier recommendation. This finding, as well as other typically identified improvements, is depicted in

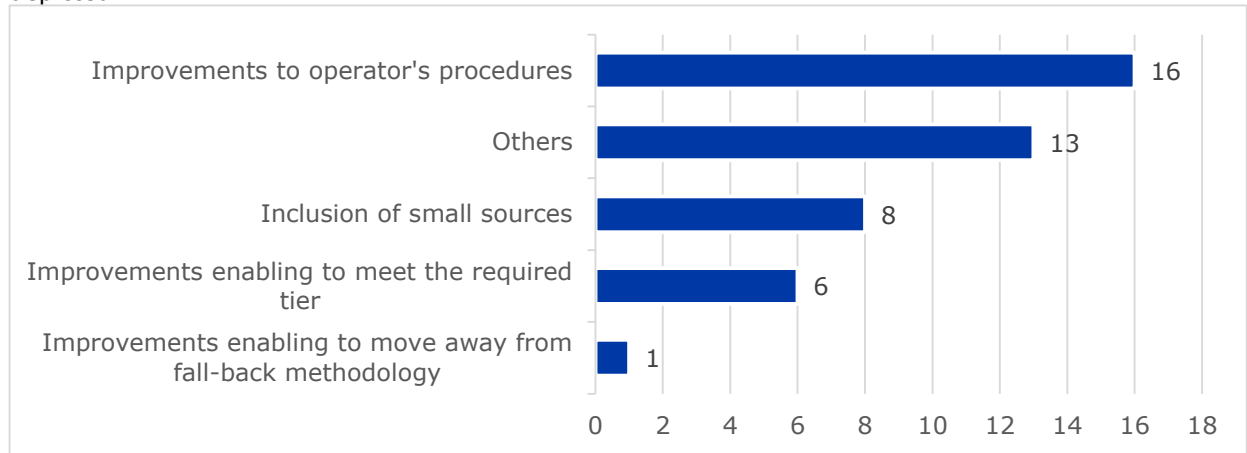
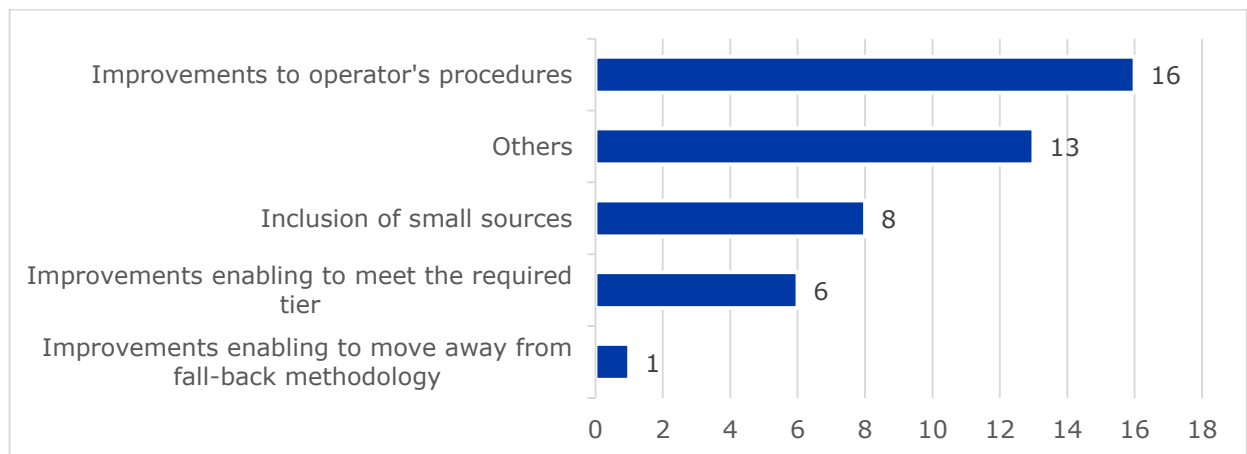


Figure 7 and was confirmed by the interviews with verifiers and by the case assessments.

Other common recommendations related to improvements to the MP, particularly to the detection of very small source streams, such as diesel generators, which need to be included in the installation boundary.



**Figure 7 Most common recommendations for improvements according to CAs**

At least four MS confirmed that the first round of verifications in Phase 3 also served to detect non-compliances of MPs with the MRR that had not been detected during the approval process, specifically

on the identification of sources that had not yet been included within the installation boundary recognised by the MP. Although these issues should be corrected as much as possible during the verification (before submission of the verified report to the operator and competent authority), the new requirement for reporting on improvements also has an important role to play to ensure residual anomalies are cleared up in compliance with the MRR.

13 CAs found that the formal improvement report provisions, requiring operators to regularly review their monitoring methodology for improvement and to consider recommendations made by verifiers as part of the verification process, resulted in an enhanced improvement process by operators. Three CAs did not see it as an improvement since either such procedures were already in place in Phase 2 in these MS or the CA sees little room for improvements. Most CAs (16) were not able to express any opinion yet as at the time of the interview no improvement reports had been reviewed. 10 MS expressed that this process has led to stronger improvements and five MS considered that it also induced timelier implementation of improvements.

#### **5.4.4 Summary of findings**

While the majority of MS confirm that the new requirement for operators to regularly submit improvement reports helps improving the monitoring methodology over time. Yet, some MS did not strictly enforce the related requirements, e.g. the deadlines, either because of misunderstanding of the MRR or to reduce the burden on operators. While there is little experience with the templates used for IRs in 2014, the project team concludes that also those MS not providing a template should do so since templates will provide operators with a structure, indicating what is required in the report. As this is a new formal requirement, operators will not be familiar with the content they should provide. Similarly, a template enables a more consistent review of the reports by the CAs. A more complete picture over the effectiveness of the requirements to report on improvements in the defined intervals will be available in a year's time after the second round of verification and improvement reports have been received and reviewed. Nevertheless, the findings of the project team confirm that for MS, which did not have such requirement in place previously, it led to considerable improvements and increased awareness of operators of the need to regularly review the monitoring methodology. Furthermore, where some CAs were not able to pick up certain non-conformities during the approval process of MPs, many of these will be corrected through the formal requirement to address verifiers' recommendations.

##### **5.4.4.1 Recommendations**

###### **Recommendation R 30**

- MS should be reminded of the requirement to formally approve IRs.

###### **Recommendation R 31**

- MS should be reminded of the deadline specified in the MRR, which does not allow for choosing a different date for reporting on improvements in the case of non-conformities and recommendations listed in the verifier's verification reports.

**Recommendation R 32**

- Three MS should remind operators, or advise their regional CAs, of the deadline for submitting improvement reports in relation to outstanding non-conformities and recommendations in the verification report. These CAs should enforce measures if deadlines are not being met.

**Recommendation R 33**

- As a good practice, MS should ensure that they have procedures in place for approving and following up of improvement reports and that a consistent approach is taken to this follow up and ensure that operators are taking action on recommended improvements.<sup>7</sup>

**Recommendation R 34**

- MS that do not prescribe the use of any template for improvement reports are advised to develop a template or to prescribe the use of the Commission template.

**5.4.4.2 Good practices**

- In at least four MS a reminder is sent to operators at the beginning of June reminding them of this requirement and the deadline, which is usually facilitated by an IT-System as such reminders are automated steps.

## 5.5 Electronic reporting

*Article 74 of the MRR defines that, if MS choose to use electronic data exchange formats, these need to be in a format using either standard electronic reporting language based on XML or a in a standard office software form.*

The project team found that there was a shift towards electronic submissions, as these are more convenient to handle during the review process or allow for the application of automated extraction tools to populate databases. While submissions of MP, AER, VR and IR are in most cases done electronically, either through an online system, email or via CD, there are still 12 MS that require or allow for the option to submit a hard copy in addition to the electronic version. One MS using an online tool for the preparation of all submissions still requires a signed copy of each submission to be sent by regular mail. The main reasons for requesting hard copies is that some CA are required to retain a signed version of every document and do not have the technical requirements for electronic signatures in place, or, -the hard copy serves as a back-up for online systems that have failed to work reliably. Some countries still allow hard copies to make concessions to small enterprises not having the required IT infrastructure in place.

Sixteen (16) CAs used IT-systems for monitoring plan approval and/or reporting purposes. In another MS, some of the various regional CAs employ IT-systems as well. The employed IT-systems range

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<sup>7</sup> Relevant to all MS.



from sophisticated tools to gateways facilitating the submission of reports using templates and defining workflows to an online tool that provides a form for the AER. More details on the scope of the online reporting systems are provided in Table 13. Three MS noted they are currently working on the implementation of an electronic reporting system.

Out of the 15 IT-Systems at least seven systems are based on XML or are XML compatible.

**Table 13 CAs with electronic reporting systems and their functions**

No. of MS	Reporting language	Permit application	Scope				Access
			MP	IR	AER	VR	
1					yes		No access provide to local CAs as they are not involved in reporting
1	XML				yes	yes	N/A , as BE Flanders operate independently from BE Wallonia
4	XML	yes	yes	yes	yes	yes	Yes, where applicable
1	XML		yes	yes	yes	yes	Only central CA, as regional CAs no longer involved in MP approval.
1			yes				N/A
1				yes	yes	yes	Each regional CA that uses an electronic reporting tool uses its own system with different scopes. A national database on AER data is under construction.
1	XML	yes	yes	yes	yes	yes	No, as different databases for installations and aviation exist
1					Yes		All CAs have access to the data submitted through the online system.
3		yes	yes	yes	yes	yes	N/A
1		yes		yes	yes	yes	N/A
1					yes	yes	Only central CA as regional CAs are not involved in reporting

*Article 75 of the MRR defines the technological functional and non-functional measures that need to be in place.*

Not all CAs using electronic reporting systems were able to confirm that the technological requirements have been implemented. While CAs generally trust that their systems comply with Article 75 of the MRR, the interviewed personnel were not always able to confirm that all of the detailed requirements are being met, mostly due to their limited knowledge about the IT specific measures.

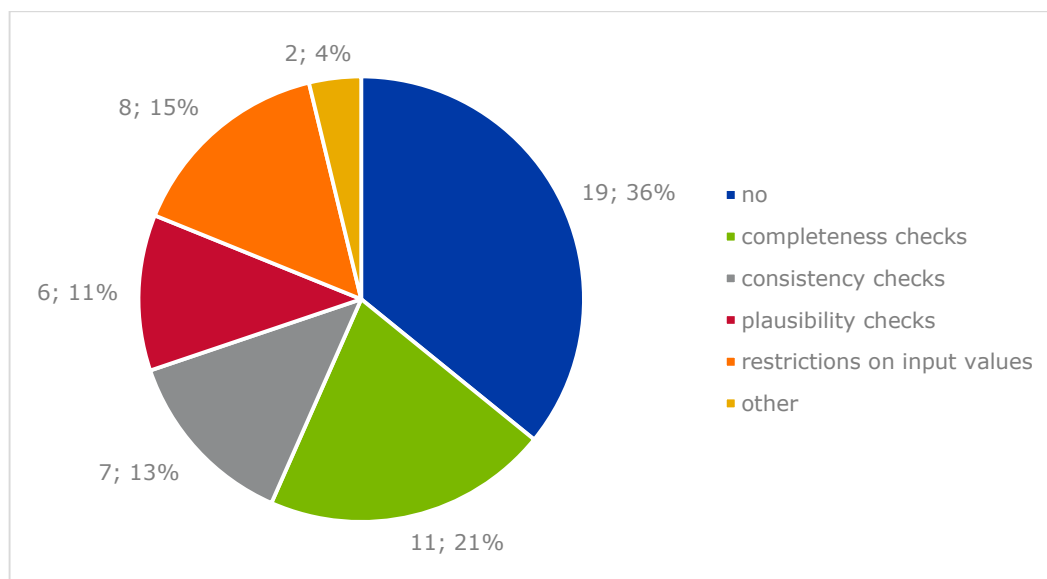
- Three CAs were not able to reflect at all on the IT measures in place ensuring that their system meets the requirements of the MRR
- Nine CAs reported they have measures in place to ensure the integrity of data (in line with Article 75, para. 1 (a))
- 9 CAs reported to have measures in place to ensure confidentiality of data (in line with Article 75, para. 1 (b))
- Seven CAs reported to have measures in place to ensure authenticity of data (in line with Article 75, para. 1 (c))
- Seven CAs reported to have measures in place to ensure non-repudiation of data (in line with Article 75, para. 1 (d))
- Nine CAs reported to have measures in place to ensure access control (in line with Article 75, para. 2), of which seven CAs confirmed that measures are in place to ensure both
  - Restriction of physical access to hardware
  - Restriction of logical access to the system
- No CA reflected on the measures in place to ensure data availability and to provide audit trail.

Another five MS report that they have an appropriate database in place, with one CA confirming that they have macros in place to populate the database. The remaining 14 MS store the received reports and related documentation, usually on local secure servers.

The majority of CAs (20) do not make use of IT reporting tools to perform automated checks on the submitted reports despite the fact that most of them receive an electronic copy of reports. For those that do employ such tools, it is typically the CAs that maintain the IT system for electronic reporting and perform the following checks:

- Automated completeness checks performed by 11 CAs
- Automated consistency checks performed by seven CAs
- Automated plausibility checks performed by six CAs
- Restrictions on input values are implemented by eight CAs
- Two CAs implement other automated checks as well.

Figure 8 summarises the answers provided by the relevant CAs.



**Figure 8 Type of automated checks performed on electronic submissions**

Of the five CAs that have a database in place, only two CAs confirm that they have IT tools in place to perform automated checks, such as a consistency check or a check on verifiers’ accreditation status, on the submissions stored in the database.

**5.5.1 Summary of findings**

In general, the use of IT in the EU ETS is good practice in itself, reducing errors and ensuring consistency. The use of IT also has the potential to reduce CA burden or redirect human resources elsewhere, although this outcome has not been directly tested in this study. While for most cases the systems seem to meet all relevant requirements, the interviewees were not able to formally confirm this impression through the answers provided. The project team is confident that at least five MS meet the requirements. Formal compliance with the relevant MRR requirements should be checked again involving the relevant IT experts of each MS.

**5.5.1.1 Recommendations**

**Recommendation R 35**

- MS using an online reporting tool are recommended to check that their systems meet all requirements of MRR Article 75 since the interviewees were not able to formally confirm compliance in this respect.

**Recommendation R 36**

- As a good practice, MS should strive for obtaining systems employing the same electronic reporting tool with elaborate features such as integrated checks (for completeness, plausibility and consistency), defined work flows and input restrictions, or at least compatible

systems using the same reporting language, as a way to ensure a harmonised approval and review process across the EU. MS should therefore strive for obtaining such systems.

#### **5.5.1.2 Good Practices**

- One MS makes MPs and AERs submitted through its electronic reporting system publically available on the CA website, with commercially sensitive information redacted as required.

## 6 Verification

The AVR provides detailed regulation on accreditation and verification in the EU ETS. In this evaluation, verifiers were approached that cover all of the relevant countries. However, some methodological challenges arose when conducting the interviews. For example, multiple verifiers were interviewed in several MS, which sometimes results in differing response numbers to a question. Some verifiers were active in multiple MS, while others only in a single MS. This meant that some verifiers accredited in a different MS than that for which the interview was conducted. Therefore, recommendations in this section are relevant to all MS, but the specific country interview in which the point was mentioned is cited.

The subsections within this section are arranged in the following order of topics:

- 6.1 Introduction to the AVR
- 6.2 Verifier obligations
- 6.3 Verification activities and procedures
- 6.4 Outcomes of verification
- 6.5 Simplified verifications

### 6.1 Introduction to the AVR

#### 6.1.1 Changes and improvements resulting from the AVR and MRR

*The AVR contains articles relating to the verification of reports for EU ETS concerning emissions and tonne-kilometre data from 1 January 2013. The MRR contains requirements relating to M&R that need to be taken into consideration by verifiers when producing verification reports.*

While verifiers from seven countries indicated that their overall processes have not specifically changed due to the introduction of the AVR, the majority of verifiers did cite more general improvements. General improvements mentioned by verifiers include:

- The AVR formalises the process of verification, consolidating all requirements into one document.
- The AVR clarifies and provides more detail on the process, leading to a more harmonised approach, particularly around requirements for documentation to be provided by the operator, procedures and site visits. The clear setting out of requirements can also be helpful in communications with operators.
- Cross-border accreditation for verifiers, specifically noted by a verifier of aircraft operators.
- Detailed requirements for specific elements, such as addressing misstatements and non-conformities, verification plans, strategic analyses, risk analysis, sampling plans, simplified verifications and independent reviews. There is now better focus on the checking of documents, data sources and their accuracy.

- Principle of continuous improvement and requirements for improvement reports, leading to more improvements being identified.
- Changes to time allocation, including the ability to charge for additional time.

Some verifiers also noted potential improvements that they would like to have in the AVR:

- The AVR does not specifically take the size of installations into account and some requirements could be simplified further for small installations. However, verifiers should note that the AVR does specifically include provisions to take account of the size or category of installation, such as in Article 11 on strategic analysis (which feeds into the requirements for risk analysis (Article 12)), Article 23 on materiality levels, Articles 31 and 32 on simplified verifications for both installations and aircraft operators. The size or category of installations is also highlighted in a number of AVR guidance documents, such as AVR KGN No. II.2 on verifier's risk analysis and AVR KGN No. II.5 on site visits concerning installations<sup>8</sup>.
- The AVR focusses on the process for waiving site visits. Further information could be provided on how site visits are to be performed or provide a bit more flexibility to verifiers in terms of waiving site visits. However, these verifiers should note that guidance on site visits concerning installations (AVR Key guidance note No. II.5<sup>9</sup>) is available on the Commission website<sup>10</sup>.

One verifier noted that not all MPs were approved at the time of verification and that the AVR should outline that only approved MPs can be used for preparing AERs and VRs. It should be noted that the verifier obligations set out in the AVR state that *'the verifier should assess whether the operator or aircraft operator has acted in compliance with the requirements of the greenhouse gas emissions permit and the monitoring plan approved by the competent authority'*. Therefore, as the CA had not approved all MPs at the time of verification, verification of the associated AERs could not be carried out in line with the AVR, resulting in non-compliance.

In addition, Article 7 of the AVR states that *'Where the monitoring plan has not been approved by the competent authority pursuant to Article 11 of Regulation (EU) No 601/2012, is incomplete or where significant modifications referred to in Article 15(3) or (4) of that Regulation have been made during the reporting period which have not been accordingly approved by the competent authority, the verifier shall advise the operator or aircraft operator to obtain the necessary approval from the competent authority.'* Therefore, there is a requirement on verifiers to advise the operator or aircraft operators to obtain approval from the CA, so that verification can be carried out on the basis of an approved MP.

Some verifiers noted that detailed requirements are set out in the MRR for M&R, MPs and AERs, which can help verifiers in undertaking the verification process. It also means that there is a lot more detail and documentation that needs to be checked during the verification process. Verifiers have also

<sup>8</sup> [http://ec.europa.eu/clima/policies/ets/monitoring/documentation\\_en.htm](http://ec.europa.eu/clima/policies/ets/monitoring/documentation_en.htm)

<sup>9</sup> [http://ec.europa.eu/clima/policies/ets/monitoring/docs/kgn\\_5\\_site\\_visits\\_en.pdf](http://ec.europa.eu/clima/policies/ets/monitoring/docs/kgn_5_site_visits_en.pdf)

<sup>10</sup> [http://ec.europa.eu/clima/policies/ets/monitoring/documentation\\_en.htm](http://ec.europa.eu/clima/policies/ets/monitoring/documentation_en.htm)

noted that the MRR sets out clear requirements on classification of source streams and tier levels, as well as on risk assessments, uncertainty and control procedures. Such comments indicated that the prescriptive approach within MRR is seen as beneficial by many verifiers.

### 6.1.2 Definitions for the verification process

*Article 3 of the AVR provides definitions of terms relating to verification of reports relating to EU ETS and the accreditation and supervision of verifiers.*

Verifiers from 23 countries stated that the definitions outlined in Article 3 of the AVR have helped to clarify terms relating to the verification process and, in general, this has provided confidence in carrying out verification work. The benefits of having clear definitions set out in the AVR were cited even by verifiers who claimed a good understanding of terms relating to verification of reports prior to the AVR. These comments indicate that the clear definitions cited in the AVR are generally seen as beneficial to the verifier community. Verifiers from only five countries indicated that the AVR had not resulted in specific clarification or increased confidence for them. However, in these instances it appears that these verifiers claimed a good understanding of terms prior to the AVR and that they have therefore not noted specific improvements.

### 6.1.3 Use of guidance

*Guidance is made available to verifiers from the Commission, national accreditation bodies (NABs) and the European co-operation for Accreditation (EA-6/03).*

Verifiers from 26 MS indicated that they had found guidance produced by the Commission useful. The guidance on risk assessment has been specifically noted as useful by the verifiers of six MS. Other guidance documents specifically cited as useful during verifier interviews were those on sampling and uncertainty, misstatements, measurement devices and CEMS. Verifiers from one MS noted that the guidance on uncertainty assessment and sustainability criteria for bioliquids could be confusing in parts and may require some further clarity. A verifier from another MS stated that there is a lack of guidance for new entrants or significant capacity increases. However, verifiers should note that guidance on new entrants and closures (GD No.7<sup>11</sup>) and guidance on verification of NIMs baseline data reports and methodology reports (GD No.4<sup>12</sup>) is available on the Commission website<sup>13</sup>.

Some verifiers noted that guidance would be useful if translated into national language, although one had noted that mistakes can be made in translation of these. MS should consider translation of guidance documents and templates into national language, where required, but care should be taken

<sup>11</sup> [http://ec.europa.eu/clima/policies/ets/cap/allocation/docs/gd7\\_new\\_entrants\\_and\\_closures\\_en.pdf](http://ec.europa.eu/clima/policies/ets/cap/allocation/docs/gd7_new_entrants_and_closures_en.pdf)

<sup>12</sup> [http://ec.europa.eu/clima/policies/ets/cap/allocation/docs/gd4\\_nims\\_verification\\_guidance\\_en.pdf](http://ec.europa.eu/clima/policies/ets/cap/allocation/docs/gd4_nims_verification_guidance_en.pdf)

<sup>13</sup> [http://ec.europa.eu/clima/policies/ets/cap/allocation/documentation\\_en.htm](http://ec.europa.eu/clima/policies/ets/cap/allocation/documentation_en.htm)



to ensure consistent and accurate translation. Translation of guidance into national language may also help to reduce uncertainty with some verifiers where language barriers might exist. Where verifiers highlight specific concerns with guidance, CAs can feed valid suggestions back to the Compliance Forum Task Forces. Where the CA notes that a specific capacity or competence issue might exist with a verifier, the CA should consider feeding this back to the NAB that has accredited that verifier, as the NAB is required to assess the competence of verifiers to carried out verification activities during the assessment process (AVR Article 44) and surveillance (AVR Article 49). The requirements for information exchange by the competent authority to the NAB are set out in the AVR Article 72.

Verifiers from three MS specifically mentioned making use of guidance produced by their NAB, while verifiers from 11 MS indicated that EA-6/03 was useful. Five MS did state that the timing of availability of EA-6/03 reduced its value for them.

#### **6.1.4 Summary of findings**

Overall, verifiers have indicated that introduction of the AVR has brought about general improvements in the verification process.

Verifiers have noted that, in some instances, MPs had not been approved at the time of verification and this means that verification of associated AERS could not be carried out in line with the AVR. There is a need for MS CAs to ensure that MPs are approved in a timely manner and for verifiers to encourage operators to seek the necessary approval from the CA. Most MS who had this issue expect that they will have the timing issues resolved going forward.

Verifier comments indicate that the clear definitions cited in the AVR are generally seen as beneficial to the verifier community. The available guidance documents are also generally found useful, although there is evidence that some verifiers are not fully aware of the guidance and the information contained in these documents. In some MS, translation of guidance into national language could prove useful and should be considered by CAs.

##### **6.1.4.1 Recommendations**

###### **Recommendation R 37**

- As good practice, all MS should remind verifiers, where MP have not been approved, they should not proceed, instead verifiers should advise the operator or aircraft operators to obtain approval from the CA, so that verification can be carried out on an approved MP. All MS should also ensure that all operators have received the approved MPs before verification, so the documentation operators provide to verifiers is up to date.

**Recommendation R 38**

- As a good practice, all MS should remind verifiers to make note of guidance documents available on the Commission website<sup>14</sup>. Where there are recommendations for specific improvements to the available guidance documents, these should be fed back through the CA to the Compliance Forum task forces for consideration.

**Recommendation R 39**

- As a good practice, all MS should consider translating all current and future guidance documents and templates into national languages, where not already completed. This is particularly important where operators, or other stakeholders, do not have a good command of English and/or prefer to receive documentation in their national language. Where translation is carried out, care should be taken to ensure consistent and accurate translation of these documents.

**Recommendation R 40**

- As a good practice, all MS should consider notifying the relevant NAB that accredited the verifier of any specific issues with a verifier identified that may relate to a capacity or competence issue.

## 6.2 Verifier obligations

### 6.2.1 General obligations of the verifier

*Article 7 of the AVR sets out the general obligations of the verifier when carrying out verification activities.*

Verifiers from 22 MS indicated that the obligations, as set out in Article 7, are clear, although have noted that there was an understanding of these obligations prior to the AVR and so there have been no specific changes in their processes. However, some have noted that there is now more of a role for the verifier in notifying non-compliance, non-conformities and recommending improvements. Verifiers from five MS have stated that Article 7 has helped them understand and carry out verification work.

Ten verifiers stated that Article 7 has led to an improved understanding amongst operators or aircraft operators regarding the role of the verifier. However, verifiers from 18 MS indicated that they felt Article 7 has not specifically led to an improved understanding in this respect, with seven verifiers indicating that this is because most operators are not aware of, or have not read, the AVR. Operators are not expected to have read the AVR, so if verifiers believe an improved understanding is required by an operator, they should signpost them to Article 7 of the AVR to ensure that they have an

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<sup>14</sup> [http://ec.europa.eu/clima/policies/ets/monitoring/documentation\\_en.htm](http://ec.europa.eu/clima/policies/ets/monitoring/documentation_en.htm)  
[http://ec.europa.eu/clima/policies/ets/cap/allocation/documentation\\_en.htm](http://ec.europa.eu/clima/policies/ets/cap/allocation/documentation_en.htm)

understanding of the role that the verifier should be performing. In this way operator awareness of the verifier role could be improved.

### 6.2.2 Pre-contractual obligations

*Article 8 of the AVR outlines pre-contractual obligations that must be carried out to ensure that a verifier obtains a proper understanding of the operator or aircraft operator, so as to assess whether it can undertake the verification.*

Verifiers from ten MS have indicated that the pre-contractual obligations, as set out in Article 8 of the AVR, have changed the way in which they handle this phase of the work, leading to a more formalised and structured process.

Verifiers from nineteen MS have stated Article 8 has not changed the way this phase of the work is carried out. These verifiers have indicated that pre-contractual arrangements were already being carried out in the manner outlined in Article 8. This indicates that improvements of their processes were not required.

The formalisation of pre-contractual obligations in the AVR has therefore assisted a number of verifiers in improving their processes, bringing them more in line with those MS that were already carrying out their pre-contractual arrangements in the manner set out.

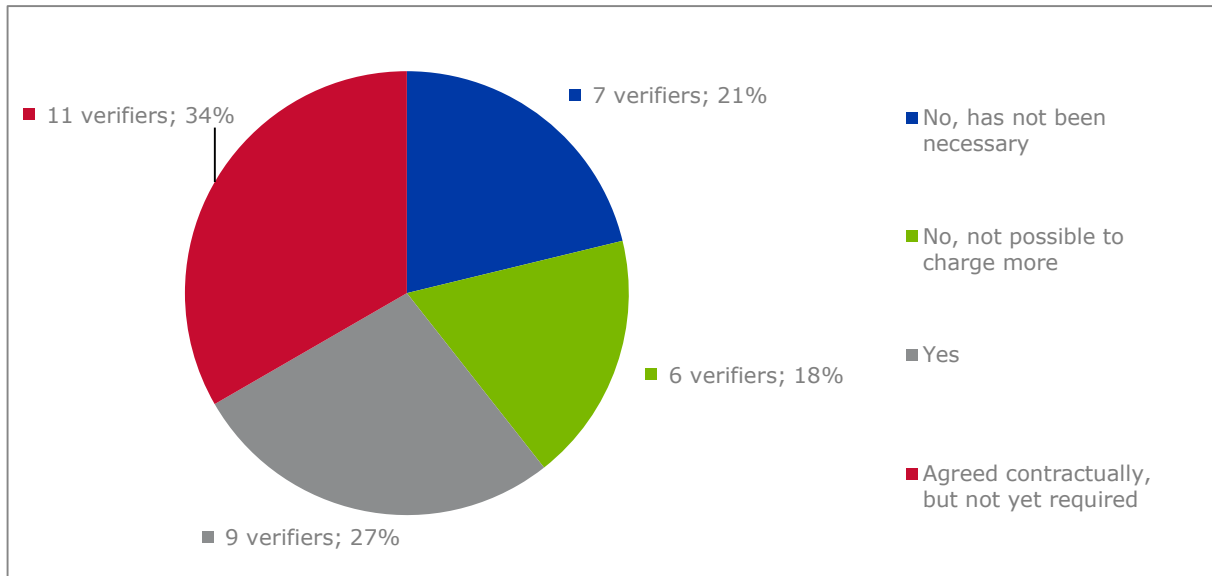
### 6.2.3 Time allocation

*Article 9 of the AVR sets out the requirements relating to time allocation for verification activities.*

Verifiers from eleven MS have indicated that the requirements for time allocation, as set out in Article 9 of the AVR, has changed the way in which they allocate time and, if required, allows them to justify additional time to clients. Examples of where additional time might be required, as provided by interviewed verifiers, are in cases where there are large or complex installations or installations in new sectors, as well as for checking of risk analyses and procedures and assessment against the MP. A further three verifiers have indicated that the way in which time is allocated has changed, but they have not charged for the additional time. These verifiers have noted that it can be difficult to charge additional time to the client, as price expectations exist. Even where price expectations exist, verifiers should ensure that the verification contract provides for a possibility of time to be charged in addition to the time agreed in the contract, as per Article 9 of the AVR. Twelve verifiers have stated that the way in which they allocate time has not specifically changed. These verifiers should ensure that their time allocation procedures are in line with Article 9 of the AVR.

Ten verifiers have indicated that they have charged for additional time. Eight verifiers have stated that it has not yet been necessary, while a further eleven have specified that charges for additional time are included in their contractual arrangements, but have not yet been required. Six verifiers discussed the competitiveness of the market and implied that, while additional time may have been

required and contractual arrangements may be in place, they would not feel able to charge more, with competitiveness in the market and some operators being unwilling to accept additional charges being the main reason stated. These verifiers should note that, even where price expectations exist, the AVR Article 9(2) requires verifiers to include these provisions in their contractual arrangements.



**Figure 9: Have verifiers charged for additional time, as per Article 9.2 of the AVR**

**6.2.4 Information from an operator or aircraft operator**

*Article 10 of the AVR sets out the information that operators or aircraft operator must provide to the verifier during the verification process.*

Verifiers from seventeen MS indicated that information required for verification work was available from operators prior to introduction of the AVR and that Article 10 of the AVR has not specifically changed this, although some noted that formalisation of the requirement is an improvement. Thirteen verifiers stated that Article 10 has improved the availability of necessary documentation. This indicates that formalisation of information requirements that operators or aircraft operator must provide to the verifier during the verification process in the AVR has helped improved the process in situations where verifiers have had difficulty previously.

**6.2.5 Strategic and risk analyses**

*Articles 11 and 12 of the AVR set out the requirements for verifiers when carrying out strategic analysis (of all activities relevant to the installation or the aircraft operator) and risk analysis for the verification process.*

Eleven verifiers have indicated that their processes have changed with the requirements of Articles 11 and 12 of the AVR on strategic and risk analysis. These requirements have specifically improved the documentation of the process and detail in the risk analysis. Ten verifiers also specifically mentioned consideration of material analyses when carrying out strategic or risk analyses in their responses. This indicates that introduction of the AVR has resulted in improvements in verifier strategic and risk analyses.

Sixteen verifiers did not specifically note any changes in the way they perform strategic and risk analyses during the interview process.

### 6.2.6 Verification plan

*Article 13 of the AVR outlines the requirements for the verification plan of a verifier.*

Fifteen verifiers have indicated that their processes, with regard to the verification plan, have changed with regard to Article 13, with a further five verifiers specifying that it is their sampling approach which has changed. Thirteen verifiers have stated that the way in which they set up and implement their verification plan has not changed since the introduction of the AVR.

### 6.2.7 Summary of findings

In general, verifiers find the obligations of the verifier, as set out in Article 7 of the AVR, are clear and this article has assisted some verifiers in carrying out their verification work. However, verifiers may wish to signpost their operators to this article in order to help improve operator awareness of the verifier role.

Interviews have indicated that the formalisation of pre-contractual obligations in the AVR have assisted a number of verifiers in improving their processes, bringing them more in line with those MS that were already carrying out their pre-contractual arrangements in line with the AVR.

In general, verifiers appear to have taken note of requirements relating to time allocation for verification activities set out in the AVR and have incorporated them. However, there is variation in whether verifiers have charged for additional time or whether they feel able to. Verifiers should note that including provisions to do so in their contractual arrangement is a requirement of the AVR.

#### 6.2.7.1 Recommendations

##### Recommendation R 41

- As a good practice, all MS should consider encouraging verifiers to make their clients more aware of specific AVR requirements affecting the verification that is carried out and that may be indirectly or directly relevant to operators and aircraft operators. For example, the general obligations of the verifier (Article 7), the need for the verification contract to include provision

to charge for additional time (Article 9(2)) and information that the operator or aircraft operator shall make available to the verifier (Article 10).

**Recommendation R 42**

- As a good practice, all MS should encourage verifiers to ensure that the verification contract provides for a possibility of time to be charged in addition to the time agreed in the contract, as per Article 9(2) of the AVR and that they are complying with the requirements of Article 9 relating to allocation of time.

## 6.3 Verification activities and procedures

### 6.3.1 Verification activities

All interviewed verifiers have indicated that they use templates or checklists for verification activities, which are predominantly in Microsoft Word or Excel. A few verifiers also use Microsoft PowerPoint or PDF templates.

Documents used include checklists and templates for the verification activities, such as for operator information, strategic analysis, risk analysis, the verification plan, time allocation and for the development of the verification report.

For verification purposes, the Commission has developed a verification report template, which has a role in harmonising the verifier's external report and confirming coverage of verifier obligations. While not all verifiers confirmed the format used for their VR, this template is used by at least 11 MS. In some of these instances, the template has been transferred into their electronic reporting system. Four MS indicated that they use their own format for VRs.

### 6.3.2 Verification of data, methodologies and sampling approach

*Articles 14 to 21 of the AVR set out requirements for activities and procedures relating to verification, including the verification of data, methodologies and sampling approaches taken.*

Verifiers from 25 MS verified AERs from operators whose MP required them to have a sampling plan. A number of verifiers noted that they identified recommended changes to sampling plans, such as in instances where detail was not enough or was too general and without evidence. Other issues or points noted by individual verifiers in the interviews were as follows:

- MP approved without a sampling plan, as the CA had not approved one.
- No sampling plan in place at the start of verification, but produced during the verification process and in place before the AER and VR submitted.
- Instances where the reality did not follow what was in the approved sampling plan.
- No sampling plan in place where an installation with low emissions was relying on the sampling plan of their fuel provider.

There was no evidence from the verifiers' interviews as to whether these types of issue were wider spread.

Verifiers from 19 MS noted that they had verified methods applied for missing data. Four verifiers specified that methods used were approved with the CA in advance and no issues were highlighted. Eurocontrol data has been used for missing aviation data. One verifier had verified missing data methods relating to CEMS for N<sub>2</sub>O, but had noted that this was appropriate and had been done according to the appropriate standard. Responses in the verifier interviews therefore indicate that the majority of verifiers are checking whether methods applied for missing data are appropriate, as per Article 18 of the AVR.

Other comments on methodologies for missing data made by verifiers were as follows:

- In two instances, a verifier stated that alternative methods (approved by the CA) were in place. However, they had stated that they did not find these appropriate and they felt this could make verification difficult for them.
- One verifier stated that they had come across an instance where an alternative method used had not been approved by the CA and other instances where the estimation method used was not deemed to be conservative.
- One verifier noted that an operator might not always be aware of when they need to notify the CA. In all cases, and particularly where instances occur of an operator not notifying the CA where required, CAs should ensure they are making clear to operators when they are required to notify and ensure appropriate enforcement of this.
- Two verifiers indicated that Articles in the MRR (Article 23 relates to temporary changes to the monitoring methodology; Article 65 relates to treatment of data gaps) are not always clear to operators and guidance may be useful. One verifier expanded on this stating that links and references between articles are unclear. The other verifier did not elaborate on why operators might find the MRR Articles clear. CAs and verifiers may benefit from making operators more aware of specific guidance available<sup>15</sup>.

When asked about whether they had encountered situations in which they felt control activities implemented by the operator to prevent missing data were not effective or such activities had not been implemented, six verifiers stated that they had experienced instances where these had not been effective and five verifiers noted instances where procedures were not implemented. General feedback from verifiers indicated that procedures were often not adequate and improvements were required. CAs need to ensure that operators are putting adequate procedures in place and that these are being implemented, enforcing this where required.

Verifiers from ten MS indicated that their sampling approach has changed due to the requirements of the AVR (AVR Article 20). Five of these respondents stated that changes were to their documentation

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<sup>15</sup> [http://ec.europa.eu/clima/policies/ets/monitoring/docs/cf\\_tf\\_monitoring\\_workingpaper\\_datagaps\\_en.pdf](http://ec.europa.eu/clima/policies/ets/monitoring/docs/cf_tf_monitoring_workingpaper_datagaps_en.pdf)

and the recording processes. Some verifiers also gave examples of additional checks that are now carried out in Phase 3:

- Additional source streams
- Data flow
- Boundary of installation.

### 6.3.3 Summary of findings

All interviewed verifiers have indicated that they use templates or checklists for verification activities, which demonstrates a consistent approach across verification bodies, however, they each use different templates or checklists developed internally.

Some verifiers had identified issues with sampling plans, either indicating that these have not been appropriately checked and approved or that operators have not been using the approved sampling plan. CAs have the role of ensuring all sampling plans are checked and approved and enforcing operator compliance with the approved sampling plan.

Some verifiers have cited issues relating to methodologies for missing data (data gaps) and the effectiveness of control measures implemented by the operator to prevent missing data. CAs have a role in ensuring appropriate methodologies are approved, that procedures for missing data are in place and enforcing compliance with operators. Some verifiers have expressed concerns about the completeness of procedures as well.

#### 6.3.3.1 Recommendations

##### Recommendation R 43

- As a good practice, all MS should ensure consistent enforcement of operator use of approved sampling plans.

##### Recommendation R 44

- Recommendation to the Commission: in any updates of guidance documentation, information on methodologies for missing data (i.e. data gaps) should be made clearer to avoid misinterpretation by CAs, verifiers and operators. In addition linkages between MRR article(s) on data gaps (MRR Article 65) and temporary changes to the MP (Article 23) could be further clarified, as a lack of MS understanding on how the articles are linked has been highlighted in the CA interviews, as discussed in section 4.11.

##### Recommendation R 45

- As a good practice, all MS should ensure they are approving appropriate methodologies and consistently checking procedures for missing data in MP applications, as well as enforcing compliance where operator procedures are found not to be in place or effective.

##### Recommendation R 46

- As a good practice, all MS should ensure they enforce required compliance with procedures, including operator responses to verifier reported recommendations.



**6.3.3.2 Good practices**

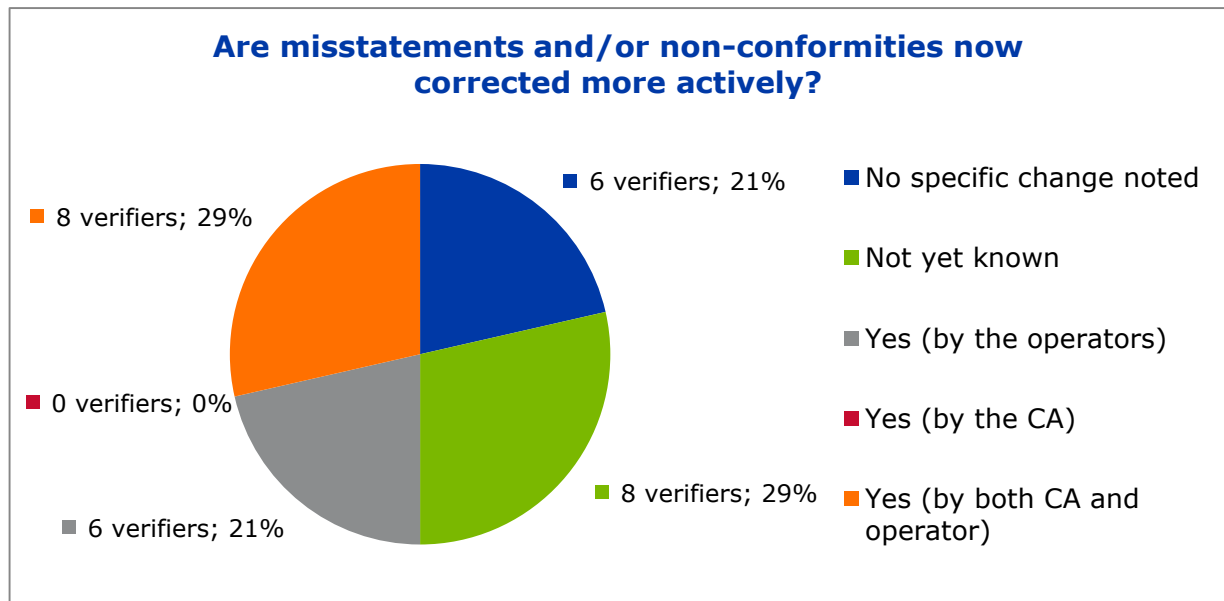
- Some verifiers produce an internal verification report, with greater level of detail on verification checks carried out. This can be used to provide further detail or evidence where required and could be considered a good practice for verifiers.

**6.4 Outcomes of verification**

**6.4.1 Misstatements and non-conformities**

Article 22 of the AVR outlines the requirements for addressing identified misstatements and non-conformities during the verification process.

Verifiers were asked whether they felt that the approach towards addressing misstatements and/or non-conformities has changed and whether these are now corrected more actively.



**Figure 10: Are misstatements and/or non-conformities now corrected more actively?**

Verifiers in six MS found that misstatements and/or non-conformities are now corrected more actively on the side of the operator and eight verifiers that these are addressed by both the operator and CA. Eight verifiers indicated that it is not yet known, either as this is the first year where improvements are listed in their VRs or they have not yet reviewed and had specific experiences. Verifiers in six MS have not noted any specific changes.

One verifier noted that MS have different approaches with regard to enforcing submission of IRs, with some being more strict with deadlines for submission and following up with operators on submission

than others. CAs need to ensure that operators are complying with the requirement to report on improvements to the monitoring methodology (as per MRR Article 69) and that the CA are enforcing submission dates, as set out in Article 69, as discussed in more detail in section 5.4.

Through participation in the Compliance Forum Task Force on Accreditation and Verification, many MS have found issues with verifiers miscategorising misstatements, non-conformities, non-compliances and recommendations in verification reports. Where such issues are identified, CAs should report their findings to the NAB that has accredited that verifier.

#### **6.4.2 Independent review**

*Article 25 of the AVR sets out the requirements for an independent review of the verification report prior to issuance.*

Verifiers from 21 MS stated that independent reviews were already carried out and processes had not specifically changed. For those that had not carried out independent reviews before the AVR came into force, the following changes were noted:

- Increased costs, although these costs would be those associated with coming in line with the AVR requirements
- Provides the verifier with additional assurance
- Changes to time allocation to include time for independent review and changes in how documentation is carried out

One verifier noted that guidance on what should be included in an independent review would be useful. Any verifier unsure of what should be included in an independent review should note that this is set out in AVR Guidance Document No.1, in section 3.2.11. As noted previously, where verifiers of CAs have particular recommendations for specific improvements to the available guidance documents, these should be fed back through the CA to the Compliance Forum task forces for consideration.

#### **6.4.3 Summary of findings**

Some verifiers felt that it was quite early in the process for them to comment as to whether misstatements and/or non-conformities are now corrected more actively. However, those that did respond indicated that they felt there were improvements, whether by operators or both by operators and the CA.

CAs have found issues with verifiers miscategorising misstatements, non-conformities, non-compliances and recommendations in verification reports. Where identified, such issues should be fed back to NABs.

The majority of verifiers stated that independent reviews had been carried out prior to Phase 3 and the introduction of the AVR. Those that had not carried out such reviews before gave some indication of the changes they had noted. Changes such as increase costs could be viewed as the cost of bringing them in line with the AVR requirements.

#### 6.4.3.1 Recommendations

##### Recommendation R 47

- As a good practice, all MS should ensure that they have procedures in place for following up on improvement reports and that a consistent approach is taken to this follow up and ensuring that operators are taking appropriate action on recommended improvements. This is covered in more detail in section 5.4.

##### Recommendation R 48

- As a good practice, all MS should ensure any issues identified with the miscategorisation of misstatements, non-conformities, non-compliances and recommendations in verification reports are reported to the NAB that has accredited that verifier.

##### Recommendation R 49

- As a good practice, all MS should encourage verifiers to familiarise themselves with the information contained in the AVR guidance documents, such as AVR GD No.1, section 3.2.11 on requirements for the independent review.

##### Recommendation R 50

- Recommendation to the Commission: an internet forum could be put in place for verifiers to allow sharing of experiences and to promote harmonisation.

## 6.5 Simplified verifications

*Articles 31, 32 and 33 of the AVR outline the requirements for simplified verifications for installations and aircraft operators, as well as justification for the use of simplified verification plans.*

The majority of verifiers have specified that no simplified verifications have been carried out in the first reporting year of Phase 3. Four verifiers specified that simplified verifications have been carried out for the 2013 reporting year, but three noted these were only for aircraft operators, as per AVR guidance.

Most MS CA representatives also indicated that simplified verifications were not carried out for the 2013 reporting year, except for some aviation small emitters. In a small number of instances, CAs have stated that site visits were waived for specific types of installations, such as offshore platforms or simple installations with low emissions. The MS that have indicated site visits were, or may have been, waived were not specifically mentioned by the verifiers interviewed. The AVR FAQ 4.5<sup>16</sup> states

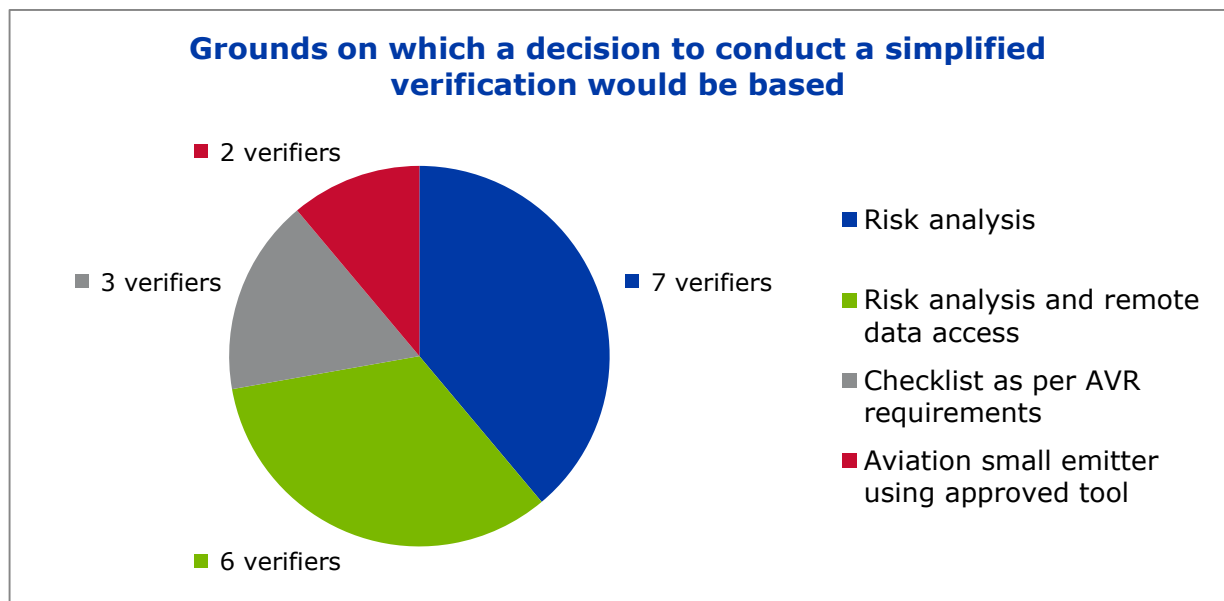
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<sup>16</sup> [http://ec.europa.eu/clima/policies/ets/monitoring/docs/faq\\_av\\_en.pdf](http://ec.europa.eu/clima/policies/ets/monitoring/docs/faq_av_en.pdf)

that, with the exception of aviation small emitters, site visits cannot be waived for installations in relation to the 2013 emissions report regardless of the verifier’s assessment of risks. Therefore, instances where site visits have been waived indicate non-compliance with the AVR.

Four verifiers have stated that they do not intend to carry out any simplified verifications for installations. Four verifiers indicated that simplified verifications would only be carried out for installations with low emissions or aviation small emitters. These approaches are both in line with the requirements as set out in the AVR.

Some verifiers specified the basis on which future simplified verifications (where there have been no significant modifications to the MP) would be carried out, as shown in Figure 11. These approaches are in line with the requirements as set out in Articles 31 and 32 of the AVR.



**Figure 11: Grounds on which a decision to conduct a simplified verification would be based**

**6.5.1 Summary of findings**

The majority of MS have not carried out simplified verifications in the first reporting year of Phase 3. However, in a small number of instances, site visits do appear to have been waived, particularly for simple sites with low emissions. This is a non-compliance with the AVR FAQ 4.5, which is derived from Article 21(1) (3) (4) and 31(3) (c) of the AVR. Site visits for some offshore installations also appear to have been waived.

### 6.5.1.1 Recommendations

#### Recommendation R 51

- All MS who have waived site visits for the first year of reporting in Phase 3 should be aware that the AVR FAQ 4.5 states that, with the exception of aviation small emitters, site visits cannot be waived for installations in relation to the 2013 emissions report regardless of the verifier's assessment of risks. This requirement derives from Article 21(1) (3) (4) and 31(3) (c) of the AVR. Where installation site visits were waived for 2013, these will need to be carried out for the 2014 reporting year.

## 7 Accreditation

The AVR defines requirements for National Accreditation Bodies (NABs) and National Certification Authorities (NCAs) that are specific to the EU ETS. Its introduction provides a common ground for the accreditation of verifiers and certification of individual natural-person verifiers across all MS. This section presents findings on the national accreditation processes and evaluates whether the introduction of the AVR has led to a greater degree of harmonisation and consistency across all 30 MS.

The subsections within this section are arranged in the following order of topics:

- 7.1 Appointment of NABs
- 7.2 Appointment of NCAs
- 7.3 Information exchange
- 7.4 Accreditation of verifiers
- 7.5 Cross-border accreditation

### 7.1 Appointment of NABs

*The Article 54 of the AVR states that "[t]he tasks related to accreditation pursuant to this Regulation shall be carried out by the national accreditation bodies appointed pursuant to Article 4(1) of Regulation (EC) No 765/2008".*

The project team found that:

- 27 MS have an appointed NAB and have been entrusted with the authority of accreditation as a public authority; of which two NABs have established procedures, but have not received any applications and are currently relying on cross-border accreditation. Verifiers active in these MS have been accredited in other MS, e.g. due to the small size of the market.
- Four MS have not appointed any NAB or NCA, and rely solely on cross-border accreditation.

#### 7.1.1 Summary of findings

Overall, all MS are in compliance with the AVR with regards to the appointment of NABs, as they are members of the European co-operation for Accreditation (EA). The appointment has also been timely enough to allow verifiers to get accredited by December 2013, on time for undertaking Phase 3 verifications. However, witness activities related to the accreditation assessments took place after accreditation certificates were issued.

## 7.2 Appointment of NCAs

*Article 54 allows MS to also entrust a national certification authority (NCA) other than the appointed national accreditation body (NAB) with the certification of verifiers that are natural persons.*

Only one MS has appointed an NCA for the certification of natural-person verifiers in this phase. This NCA is entrusted with the certification for other schemes, such as Eco-Management and Audit Scheme (EMAS) certification. It has the status of a public authority which means it has all relevant procedures, such as for imposing administrative actions and for dealing with complaints, in place. It has changed its procedures entirely to comply with AVR requirements. For example, single-person verifiers have to contract another single-person verifier or accredited body to carry out the independent review. While the NCA is under the supervision of a ministry and needs to report to the main EU ETS CA to prove that its procedures are in line with national law and the AVR, it does not undergo processes as elaborate as the peer review of NABs. The contact at the CA assumes that the documentary evidence in accordance with Reg. 765/2008 regarding the appointed NCA been provided to the Commission by the ministry in charge.

### 7.2.1 Summary of findings

As only one natural-person verifier has been certified by the NCA this form of verifier authorisation only has limited impact on the current EU ETS compliance cycle.

## 7.3 Information exchange

The AVR outlines information exchange requirements between the different bodies involved in accreditation and verification, i.e. CA, NABs, NCAs and verifiers, to ensure that each can fulfil its monitoring and reporting duties regarding accreditation.

### 7.3.1 Information exchange between NAB and CA

*Article 69 of the AVR requires MS to "establish an effective exchange of appropriate information and effective cooperation between their national accreditation body or, where applicable, the national authority entrusted with the certification of verifiers, and the competent authority". To facilitate coordination in MS that have multiple CAs, the same Article also requires that one CA needs to be assigned as focal point on accreditation issues.*

The project team concludes that the vast majority of MS have successfully implemented an effective information exchange between CA and NAB. The project team found that 24 MS confirmed to have an effective information exchange between the CA and the NAB/NCA. The various means in place to implement- efficient information exchange validated this finding. This included the following:

- Defining national communication procedures

- Engaging in frequent informal communications (e.g. phone calls and email exchanges on specific issues)
- Establishing close collaborations, such as the organisation of joint workshops or meetings on accreditation issues
- Participating in technical committees or working groups, making use of each other's expertise.

Only one MS does not meet the relevant AVR requirement as it reported that the information exchange is not effective; since despite requirement, the NAB is not informing the CA of the accreditation status of verifiers.

The two MS that have appointed NABs, which have not accredited any verifiers yet, report that procedures are in place, but cannot confirm whether information exchange would be efficient. Four MS have no NAB appointed for the purpose of EU ETS verifications, so it is not applicable.

In general, the project team found that where there is meaningful information exchange between CAs and NABs, it is going beyond the submission of formal reports, i.e. the work programme and management report, by establishing broader cooperation; e.g. CAs making use of the technical expertise of NABs and vice versa.

12 of 15 MS with multiple CAs, have designated a focal point for the information exchange with the NAB as required under Article 69(2) of the AVR. Three MS have not clearly designated a focal point as required.

#### **7.3.1.1 Work programme and management report**

*As per Article 70 of the AVR, NABs need to submit a work programme and management report to the CA by 31 December and 1 June respectively and inform its CA of administrative measures, such as withdrawal, suspension or reduction of accreditation scope, as well as informing on appeals decisions. It also requires CAs to communicate with the NAB after having received the work programme regarding any relevant information, including any relevant national legislation or guidelines.*

The interviews showed that 22 NABs have submitted work programmes to their respective CAs. Only three MS reported that their CAs have not received a work programme. In one case this was due to the fact that the accreditation process was just being introduced and verifiers were in the midst of their accreditation process. In six cases no work programme was received by the CA, as no NAB was appointed or the appointed NAB had no activities to report.

18 MS stated that the work programme was sufficient for the purpose of the CAs. One main purpose mentioned by CA was the identification of verifiers operating in their MS with accreditation from another MS's NAB. Yet, the information provided was not always up to date due to the fact that verifiers are often contracted a very late stage, i.e. after the submission deadline of the verification plan, which serves NABs as a basis for compiling the work programme. In order to get the full picture



of scheduled verification activities CAs rely on NABs to submit updates at a later stage, which is not a formal requirement in the AVR. Some CAs have identified the respective activity type per Annex I for each scheduled verification as relevant additional information to be included in future work programmes.

Regarding the requirement of CAs to communicate with the NABs, none of the interviewed NABs raised any concerns with CAs providing relevant information on national legislation or guidelines.

The project team also found that 19 MS received the management report from their appointed NAB, while six MS had not received it at the time the interviews were being held or it was not known. In six MS no management report was received from their NAB as no such body was appointed or the NAB did not have any accreditation activities to report.

Management report content: 16 MS found the content to be sufficient and serving the CAs' purpose, while three MS reported that it did not contain enough information for their purposes. A key purpose identified by CA was again the information provided on the performance of foreign verifiers. Their desired additional content includes additional information on the accreditation scope of verifiers, e.g. on scope extensions and reductions; summarised results of surveillance and reassessments; on outstanding non-conformities; and information that was not provided due to confidentiality concerns.

### **7.3.1.2 CA findings regarding verifiers**

*According to Article 72 of the AVR CAs are obliged to report to relevant NABs at least on an annual basis on findings related to verifiers from the reviews of AERs and VRs or inspections.*

At the time of the interviews, only two MS had filed serious issues regarding verifiers with the NABs concerned. 18 MS had not reported any findings to the NABs as they did not come across any issues related to verifiers' performance. Eight MS identified issues, but had not yet notified the NABs. The most common reasons were that the issues had just had been identified and further assessment was required before informing the NAB, or that the CA had limited capacity. While the requirement to report such findings is clear, one MS still considered that this type of exchange was not applicable as it was relying on other MS' NABs. Four MS stated that they have, or plan to, compile minor findings for the relevant NABs. Many MS were still in the review process of the AERs and VRs at the time of the interviews, therefore not all issues will have been detected. Also, CA are still becoming familiar with what they need to report to whom. Some are also reluctant to file a complaint with a NAB until and unless it is well-documented. Generally, major issues are reported as soon as they are detected and further investigated.

While CAs had not reported all of the issues identified during assessment period of the reporting period 2013/2014 to relevant NABs at the time of the interviews, the project team concludes that overall the process for identifying and communicating verifier related issues works well and meets the requirements of the AVR. Yet this finding is subject to effective and timely review processes on the sides on the CAs.

### 7.3.2 Information exchange between NAB and verifiers

*Article 76 of the AVR requires that verifiers report information on their activities to the NAB that has accredited them.*

Of the 25 NABs and one NCA interviewed:

- 15 received notifications from all of their accredited verifiers on planned verification activities.
- Eight NABs received notifications for more than half of their verifiers.
- One NAB received less than half of the notifications due.
- Three NABs/NCA received no notifications.

The main reason for not receiving notifications was that verifiers were in the middle of their accreditation process, in which they had provided all relevant information on planned verifications already. Late submissions were reported by seven NABs, with these usually due to verifiers being occupied by the accreditation process, not realising that this was a new requirement, the fact that operators contracted verifiers late or the NAB/NCA not requiring a notification as the planned verifications had been notified as part of the application process. For these reasons, NABs have usually been indulgent to breaches of the requirements, which will mean they have to be stricter in the coming years to ensure that these requirements will be met in the future and clearly communicate these requirements in order to allow verifiers to prepare the notification of planned verification on time.

The majority of NABs (18) reported that they received updates on planned verifications from their verifiers within timelines agreed.<sup>17</sup> Six NABs and the one NCA have not received updates on the verification plans from their verifiers, of which two erroneously did not consider this to be an applicable requirement during the accreditation assessment period. At the time of the interview, two NABs did not know whether they had received any updates.

Timely notifications were often found to contain only a rough indication of the planned verifications as the contracts with operators are often signed at a very late stage. Updates were found to be very useful as these contained more detailed information. The content of these notifications tended to be better and of more use for the NAB in MS where operators tend to contract verifiers regularly and/or over longer periods rather than for just one verification.

#### 7.3.2.1 Cross-border communication

*Article 71, 73 to 74 of the AVR outline formal information exchange requirements to facilitate efficient functioning of the provisions for cross-border accreditation and mutual recognition of verifiers.*

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<sup>17</sup> The timeline spans from as soon as new contracts are signed to eight days after a change is known to updates need to be provided every month.

Five NABs have noted that they provided their work programmes to other MS' CA and NAB in which the verifiers they have accredited are operating. However, not all relevant MS have reported that they have received the information. Not all MS seem to be aware that they should receive this. Three NABs stated they imposed administrative measures, two reduced scope and one suspended a verifier, who kept postponing and eventually never performed its witness activities. In all three cases the NABs' databases have been updated accordingly. However, only one NAB's website has a designated section providing detailed information on the reduction of scope. The information about the suspension reached the national CA and at least one MS. In the case of reduction of scope, no foreign MS CA was informed as this verifier reported to be operating only in the country it was accredited in. In both cases, and the databases were updated immediately.

None of the six MS that rely on accreditation by other MS NABs received work programmes from other MS NABs; only one MS CA reported that a management report was received. At least two of the four MS that have not appointed a NAB for EU ETS were unaware that they should receive work programmes from elsewhere, and that it is relevant for them to be informed of any issues regarding a verifier that is operating in their MS and likewise to engage in active return of relevant information to the accrediting NAB where appropriate.

The provided answers indicate quite clearly that the information exchanges between countries is to a large degree not satisfying the requirements of the AVR, both on the side of the sender and receiver of information. The cross-border reporting requirements do not seem to be clear to all NABs concerning accredited verifiers that are operating in other jurisdictions. Similarly, many CAs seem to be unaware that they now have the right to be informed on general issues through the work programme of NABs from other MS and not only on imposed administrative measures relating to specific verifiers. Receiving management reports from foreign NABs could also enhance the information exchange as CAs would be kept informed on the follow-up actions in regards to complaints and identified non-conformities putting them at ease that these issues are appropriately dealt with.

CAs are aware of the need to communicate their findings to the relevant NABs, but some have faced difficulties doing this in a timely manner, e.g. due to capacity constraints.

### **7.3.2.2 Verifier accreditation status**

*Article 75 of the AVR requires each NAB to maintain and regularly update a database with the accreditation status of verifier they have accredited.*

All appointed NABs maintain a database of accredited verifiers on their website. This database ranges from a simple list of only EU ETS accredited verifiers to a complex database containing all accredited and certified bodies for various accreditation systems governed by the NAB. The latter approach makes the search for relevant verifiers difficult and not user-friendly. However, in most cases the

information is available in the national language as well as in English. Four NABs reported that they update their databases in frequent but fixed intervals, rather than as soon as the accreditation status of a verifier changes, as is being done by the other NABs. These intervals range from weekly to as frequent as every 24 or even every three hours. In two cases of imposed administrative actions, it was confirmed that the database was updated immediately to reflect this change.

One NAB noted that reporting information on verifiers' activities outside of the MS in which they are accredited could be misleading as it only shows a backward looking picture and provides only limited information on whether a specific verifier is capable and interested in providing its services in other MS, e.g. that the right language skills are available. NABs will therefore only report issues to MS where they have been informed that their verifiers are active.

### 7.3.3 Summary of findings

Overall, the majority of CAs and NABs are on track in terms of implementing the information exchange requirements of the AVR and have developed a range of means to facilitate the communication. Yet, some MS will need to implement measures to meet the requirements related to the work programme and an overall efficient information exchange, while others need to fine-tune their procedures in terms of, for example, meeting the deadlines and providing information to all relevant bodies across all MS. Similarly, while for some MS the information exchange works well on national level, it will be necessary to clearly state which of the multiple CAs is in charge of accreditation issues in order to enhance cross-border communication. Therefore, this area should remain on the radar for future reviews. Also, the project team identified the need to follow up with MS to ensure that if new national legislation is introduced CAs continue to provide this information to their NAB in due time.

#### 7.3.3.1 Recommendations

##### Recommendation R 52

- The MS are reminded of their wider responsibility to communicate on findings regarding verifiers with any NAB concerned, not only their 'own' NAB.

##### Recommendation R 53

- MS relying on accreditation by other MS' NAB should be more proactive and engage directly with the relevant NAB.

##### Recommendation R 54

- MS should enhance cross-border communication by reminding their NABs of the requirements to inform other MS of the activities of the verifiers they have accredited. Similarly, MS knowing that verifiers from other MS are operating in their country should actively approach the relevant NAB to demand the information they should be provided with. NABs should also send back confirmations for receiving work programmes.

##### Recommendation R 55

The Commission may wish to consider providing good practice or example national protocol for communication between CA and NAB, in relation to the forms and frequency of

communications, situations in which communication is required, and the type of information that needs to be exchanged. This input could prompt a more efficient information exchange for countries that are currently struggling with this requirement.

**Recommendation R 56**

- The project team made the observation that the option of appointing an NCA for certifying verifiers that are natural persons could be omitted in a next update of the AVR since this form of appointing no longer plays a significant role in the EU ETS. In particular, for MS that have an appointed NAB in line with Regulation EC 765/2008, having another body to monitor activities of and ensuring it meets an equivalent level of credibility, the additional costs are not justified by the additional benefit.

**Recommendation R 57**

- MS should remind their NABs of stricter application and enforcement of the deadlines and requirements of the AVR in regards to verifiers informing on planned verification activities in order to ensure timely submission from now on. To accommodate the fact that verification plans submitted by the 15 November deadline are often incomplete due to late contractual agreements between verifiers and operators, NABs which have not done so yet or where the timeline 'as soon as a change occurs' did not trigger any update, should consider regular intervals by which updates will be required.

**Recommendation R 58**

- Reporting requirements of Article 71 in regards to information on administrative measures should be extended to informing all MS' NABs and CAs of such measures in order to ensure that no information gap occurs.

**Recommendation R 59**

- Similarly, Article 70 should be extended obliging NABs to send management reports to foreign CAs/NABs as well in order to inform CAs that have sent information on issues identified or filed complaints against verifiers about how this has been addressed. Sending it to all CAs will also ensure that CAs in any MS where the verifier might operate are being informed while limiting the burden on the NAB to identify who exactly the relevant MS are. .

**Recommendation R 60**

- NABs will need to be reminded of their obligation to submit work programmes to each MS where their accredited verifiers are or intend to operate.

**Recommendation R 61**

- The three MS are reminded to designate one of their multiple CAs as a focal point for accreditation issues (which should not prevent them from involving more than one CA in the communication with their NAB).

### 7.3.3.2 Good practices

- Good practice in terms of engagement between CAs and NABs includes informal information exchanged via email and phone and most importantly, regular meetings and workshops. Seeking active support from the NAB in the translation of accreditation and verification related documents, jointly organising workshops for verifiers or being part of the other bodies' technical committees, are approaches that should be adopted by other MS, too.

- MS inviting NABs and verifiers from other countries to their meetings facilitates the cross-border information exchange and helps harmonising verification approaches across MS.
- One of the small MS is informed of verifier site visits and arranges a pre-meeting with the verifier before any site visit to ensure a common understanding. While such an approach is only manageable for MS with a small number of installations, this practical approach to monitor verifiers' activities within a MS is very effective.
- One MS established and signed a convention between CA and NAB in which the Terms of Reference for information exchange and cooperation is defined in more detail.
- Sending management reports, rather than only work programmes, to the MS concerned, i.e. to MS in which verifiers are operating in, allows CAs and NABs of these MS to have full access to information about any issues identified in regards to verifiers providing services in their country.

#### 7.4 Accreditation of verifiers

*With the introduction of the AVR a common approach to accreditation has been defined by defining a clear set of requirements for both verifiers and the NABs. Articles 34 to 42 of the AVR lay out the requirements that verifiers need to fulfil in order to become accredited, while Articles 43 to 53 prescribe the main steps of the accreditation process to be followed by NABs.*

25 NABs/NCA provided additional information to verifiers regarding their national accreditation processes and the relevant requirements additional to the AVR and Commission guidance notes. Next to translating the relevant requirements and processes, this additional information usually embeds the AVR requirements and EA-6/03 into a national standard accreditation programme based on EN ISO 14065, to align it with other accreditation programmes governed by the NAB.

Such documents typically describe step-by-step what verifiers need to do in order file a complete accreditation application for the EU ETS and are available on the NABs' websites. Commission guidance notes were used to the extent possible as, at the time many accreditation procedures were being developed, not all guidance documents were yet available. Some NABs provide technical briefings or instructions via telephone in addition to this documentation to clarify the accreditation approach. To inform verifiers of the requirement to obtain accreditation according to the AVR for Phase 3 and to familiarise them with the new provisions, some NABs, usually in conjunction with the main CAs, organised workshops for all verifiers accredited in Phase 2.

Only two MS decided to not provide any additional information and refer verifiers only to Commission guidance and EA-6/03 for information on the accreditation requirements.

*Articles 45 to 47 prescribe the main steps of the NAB's assessment process for it to come to a decision over whether to accredit an applicant entity or not. The steps include the request for accreditation, the NAB's preparation for assessment, the assessment itself and the decision on accreditation and issuance of an accreditation certificate.*

The project team found that each of the 27 interviewed NABs/NCA request applicant entities to provide all of the relevant information to be submitted as part of the accreditation application. Application requirements can therefore be considered to be complete in the sense that they request the information required as per the AVR. In many cases, the accreditation process was based on EN ISO 14065 and met the harmonised standard pursuant to Regulation 765/2008 already in Phase 2, which facilitated the implementation of the AVR specific requirements for Phase 3. One NAB required applicant entities to only submit information that these entities had not yet provided for their EN ISO 14065 accreditation. They were required to undertake a gap analysis in order to identify the information required in order to demonstrate compliance with the AVR. A new accreditation application including the entire set of information will become due upon expiry of the EN ISO 14065 accreditation, which might be due before the expiry of the EU ETS accreditation certificate.

The interviewed NABs/NCAs described the steps of the assessment process in line with what is requested by the AVR. This process includes a review of all relevant documents and records submitted with the accreditation request. The NAB then visits the premises of the applicant verifier to review a sample of the internal verification documentation and to assess implementation of the quality management system. As a next step, the NAB must observe the performance and competence of staff during a verification activity. The NAB then reports any findings it may have to the applicant and requests it to respond. An assessment of the applicant's response and actions is then undertaken. Accreditation certificates are issued if all of these steps are completed to the satisfaction of the NAB.

*Article 48 of the AVR limits the validity of the accreditation certificate to five years.*

The accreditation certificates issued by 15 NABs/NCA have a validity of five years. In 11 MS the validity is limited to four years, in most cases due to alignment of the EU ETS accreditation with other national accreditation programmes. In one MS the validity is currently only for one year. It is expected that the validity of accreditation certificates will be extended to three years and that issued certificates will be renewed in the fourth quarter of 2014.

*Articles 34 to 39 lay out the competence requirements for verifiers. If the assessment process detects that the applicant verifier does not meet these requirements, the applicant verifier will not become accredited in the first place. When incompetence becomes known at a later stage, the accredited verifier will face administrative measures in accordance with Article 53. The same article also requires MS to provide the opportunity to appeal against such measures.*

Out of the 27 NABs/NCA interviewed, nine established their procedures for checking that verifiers' competences meet the requirements of the AVR according to the Commission AVR Key guidance note no. II.7. 18 NABs' have established their own procedures to fulfil the requirements in regards to ensuring that accredited verifiers meet the AVR's competence requirements, which are usually based on the competence management process required by EN ISO 14065.



Interviews of key personnel, most importantly the lead auditor, during the office visit are found to be key to determine competence, next to witness activities and to reviewing the competence procedures that verifiers present. The NCA even developed an oral exam to test verifiers' knowledge of the AVR requirements. Generally, all NABs/NCA have appropriate procedures in place to check that verifiers are compliant to Article 34 to 39.

The new competence requirements of the AVR and NABs'/NCA's procedures for checking that verifiers meet these requirements have led to a number of accreditation applications being rejected or to administrative measures being imposed on verifiers. In at least three cases, applicant entities, which were accredited for EU ETS verifications in Phase 2 either did not get accredited for Phase 3, or only with a reduced scope, due to not being able to meet the relevant competence requirements of the AVR. Three NABs stated they imposed administrative measures, of which two were reductions of scope and one was a suspension of a verifier. Two NABs found out about the verifier not meeting the AVR requirements any more through communication with the verification body itself or through a witness activity. All 27 NABs/NCA have the procedures to impose such administrative measures in place.

16 MSs were able to confirm that procedures for filing appeals against NABs'/NCA's administrative measures are in place. These are in all cases implemented by the NAB and are part of the NABs' general procedures.

*Articles 41 and 42 define the requirements for verifiers concerning how to ensure that they act impartially and independent when providing verification services to EU ETS operators and how verifiers should demonstrate that they comply with the AVR in this respect.*

In most cases EN ISO 14065 and the AVR serve NABs/NCA as basis for determining whether verifiers ensure impartiality and independence in line with the requirements. In some cases NABs also checked verifiers' procedures against EA-6/03. These requirements are typically checked during office assessments, review of verifiers' procedures, such as contract review procedures, and risk analysis. Where verifiers are also accredited under EN ISO 14065, which is commonly the case, members of the impartiality committee are subject to a check. Data from business registers are being used to detect linkage to any operators. Services provided by verifiers that relate to the EU ETS, including training, such as on metrology, are being assessed to detect potential conflict of interest and how this is being addressed. Witness activities are being used to observe whether individual verifiers are aware of their role and do not act as consultants.

All 27 NABs/NCA reflected upon their procedures in a way that confirms that they are fully aware of the requirements and implemented them in accordance to the AVR.

#### **7.4.1 Surveillance and extraordinary assessments**

*Article 49 of the AVR stipulates how NABs shall carry out surveillance of its accredited verifiers.*



26 NABs/NCA confirmed that surveillance is undertaken on an annual basis, involving a witness activity during the first quarter and an office visit during the second half of each year. Two NABs reported that they carried out surveillances for other MS NABs on verifiers operating in their MS. 23 NABs/NCA confirmed that they use technical experts in their assessments, such as consultants with relevant EU ETS or industry expertise, technical experts from CAs, industry, universities and scientific institutes, former verifiers, or staff from other MS' NABs. In one MS, such technical experts include verifiers, which create some risk of conflicts of interests between the technical assessor and the applicant entity. While relevant industry and EU ETS expertise is usually required from all these technical experts, nine NABs provided accreditation specific training to them or monitored their performance.

*The requirements for extraordinary assessments are provided in Article 51 of the AVR.*

Only two NABs reported that it has undertaken an extraordinary assessment in Phase 3. These extraordinary assessments were triggered by a verifier requesting to extend its scope and informing the NAB that it wishes to operate in another MS as well, and a NAB ensuring that previous identified non-conformities were resolved.

#### **7.4.2 MS' monitoring of NABs' activities**

*According to Article 65 a MS is required to monitor its NAB at regular intervals to ensure that it fulfils the AVR's requirements.*

Out of the 27 MS that have an appointed NAB/NCA, 21 MS can be considered to have an appropriate approach to monitor the NABs compliance with the AVR requirements. In cases where a different Ministry is tasked with the general supervision of the NAB, which is not associated to the MS' CA, the CA usually uses the AVR's information exchange requirements to obtain relevant information or even engages with the NAB by attending witness activities or being part of the NAB's technical committee or MS' accreditation council. In two MS, the CA has been tasked with the EU ETS specific monitoring of the NAB, while another ministry remains in charge of the general monitoring of the NAB. Six MS were not able to confirm that there is a monitoring process in place that satisfies the AVR requirements. These MS rely entirely the information provided in the NAB's work programme and management report, and on the EA's peer review or monitoring performed by another ministry to detect any potential nonconformities of the NAB.

#### **7.4.3 Reassessment procedures**

*Article 50 of the AVR entails the requirements for a reassessment procedure that NABs need to have in place in order to determine whether an accreditation certificate can be extended after its expiry.*

26 NABs confirmed that the procedures for reassessing accredited verifiers are in place and have been established as part of the general accreditation procedures. Generally, NABs will remind their accredited verifiers in time to submit the application for extending the accreditation certificate together with the relevant information at least six month before expiry of the certificate.

While the basic steps of reassessment are defined by the NCA, detailed procedures are not in place yet, as it wants to gain experience with the current procedures.

#### **7.4.4 Summary of Findings**

In summary, the AVR has led to a great degree of harmonisation. In MS where appointment of verifiers was not based on accreditation previously this is now the case. Also, the accreditation process is aligned to great degree across all 27 NABs, with some deviations, such as the validity of the accreditation certificate and delays in the development of accreditation process. Hence, some areas for improvements remain, as outlined in more detail in the recommendations below. However, notwithstanding those improvements, the project team is confident that the accreditation processes in all MS with NAB<sup>18</sup> all relevant requirements.

##### **7.4.4.1 Recommendations**

###### **Recommendation R 62**

- The six MS, that were not able to confirm that there is a monitoring process in place, should ensure they have established the relevant procedures for this task, as required by the AVR in accordance with Section 6.3 of EN ISO/IEC 17011.

###### **Recommendation R 63**

- The MS should remind their NABs to revisit the expiry date of all EU ETS accreditation certificates in order to assess whether they will all require reassessment at the same time or the reassessment is more spread over time. If they will expire all around the same time, the NABs that have accredited a high number of verifiers should consider whether they need to stagger the required reassessments.

##### **7.4.4.2 Good practices**

- One MS attends witness activities of the NAB's assessment process which enables the MS to have an effective means to monitor its NAB, next to assessing the work programme and management report.
- One MS aligns of the timing of the reassessment for EU ETS accreditation with existing EN ISO 14065 accreditation which will reduce the burden for verifiers.
- Due to the limited timeframe in which verification can take place, the NAB of one MS issues the accreditation certificate under the condition of a successful completion of a witness

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<sup>18</sup> with the exception of two MS where the NABs did not receive any application

activity. This ensures that the accreditation is only finalised once the full competence of a verification body has been assessed.

## 7.5 Cross-border accreditation

*Article 66 provides for the mutual recognition in all MS of verifiers accredited by a NAB that has successfully undergone peer evaluation.*

Of the verifiers interviewed from 27 MS that responded, two had not encountered a situation in which MS or operators did not accept their accreditation certificate without any prejudice because these were issued by another MS' NAB. In one case, a verifier faced issues when offering services to operators in a MS different to the MS it was accredited. The NAB of the MS concerned had provided operators with a list of its accredited verifiers, which let operators assume that these are the only verifiers that hold a valid accreditation certificate. It required some arguing and persuading on the part of the traveling verifier to convince operators that it held an accreditation certificate that is also valid in that MS. Another verifier reported that for it to undertake verifications in two MS it was required to speak the national languages and to have office in the MS. While the national reporting requirements, e.g. using national templates and providing a verification report in national language, might require a foreign verifier to be able to converse in the national language, it is not obligatory for verifiers, neither by the AVR or Regulation 765/2008, to have an office in each MS where they operate. In one MS it was reported that verifiers that wish to undertake verifications for aircraft operators still need to be recognised by the relevant CA due to national legislation.

While all but one NAB confirmed that the aspect of time allocation is being assessed as part of the accreditation process, the project team found that the approaches vary quite substantially. Since this aspect directly affects competitiveness between verifiers, there should be a harmonised approach across all NABs.

### 7.5.1 Summary of findings

The project team found that AVR provides a good foundation for cross-border accreditation, and decreases the burden on verifiers by facilitating MS recognition of verifiers accredited in another MS. Only in one MS did a verifier encounter a situations in which an operator did not accept their accreditation certificate because it was issued by a different NAB than the national NAB of that MS. This was mainly caused by the fact that the MS' CA maintained a list of accredited verifiers, which did not include verifiers from other MS, a practice which undermines mutual recognition of verifiers. Similarly, the practice in another MS of requesting foreign verifiers to register is a non-compliance against the AVR.

The project team was not able to identify any discrepancy between the quality of accreditation procedures in MS. In addition, no verifiers appear to have applied for accreditation in different MS than the verifier was established, when there was a local NAB in place. Yet, there remains some

difference in the stringency with which certain requirements are being checked during the accreditation process, such as assessing whether verifiers allocate sufficient time.

#### 7.5.1.1 Recommendations

##### Recommendation R 64

- MS should advise their CA and NABs to refrain from providing lists to operators of accredited verifiers as these can be out of date or tend to omit verifiers that are accredited in another MS. Instead NABs and CAs should advise their operators to use the EA web-link to all NABs<sup>19</sup>.

##### Recommendation R 65

- MS should remind their NABs of the importance of submitting the work programme to other MS' CAs and NABs in order to ensure that cross-border accreditation can happen effectively.

##### Recommendation R 66

- The MS still applying some procedure of approving foreign verifiers for undertaking verifications for aircraft operators should be required to terminate this practice and inform its aircraft operators of the fact that any verifier with an accreditation certificate can in principle perform this task as long as the it can do so in the required language, which in the case of aviation can often be English.

##### Recommendation R 67

- All MS should advise their NABs to share their experience, e.g. through a working group meeting organised by the EA, in assessing whether verifiers have allocated sufficient time in order to arrive at a common understanding of what can be considered 'sufficient time' and how this can be checked.

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<sup>19</sup> <http://www.european-accreditation.org/information/national-accreditation-bodies-having-been-successfully-peer-evaluated-by-ea>

## 8 Competent authority coordination and communication

This section considers the way in which MS have complied with the MRR with respect to competent authority coordination. The regulation indicates how competent authority (CA) functions can be organised, and provides information about how they should communicate, where there is more than one entity involved. This section also addresses CA staff competence.

The subsections within this section are arranged in the following order of topics:

- 8.1 Competent authority organisation
- 8.2 CA coordination
- 8.3 Competence of the competent authority staff

### 8.1 Competent authority organisation

*According to Article 18 of the EU ETS Directive (Directive 2003/87/EC), more than one competent authority can be involved in the compliance of EU ETS in a MS. Article 10 of the MRR defines that in such cases MS must coordinate the work of the CAs. The article does not elaborate on how this coordination should take place.*

All MS have assigned at least one CA to handle EU ETS compliance tasks. In principle, the existence of only one CA seems preferable in terms of ensuring overall quality and harmonised treatment of all installations. However, such an approach is not feasible in some MS due to national circumstances, such as existing competence structures or the political framework.

While the 2013/14 compliance cycle showed a trend towards a centralisation of responsibilities as compared to Phase 2, the number of CAs in each MS varies widely, as do the approaches used in the coordination of multiple CAs per MS differs considerably. However, there was no correlation identified between the level of harmonisation, consistency and quality of CA work with the number or nature of the CAs; as some MS achieve a high level of harmonisation despite having a large number of CAs.

In 15<sup>20</sup> out of 31 MS, there is only one central CA<sup>21</sup> responsible for the EU ETS compliance cycle. In the remaining 16 MS<sup>22</sup>, which have multiple CAs the number of CAs differs substantially: Four MS<sup>23</sup>

<sup>20</sup> BG, CY, CZ, DK, EE, IE, IS, IT, LI, LU, MT, NL, NO, RO, SI

<sup>21</sup> Only authorities directly involved and taking relevant decisions in permitting and reviewing AERs and VRs were accounted for as CAs. This excludes Ministries of environment which only set the legal framework, accreditation bodies, and authorities responsible for inspection (as inspection is not a task included under the EU ETS Directive)

<sup>22</sup> AT, BE, DE, ES, FR, FI, GR, HR, HU, LT, LV, PL, PT, SE, SK, UK

<sup>23</sup> PT, FI, GR, HR

have two CAs; in two of these MS<sup>24</sup>, one CA is responsible for installations and the other is responsible for aviation (or aspects of aviation); in another MS<sup>25</sup>, the responsibilities are divided regionally and in the fourth MS<sup>26</sup>, responsibilities for the administrative compliance tasks are handled by one CA, while more technical tasks are handled by the other. Three MS<sup>27</sup> have two to ten CAs, while four MS<sup>28</sup> have between 10-50 CAs. Four MS<sup>29</sup> have more than 50 CAs. In all MS, one CA can be identified as a central CA, providing to various degrees technical support to the regional/local CAs. Yet, the CAs acting as central CA often do not have a supervisory role over the regional ones and hence can therefore not ensure that assessment and review processes are undertaken in a harmonised and consistent manner across all CAs. Table 14 gives an overview on the number of CAs across the MS.

**Table 14: Overview of number of CAs per MS**

MS	No of CAs	Comments / country specific explanation
AT	81	1 Federal Ministry of Environment (receiving and reviewing AERs + VRs for installations and aviation, as well as MP for aviation) + local authorities responsible for issuing and renewing permits and approving MPs for installations, as well as receiving and assessing notifications of a change to the MP
BE	3	Flanders: 1 Ministry of Environment, Nature and Energy (responsible for MPs, AERs and VRs), with provincial authorities responsible for GHG permits and environmental inspection authorities carrying out inspections Brussels region: 1 Ministry of Environment (one installation) Wallonia: 1 Ministry of Environment (MPs, AERs and VRs), with Regional Authorisation and Permit departments responsible for GHG permits and environmental inspection authorities carrying out inspections
BG	1	Executive Environmental Agency
CY	1	Ministry of Agriculture, Natural Resources and Environment (MANRE)
CZ	1	1 Ministry of Environment, Department of Energy and Climate protection, responsible for every step in compliance chain except inspection and registry.
DE	< 250	1 central CA (DEHSt), large number of local authorities <sup>30</sup> involved, differing approaches in federal states; often MP approval is centralised in federal states and only permitting lies with local CAs, some federal states have one central CA
DK	1	Danish Energy Agency responsible for everything in compliance chain including legislation
EE	1	1 central CA (MoE)
ES	20	19 regions, one CA per region + Ministry of Environment as central CA for installations and

<sup>24</sup> FI, GR

<sup>25</sup> PT

<sup>26</sup> HR

<sup>27</sup> BE, LT, UK

<sup>28</sup> ES, FR, LV, SE

<sup>29</sup> AT, DE, PL, SK

<sup>30</sup> According to central CA there are less than 250 CAs, as number was reduced since last review, but exact count is unknown

MS	No of CAs	Comments / country specific explanation
		CA for aviation
FI	2	Energy Authority Trafi for Aviation
FR	24	1 central CA (Directorate of Energy and Climate (DGEC) at the Ministry) and 23 local authorities (DREALs)
GR	2	1 Emissions Trading Office at the Ministry of Environment and Climate Chare 1 Civil Aviation Authority for aviation (Hellenic Civil Aviation Authority)
HR	2	1 Ministry of Environment in charge of issuing permits and inspection, focal point for accreditation issues 1 Environment Agency in charge of revision and approval of MP, AER, VR
HU	3	1 Ministry of Agriculture is responsible for the overall administration of the system 1 Ministry of National Development is responsible for the development of the legislation and allocation of allowances 1 Ministry of Agriculture has delegated its duties to the National Inspectorate for Environment and Nature (NIEN), which executes most of the functions of the CA including the national registry, permitting, review and approval of MP, AER, VR, as well as compliance and enforcement
IS	1	Environment agency
IE	1	Irish Environmental Protection Agency
IT	1	1 National Committee in which several ministries and one representative from regions are represented
LI	1	Office of Environment (OE)
LT	9	1 Ministry of Environment in conjunction with the Environmental Protection Agency (EPA); 8 Regional Environmental Protection Departments currently in charge of permitting, MP approval, review of approval of IR, AER and VR and inspection
LU	1	1 Administration de l` Environnement (AEV)
LV	10	2 central (SES, ESB); 8 regional SES boards
MT	1	Malta Resources Authority (MRA)
NL	1	Dutch Emissions Authority (NEa) responsible for all compliance steps
NO	1	Norwegian Environment Agency
PL	275	1 central CA (KOBIZE), 274 local CAs 1 Ministry of Environment for point for accreditation issues
PT	2	Environmental Agency (APA); one for mainland, one for islands
RO	1	Ministry of Environment and Climate Change
SE	22	1 central CA: Environmental Protection Agency (EPA) in charge of review and approval of IR, AER and VR, focal point for accreditation issues 21 Country Administration Boards (CABs): in charge of permitting and MP approval
SI	1	1 Slovenian Environment Agency

MS	No of CAs	Comments / country specific explanation
SK	73	1 Ministry for Environment, responsible for aviation, focal point for accreditation issues 72 District Offices, responsible for installations
UK	5	Environment Agency in England (EA); Scottish Environmental Protection Agency (SEPA); Northern Ireland Environment Agency (NIEA); Natural Resources Wales (NRW) and the Department of Energy and Climate Change (DECC) for offshore installations

In all but one MS with multiple CAs, harmonisation of approaches is supported by the central CA that serves as focal point in the respective MS. In general, there are two common approaches to organise the tasks between multiple CAs. First, the central CA can hold the responsibility for some of the relevant steps in the compliance cycle (e.g. review of AER and VR), while other tasks are handled entirely by local/regional CAs, most commonly permitting, inspection or MP approval.

A second approach is that the central CA ensures coordination by taking appropriate measures for steering the local/regional CAs, including centralised quality control, training, guidance and/ or regular meetings.

**8.1.1 Summary of findings**

The project team found that that MS are still facing some challenges in the CA coordination when more than one CA is assigned with MRAV related tasks. While in over half of the MS (16) only one CA is responsible for the compliance work, in 15 MS multiple CAs are involved in this work. Issues of concern are usually an inefficient information and document exchange where the permit, MP assessment and AER and VR review are allocated to different CAs, which negatively effects each CAs’ ability to perform its tasks. Using a common IT system or central database for storing all relevant documents has helped to overcome these issues.

Yet, MS are undertaking measures to enhance harmonisation and quality. Differences in approaches taken and in the quality of the compliance process may arise where local or regional CAs perform compliance-related tasks autonomously, since regional CA are usually working on many more tasks than only on EU ETS and are therefore resource constraint. Defining clear communication procedures between the central CA and the regional ones, as well as assigning clear support functions to the central CA usually helps in overcoming these issues.

The project team observed a tendency of shifting towards allocating more tasks from regional CAs to the central CAs, limiting regional CAs’ tasks to permitting only, as efficiency is gained from centralising the tasks of MP approval, review of IR, AER and VR at the central CA. Some MS have implemented changes to their CA organisation to shift to this more centralised organisation. Given these structural changes and the ongoing challenges in some areas of compliance discussed in other sections (e.g. Permitting or Monitoring), it will be valuable for the Commission to continue to explore whether or not the existing coordination in MS with multiple CAs is sufficient in order to ensure



appropriate quality and comparability of the results over time. MS themselves should take responsibility for considering the roles of coordination of different CAs more closely, depending on their circumstances. For example, as new national or EU-level regulations or guidance are developed. It is important to also note that staff in local/regional CAs may only be responsible for a small number of installations and could have less experience on specific monitoring issues, potentially affecting the quality of compliance.

In addition, in MS with multiple CAs, the MS needs to have a clear strategy for addressing issues that may change which CA is responsible, e.g. in cases where the operator of an installation changes and hence the CA responsible for the installation might also change.

#### **8.1.1.1 Recommendations**

##### **Recommendation R 68**

- Nine MS with multiple CAs should take responsibility for considering the roles of coordination of different CAs more closely, depending on their circumstances. This could be in the form of defining clear communication processes between the different CAs, assigning the central CA with a supervisory role in order to prescribe regional CAs harmonised procedures on the assessment of permit and MP applications, and AER and VR review procedures where applicable. The introducing of an IT system, e.g. a comprehensive electronic reporting system covering all relevant processes of the compliance cycle, for communicating and sharing information across all CAs should be considered. Alternatively, the implementation of a common database, to which all CAs have access, should be considered.

##### **Recommendation R 69**

- The 16 MS in which local/regional CAs perform compliance-related tasks autonomously should ensure that responsibilities are clear for all CAs and consider providing the central CA the mandate to conduct periodic checks on MPs, AERs and VRs approved by the local/regional CAs to facilitate consistency and quality.

##### **Recommendation R 70**

- For the 16 MS with multiple CAs, these MS should consider providing regular training and guidance on processes, such as checking MP, to staff of local/regional authorities to ensure harmonisation of approaches and quality of compliance work.

#### **8.1.1.2 Good practices**

- As a good practice, in cases where local/regional CAs are in charge of issuing permits, while the central CA approves MP, the MS should develop national procedures prescribe that both entities consult each other on their final decision in order to ensure that both documents, the issued permit and the approved MP, are in line with each other.<sup>31</sup>

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<sup>31</sup> As is done in DE from 2014 onward

## 8.2 CA coordination

*Article 10 of the MRR stipulates that where a MS has multiple CAs it shall coordinate their work.*

In 15 MS, there is only one central CA involved in the compliance cycle tasks, which limits and simplifies coordination to that within this one CA. These CAs reported that they are coordinating and communicating internally through regular meetings or on a bilateral basis, if needed. In seven out of 16 MS with multiple CAs, at least the tasks of MP approval and review of AERs & VRs are done by the same CA (on a national or regional level), which limits the need for cross-CA coordination. In the 16 MS, in which more than one CA is involved in the compliance work, the coordination requirement is satisfied in the sense that each CA covers specific tasks either based on a specific steps of the compliance cycle based on a region. Yet, the coordination between CAs in regards to information exchange, which is relevant for each CA to be able to implement its task in accordance to the MRR differs between MS. Information exchange ranges from daily communication to only periodic meetings/workshops, as the need arises to using a common database or IT system. While in most of these MS the central CA provides guidance and clarification to local/regional CAs, such ad-hoc communications, whenever issues arise, it cannot always ensure that harmonised approaches are applied by all regional CAs and that all relevant documentation is exchanged. Also, local/regional CAs tend to make use of this form of communication to different degrees.

### 8.2.1 Summary of findings

The interviews showed that there is coordination within and across the CAs engaged in the compliance work, but the extent and regularity differs considerably. Given these different and irregular approaches, there is a risk that relevant information will not always be given to all relevant CA staff involved or that the procedures differ across CAs within the same MS, which may lead to differences in the quality of compliance work.

#### 8.2.1.1 Recommendations

##### Recommendation R 71

- In five MS where more than one CA is involved in the compliance work, the MS should ensure the expectations for coordination between the CAs are clearly defined, e.g. by tasking the central CA with drafting guidance documents or checklists and prescribing local/regional CA to use them, in order to facilitate proper coordination according to MRR Art. 10. Also, defining clear information/document exchange requirements for CAs should enhance the coordination.

#### 8.2.1.2 Good practices

- The application of a common IT system, which covers all compliance steps and communications between CA, operators and verifiers, prescribes workflow and procedures for

the CA staff ensures that a harmonised and consistent approach is applied by all CAs within a MS.

- Introducing the requirement of a hearing between the CA that issues a permit and the CA that approves a MP ensures that both documents are in line and improves compliance through enhanced coordination.

### 8.3 Competence of the competent authority staff

*The MRR does not define which and how competences of CA staff should be obtained and maintained. Yet, the quality of assessments and reviews, and hence the compliance with MRR requirements will ultimately depend on the expertise of CA staff.*

The transition from Phase 2 to Phase 3 involved major changes for some MS. Also, some MS have large departments, while in other cases there are only one or a few staff involved. The interviews showed that the extent to which the competence and the further development of the CA staff is managed is less than would be expected and differs considerably among the MS, ranging from on-the-job learning to the provision of specific training aimed at developing detailed expertise.

In 26 out of 31 MS, staff of the CA primarily gain competence by learning on the job, which makes it more difficult to ensure consistency on comprehensiveness in training. However, 13 MS complement this with general training for their staff members. Seven MS provide their staff with specific training in order to develop experts on different ETS-related topics. Also, 11 MS have established internal competence requirements, e.g. with regards to the professional qualifications for potential CA staff.

In addition, the CA staff of several MS have regular internal meetings in which information is exchanged and potential issues are discussed. By this, not only a harmonised approach is facilitated, but these meetings function also as a platform for getting answers to specific issues.

#### 8.3.1 Summary of findings

The interview team found that the vast majority of MS are not providing their CA staff with specific training as would be expected; rather competence is typically gained through on-the-job learning. MS relying on on-the-job learning only do not built up competences in an efficient way. Only few MS provide their CA staff with expert trainings. As discussed in other sections, several MS are struggling with one or more aspects of the compliance cycle. The limited or inconsistent training, especially for MS with a small number of ETS installations, bears the risk that the CA staff does not have the necessary expertise or sufficient experience in order to be able to carry out the compliance work properly.

### 8.3.1.1 Recommendations

The following recommendations and good practices are provided to help facilitate ongoing compliance, consistency and quality.

**Recommendation R 72**

- All MS with multiple CAs should provide at least general training consistently to the relevant staff of all CAs, especially of local/regional authorities to ensure a minimum level of competence and harmonisation of approaches.

**Recommendation R 73**

- MS that do not currently have internal competence requirements should develop and define requirement profiles in order to guarantee a necessary level of competence of CA staff (e.g. by professional background, expertise).

**Recommendation R 74**

- All MS with multiple CAs should implement or continue a national helpdesk (maintained by the central CA) where local/regional staff can get quick advice, as specific issues related to single installations may arise that are not fully covered by guidance documents or general training.

**Recommendation R 75**

- All MS should ensure there are internal meetings on a regular basis or a similar mechanism in order to facilitate regular and timely information exchange among the staff involved in the compliance work.

**Recommendation R 76**

- All MS should implement internal checklists and to develop guidance documents, or use Commission provided guidance as relevant, on how to carry out the compliance work in order to facilitate consistency and quality, e.g. to address staff turnover.

## 9 Inspection and enforcement

This section addresses both inspection and enforcement issues, and is arranged in the following order of topics:

- 9.1 Inspection
- 9.2 Enforcement

### 9.1 Inspection

*MRR Guidance Document No.1 states that the CA may carry out inspections at installations, to gather assurance that the monitoring plan is well aligned to the reality of the installation. Any inspections by the CA should also aim at identifying elements of the monitoring methodology which are no longer appropriate, such as after technical changes have been made to the installation.*

As there are no specific requirements set out in the MRR concerning inspections for EU ETS, there is no consistent approach to carrying out these inspections across MS. Inspections can be the responsibility of the CA, regional CAs or separate bodies, such as environmental inspectorates. In cases where regional CAs are responsible for inspection, the inspection approach might vary from region to region within the MS.

Fourteen CAs have stated that EU ETS inspections are carried out as part of other permitting activities, such as IPPC, waste or water permitting. Three of these CAs have noted that the staff carrying out such inspections are not required to report findings to the EU ETS CA. In such instances, the CAs should ensure procedures are in place to ensure effective communication between the EU ETS CA and inspectors on the outcome of inspections carried out.

Fourteen CAs have indicated that they do carry out EU ETS-specific inspections and have undertaken Phase 3 inspections. A further five CAs have indicated that they intend to carry out EU ETS-specific inspections, but had not yet carried any out at the time of the interview. In some instances, this has been cited as due to lack of resources.

There is also no consistent approach to ensuring that those carrying out an inspection have EU ETS-specific expertise. Ten MS have indicated that staff should have appropriate knowledge through involvement in the EU ETS process (e.g. where inspections are carried out by the same CA that approves the MP) or that a member of the CA team responsible for EU ETS will accompany an inspector to an inspection. Another five MS have indicated that some training or workshops have been held in the past and attended by inspectors. However, in other instances there are no specific procedures in place to ensure that staff that carry out inspections have EU ETS-specific knowledge.

In terms of the number or percentages of installations that are inspected by CAs each year, the approach again varies significantly, with 11 MS stating that less than 20% would be inspected each year. The percentages in other MS vary, with some smaller MS indicating that they would inspect all installations each year. Two MS stated that the frequency of inspection would depend on the category of the installation, which is also how the sites are selected for inspection. One of these MS specified that category C installations would be inspected every year, category B installations once every two years and category A installations once every four years. This approach is in line with the frequency that the operator is required to submit an improvement report to the CA, as per MRR Article 69.

The approach to how sites are selected for inspection again varies between MS, although 15 MS have indicated that they would select, or intend to select, based on some form of risk analysis or where issues have been identified with the site (e.g. during review of AERs/VRs).

In terms of what is checked during inspection, 13 MS have stated that documentation would be checked, 12 that procedures and responsibilities would be checked and 14 indicated that the on-site equipment would be inspected.

Following on from site inspections, where issues were identified during the process, the majority of CAs (18) appear to take the approach of contacting the operator and liaising with them to agree corrective actions and timescales for these to be completed.

Most CAs did not note any specific findings from verifications to date during the interviews. Six MS stated that inspections found missing source streams, particularly de-minimis sources, such as back-up fuels. A further three MS noted issues around measurement equipment not matching the information in the MP.

One MS noted that it views periodic site visits are necessary and they provide good opportunity for site staff to clarify issues with the CA and get a better understanding of some of the requirements. It can also help operators gain staff senior management buy-in to get resources to implement improvements or requirements of the permit.

### **9.1.1 Summary of findings**

As there are no specific requirements set out in the guidance for EU ETS inspections, variability is seen in MS approaches to inspection and many MS are still developing procedures. Two main approaches have been seen in MS so far:

- MS that have carried out, or plan to carry out, EU ETS-specific inspections, or
- MS that carry out inspections as part of other permitting activities, such as IPPC, waste or water permitting.

The interviews have highlighted some areas where improvements could be made to the inspection processes, specifically:

- Knowledge and skills for undertaking inspections

- Communications between the CA and those undertaking inspections.

There are good practice examples in MS and incorporating learning from these into guidance outlining standardised approaches for inspection could help to harmonise the approach to inspections across MS. Such guidance could include considerations for CAs that wish to undertake ETS-specific inspections and those who wish to carry out inspections as part of other permitting activities.

The approach to inspections does vary across MS, as there are no mandatory requirements for EU ETS inspections. There is therefore scope for improved harmonisation across MS over time. As there are no mandatory requirements, inspections can drop down the priority list in some CAs, particularly where resource constraints exist.

#### 9.1.1.1 Recommendations

##### Recommendation R 77

- Recommendation to the Commission: good practice guidance on carrying out ETS-related inspections, in relation to frequency, procedures, etc. could be produced to help in developing a harmonised approach to inspection. However, the project team is aware that this goes beyond the legislative scope of the MRR and AVR. This topic could also be considered as an activity for the Compliance Forum Task Force on Monitoring and Reporting. In such an instance, the Task Force could incorporate good practice learning from CAs that already have inspection procedures in place.

##### Recommendation R 78

- As a good practice for all MS, and especially where no form of inspections are being undertaken relating to EU ETS, MS should consider developing procedures for carrying out ETS-specific inspections, or linking ETS requirements into other inspections, such as IED inspections.

##### Recommendation R 79

- As a good practice, all MS should ensure inspectors are briefed or provided with guidance/instructions about EU ETS specific requirements, especially where inspections are undertaken by inspectors carrying out IED inspections or other permitting activities.

##### Recommendation R 80

- As a good practice, all MS should ensure procedures are in place to ensure effective communication between the EU ETS CA and inspectors on the outcome of inspections carried out, especially where inspections are undertaken by inspectors carrying out IED inspections or other permitting activities.

**Recommendation R 81**

- As a good practice, all MS should develop and adhere to a formalised inspection plan / protocol, addressing points such as the frequency of selection and the selection approach, as well as a procedure to follow through during the site inspection.<sup>32</sup>

**9.1.1.2 Good practices**

Some examples of good practice for inspections were found through the CA interviews:

- One MS follows a site inspection protocol, which has been updated with specific references to Phase 3. This site inspection protocol follows through and checks compliance against information contained in the MP and permit. Procedures and responsibilities are checked against what is happening on site and a site walk-around carried out to ensure all emissions sources are included. Sites are selected for inspection using a risk-based approach. At the end of the site visit, the inspector goes through findings with the operator, to allow them to start working on any issues identified. Following on from the site inspection a report is prepared and the CA then follows up with a letter to the operator outlining issues identified and asking operator to respond with proposed actions.
- In one MS, inspector findings from on-site visits are taken into account in future decisions on permits. It would be considered good practice for CAs to keep a log of any issues identified during site inspections and specifically check on such issues in any permit or MP updates and when reviewing AERs.
- In one MS, the frequency and selection of sites for inspection is based on the category of the installation. Category C installations would be inspected every year, category B installations once every two years and category A installations once every four years.

## 9.2 Enforcement

*Article 16 of Directive 2003/87/EC sets out the requirements for penalties to be applied with regard to enforcement of EU ETS. Member States are required to lay down the rules on penalties applicable to infringements of the national provisions adopted relevant to EU ETS and to take all measures necessary to ensure that such rules are implemented. The penalties provided for must be effective, proportionate and dissuasive. The MRR does not contain any specific provisions relating to enforcement.*

As the MRR does not specifically contain any provisions relating to enforcement, no specific changes were required for Phase 3. In line with this, twenty MS have indicated that there have not been any significant changes to the enforcement processes in their MS in Phase 3. For those MS whose enforcement processes have changed since the beginning of Phase 3, changes cited have included:

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<sup>32</sup> Relevant to all MS who do not have a formalised inspection protocol in place for EU ETS inspections.



- New legislation, including reference to the MRR and/or AVR
- Improvements resulting from the improvement reports, such as more formal follow-up on non-compliances
- General process improvements and harmonisation of procedures, resulting from a clearer understanding provided by the MRR, or more detailed enforcement processes
- Additional checks on cessation or partial cessation, linked to free allowances
- New sanctions.

The responses from 19 MS indicated that they prescribe evidential requirements to support the determination of the cessation or partial cessation of an Annex I activity. Three MS indicated that they prescribe such evidential requirements just for the determination of the cessation of an Annex I activity. Ten MS do not prescribe evidential requirements, although one MS has indicated it intends to include this in its national legislation in the future. MS that do not prescribe evidential requirements should consider doing so in future, as this would be considered good practice.

MS have encountered some practical difficulties bringing enforcement against operators and/or aircraft operators. The most common of these are:

- Enforcing in instances where installations have become bankrupt (or changed ownership)
- Contact with and enforcement of aircraft operators, specifically from other countries (such as China or India).

The ETS Directive stipulates that the excess emissions penalty shall be €100 for each tonne of carbon dioxide equivalent emitted for which the operator or aircraft operator has not surrendered an allowance. This, and other penalties relating to enforcement, are typically stipulated in the national legislation of each MS. These include administrative penalties and fines. Different approaches have been taken by each MS relating to the type of infringement that sanctions can be applied for. Fines and sanctions applied for infringements, as stated by MS during the interviews<sup>33</sup>, are outlined in Table 15.

**Table 15: Fines and sanctions applied for infringements**

MS	Fines and sanctions applied
AT	Administrative fines: <ul style="list-style-type: none"> <li>• Up to €35,000 for emitting GHGs while not having a valid ETS permit</li> <li>• Up to €5,000 for not notifying changes to the permit and the MP</li> <li>• Up to €7,000 for monitoring and reporting contrary to national ETS requirements</li> <li>• Up to €15,000 for failure to fulfil the reporting obligations according to Article 15 of Ordinance 2216/2004/EG to the registry administrator.</li> </ul> Permits withdrawn if: <ul style="list-style-type: none"> <li>• The installation permit terminates during a trading period</li> <li>• The installation has been shut down</li> <li>• The installation that received an allocation decree (without allowances actually issued) did not start operations.</li> </ul>

<sup>33</sup> Other fines and sanctions may apply in MS, but were not specifically stated during the interview process or follow up.

MS	Fines and sanctions applied
BE Flanders	<p>No EU ETS specific sanctions; sanctions imposed based general environmental act provisions:</p> <ul style="list-style-type: none"> <li>• Up to €250,000 multiplied with an index of 5.5 for emitting emissions while not having a valid ETS permit</li> <li>• Up to €50,000 multiplied with an index of 5.5 for not complying with monitoring and reporting requirements</li> <li>• Up to €50,000 multiplied with an index of 5.5 for not notifying changes</li> <li>• Not surrendering emission allowances equivalent to the emissions reported.</li> </ul> <p>Administrative fines can be imposed by MoE. Administrative fines for aviation:</p> <ul style="list-style-type: none"> <li>• No approved MP by 1 January: fine between €5,000 and €450,000. Calculated as €0.5 by the estimated emissions (taking max/min into account)</li> <li>• No verified emissions reported by the second Thursday of March: fine between €5,000 and €450,000. Calculated as €0.5 by the estimated emissions (taking max/min into account).</li> </ul>
BE Wallonia	<p>Sanctions on operators/aircraft operators as follows:</p> <ul style="list-style-type: none"> <li>• Delay in submitting AER: €500 per working day (up to a maximum of €15,000)</li> <li>• Delay in surrendering allocations: €100 per tonne of CO<sub>2</sub>e (in accordance with the ETS-directive)</li> </ul> <p>Environment Inspection Authorities can impose penalties related to environmental permit (infractions)</p>
BG	<p>Infringements of between €1,000 and €100,000 for:</p> <ul style="list-style-type: none"> <li>• Not surrendering a sufficient amount of allowances</li> <li>• Not holding a permit</li> <li>• Not communicating changes to the monitoring plan</li> <li>• Not handing in a verified emission report.</li> </ul>
CY	<p>In Part V of the National Law 110 (I)/2011 are prescribed the following sanctions:</p> <ul style="list-style-type: none"> <li>• Art. 45: provides the possibility, in case that the operator is still non-compliant after the request of the CA, CA may impose a prohibition notice and operating ban on the operator/aircraft operator</li> <li>• Art. 46: imprisonment up to three years or a fine up to €35,000</li> <li>• Art. 47: fine of €100 per tonne CO<sub>2</sub> for exceeding emissions/ not surrendering the respective amount of allowances</li> <li>• Art. 48: provides that CA shall ensure the publication of the name of the operator/aircraft operator who is in breach of requirements to surrender sufficient allowances</li> <li>• Art. 49: in case that an aircraft operator allocated to the Republic of Cyprus is non-compliant and other enforcement measures have failed, CA may request the Commission to decide on the imposition of an operating ban on the aircraft operator</li> </ul>
CZ	<p>Administrative fines:</p> <ul style="list-style-type: none"> <li>• Up to 5,000,000 CZK for emitting emissions while not having a valid ETS permit or for operating of an installation contrary to a valid ETS permit</li> <li>• Up to 500,000 CZK for not notifying changes in operation installation and capacity that would lead to changes in monitoring and reporting emissions</li> <li>• Up to 100,000 CZK for not notifying changes in permit</li> <li>• Up to 2,000,000 CZK for monitoring and reporting contrary to national ETS requirements</li> <li>• Up to 2,000,000 CZK for failure to submit verified "application form for amending amounts allocated free of charge" to the Ministry of Environment in case of a partial cessation/cessation</li> <li>• €100 per tonne of CO<sub>2</sub> for each allowance not surrendered</li> </ul>
DE	<p>Penalties imposed if surrendered allowances are insufficient or too late according to Article 16 (3) EU ETS Directive. If mistakes are identified and corrections lead to higher annual emissions, the CA requires the operator to surrender additional allowances and applies penalties according to Article 16 (3) EU ETS Directive. General fines independent of surrendered allowances can also be applied. The CA also blocks registry accounts for operators if no AER is submitted in time. Penalties are imposed on airline operators, who do not submit monitoring plans when requested.</p>

MS	Fines and sanctions applied
DK	<p>Fines for infringements:</p> <ul style="list-style-type: none"> <li>• Emitting emissions while not having a valid ETS permit</li> <li>• Violation of the permit conditions</li> <li>• Violation of the MP requirements</li> <li>• Violation of reporting requirements by not submitting an AER/VR or not reporting correctly</li> <li>• Withholding information or giving false or misleading information of significance to the DEA's functions or decisions</li> <li>• Not surrendering emission allowances equivalent to the emissions reported.</li> </ul>
EE	<p>Fine of €100 per tonne of CO<sub>2</sub> can be imposed.</p>
ES	<p>Infringements and sanctions are laid down at the national level. Three levels exist:</p> <ul style="list-style-type: none"> <li>• Very serious: e.g. operating without a permit, not handing in emission units. Sanctions between €50,001 and €2,000,000</li> <li>• Serious: e.g. failing to notify relevant changes to the permit or the MP, not implementing the MP correctly in a way which leads to deviations in total emissions. Sanctions between €10,001 and €50,000</li> <li>• Light: e.g. not implementing the MP correctly in a way which does not lead to deviations in total emissions. Sanctions up to €10,000.</li> </ul>
FI	<p>Penalties for:</p> <ul style="list-style-type: none"> <li>• No AER submitted. No specific penalty for reporting, but can issue formal notice (administrative penalty). If they don't respond here, can then be fined.</li> <li>• Default of information under the article 24 of the CIMS.</li> <li>• For aviation: No specific penalty for reporting, but can issue formal notice (administrative penalty). If they don't respond here, can then be fined.</li> </ul>
FR	<p>A formal notice, with an administrative penalty, can be issued in the case of no AER submission. For aviation, penalty of up to €7,500 for not submitting a MP or AER (or an unverified AER).</p>
GR	<p>Two types of penalty – administrative penalties and fines. Fines range from €3,000 to €15,000 for installations and €20,000 to €50,000 for aircraft operators.</p> <p>Enforcement can be undertaken for:</p> <ul style="list-style-type: none"> <li>• Not submitting a MP or verified AER</li> <li>• Failing to notify changes at the installation</li> <li>• Failing to follow the control activities</li> <li>• Not surrendering sufficient emission allowances.</li> </ul>
HR	<p>Penalties:</p> <ul style="list-style-type: none"> <li>• Fines of €13,000-€40,000 for operating without permit, failing to submit an AER or not opening a registry account on time.</li> </ul>
HU	<p>Penalties range from €160 to €1,600 for:</p> <ul style="list-style-type: none"> <li>• Unapproved deviations from MP</li> <li>• Not responding to requests from the NIEN</li> <li>• Significant problems with reporting documentation.</li> </ul> <p>Fines range from €70 to €300 daily for operating without the permit or for non-reporting in case of partial or full cessation of their activities.</p>
IE	<p>SI No.261 of 2010, as amended, sets out the infringement and sanction framework for aviation and S.I. No. 490 of 2012 sets out the infringement and sanction framework for stationary operators.</p> <ul style="list-style-type: none"> <li>• €100/tonne penalty (in accordance with the ETS-directive) increased in accordance with the European index of consumer prices, a flight ban and other penalties are set out in the statutory instruments.</li> </ul>
IS	<p>Fines include:</p> <ul style="list-style-type: none"> <li>• 500,000 Krona per day fine for late reporting</li> <li>• Inaccurate reporting: €100 per tonne CO<sub>2</sub> (in accordance with the ETS-directive).</li> <li>• Maximum fine that can be imposed is 10,000,000 Krona.</li> </ul>
IT	<p>Penalties for:</p> <ul style="list-style-type: none"> <li>• Overall allocations (for the operators that don't respect the deadlines);</li> <li>• Non conformities with the MRR rules for the emissions calculations and for not having sent the AER and/or the VR.</li> </ul>
LI	<p>To date, sanctions to the operator have not been needed or applied. In case an operator fails to send a verified AER, their EU ETS account is blocked.</p>

MS	Fines and sanctions applied
LT	<p>The account at the registry will be blocked in case of irregularities or late submission of the AER or VR. The permit may be withdrawn or suspended, or the name of the non-compliant operator will be publicly announced.</p> <p>Administrative penalty for not receiving documentation in time can be applied – ranges from €116 to €232.</p> <p>Administrative penalty for polluting the environment without permission – ranges from varies from €290 to €579.</p>
LU	<p>For non-conformities fines can be imposed or permits withdrawn:</p> <ul style="list-style-type: none"> <li>• €100 per tonne CO<sub>2</sub> fine, in accordance with the ETS-directive</li> <li>• Other penalties range from €251 up to €100,000.</li> <li>• The legislation provides for imprisonments of eight days to six months depending on the severity of the irregularity.</li> </ul>
LV	<p>Sanction types are laid down in the national legislation (Latvian Administrative Violations Code):</p> <ul style="list-style-type: none"> <li>• €100 per tonne CO<sub>2</sub> fine, in accordance with the ETS-directive</li> </ul> <p>Other penalties:</p> <ul style="list-style-type: none"> <li>• Concealment of monitoring data or its modification: fine between €210 and €1,400</li> <li>• Conducting polluting activities without the required greenhouse gas emission permit: fine between €140 and €430 on natural persons and between €280 and €290 on legal persons</li> <li>• Failure to comply with the requirements of the permit for a polluting activity involving greenhouse gas emission: fine between €70 and €350 on natural persons and between €140 and €1,400 on legal persons.</li> </ul>
MT	<p>Sanctions where:</p> <ul style="list-style-type: none"> <li>• An operator is operating without valid permit or monitoring plan</li> <li>• Operations are not in line with the permit or monitoring plan</li> <li>• Changes have not been notified to the CA</li> <li>• There is non-compliance with regards to timely and complete surrendering of allowances.</li> </ul> <p>Sanctions for aircraft operators are determined in a separate legislative act.</p>
NL	<p>Penalties range from €10,000 to a maximum of €450,000 or, when this is higher, to a maximum of 10% of the turnover of the operator concerned. Also €100 per tonne CO<sub>2</sub> fine, in accordance with the ETS-directive.</p>
NO	<p>€100 per tonne CO<sub>2</sub> fine available, in accordance with the ETS-directive</p> <p>CA can also use fines in the NO pollution act.</p>
PL	<p>Sanctioning with regards to the general violations of permit conditions and requirements, with sanction types are laid down in the national legislation.</p> <p>For aviation there can be a withdrawal of the Commission’s operating license</p> <p>Accounts can also be blocked whenever issues are found with enforcement (such as in case of bankruptcy).</p>
PT	<p>A Decree Law, published in 2013, provides a list of infringements and the associated penalties/sanctions.</p> <p>€100 per tonne CO<sub>2</sub> fine available, in accordance with the ETS-directive, is the only fine that APA can issue directly to the operator. All other fines or sanctions are issued by the inspectorate.</p>
RO	<p>Fines range from €4,500 up to €11,000</p> <p>Infringements include the following:</p> <ul style="list-style-type: none"> <li>• Not applying for a permit</li> <li>• Not notifying the CA of changes</li> <li>• Not submitting an improvement report</li> <li>• Not reporting the correct amount of annual emissions</li> <li>• Aircraft operators not submitting MPs &amp; AERs</li> <li>• Not keeping monitoring data for 10 years.</li> </ul>
SE	<p>A penalty of 20,000 SEK applies in case of late or missed submission of an annual emission report, or in case of an annual emission report not verified.</p>



MS	Fines and sanctions applied
SI	<p>Inspectorate can impose a fine of €40,000 to €125,000 in the following cases:</p> <ul style="list-style-type: none"> <li>• Operating without a GHG permit</li> <li>• Not notifying the Agency of changes to permit and MP</li> <li>• Not submitting the AER within the set annual time limit</li> <li>• Not notifying the Agency of closure of an installation</li> <li>• Not monitoring and reporting in line with national law implementing MRR</li> <li>• Not submitting a verified AER</li> <li>• Undertaking transfers of GHG emission allowances after 31 March if the AER is not verified as correct within the set time limit.</li> </ul> <p>Inspectorate can also impose fine of €40,000 to €75,000 to a verifier who continues to perform verification work without of SA accreditation for verification.</p>
SK	<p>The following sanctions can be imposed:</p> <ul style="list-style-type: none"> <li>• Fine on an operator or aircraft operator who fails to surrender allowances to cover emissions for the previous year to the registry administrator by 30 April. The penalty for each non-covered tonne of CO<sub>2</sub> during the trading period is €100.</li> <li>• Fine up to €16,600 on an operator if the operator: <ul style="list-style-type: none"> <li>○ Fails to submit an application for a permit in the set time limit</li> <li>○ Fails to comply with the requirements on monitoring GHG emissions or the submission of emission reports as laid down in the permit</li> <li>○ Fails to notify the information on changes of permit or MP</li> <li>○ Fails to submit an emission report and VR to the District Office by 15 March</li> <li>○ Fails to submit an AER, VR and verification protocol to the registry administrator by 30 April</li> <li>○ Undertake transfers of GHG emission allowances after 31 March if the emission report is not verified as correct within the set time limit</li> <li>○ Fails to submit activity level data report or NER application.</li> </ul> </li> <li>• Naming and shaming of operators who have breached the requirement to surrender emission allowances equivalent to the emissions reported.</li> </ul> <p>The sanction is imposed within three years of the day that the breach of the obligation is discovered, but no later than five years as of the day on which the breach of the obligation has occurred.</p>
UK	<p>The regulation provides for fixed and incremental penalties for the following situations:</p> <ul style="list-style-type: none"> <li>• Operation without permit (installation)</li> <li>• Failure to apply for an emissions plan (aviation)</li> <li>• Failure to report emissions</li> <li>• Not complying to permit (installation) or plan (aviation) conditions</li> <li>• Failure to surrender a permit (installation)</li> <li>• Opt-out installations not meeting their targets,</li> <li>• Under-reporting from opt-out installation</li> <li>• Opt-out installation failing to notify that it falls out of the criteria for opt-out</li> <li>• Infringement of monitoring and reporting obligations, omission to notify changes</li> <li>• Not surrendering a sufficient amount of allowances</li> <li>• Failure to return allowances (in case of free allocation)</li> <li>• Providing false and misleading information</li> <li>• Penalty fail to pay penalty (installation)</li> <li>• Not complying with regulation related to an operation ban (aviation)</li> <li>• Failure to comply with an enforcement or information notice.</li> </ul>

**9.2.1 Summary of findings**

The MRR does not specifically contain any provisions relating to enforcement and the majority of MS have indicated that there have not been any significant changes to the enforcement processes in their MS in Phase 3.

The majority of MS prescribe evidential requirements to support the determination of the cessation or partial cessation of an Annex I activity.

The main practical difficulties MS have in bringing enforcement against operators and/or aircraft operators are where installations have become bankrupt (or changed ownership) or with aircraft operators from countries outside of Europe.

Penalties relating to enforcement, including administrative penalties and fines, are typically stipulated in the national legislation of each MS. Sanctions applied for infringements differ in each MS.

### **9.2.1.1 Recommendations**

#### **Recommendation R 82**

- As a good practice, all MS should ensure they have prescribed evidential requirements to support the determination of the cessation or partial cessation of an Annex I activity.

#### **Recommendation R 83**

- All MSs are recommended to actively participate in the Compliance Forum task forces and to use this as the platform to actively raise and discuss issues around enforcement, where required, such as approaches in cases where the operator has become bankrupt or enforcement of aircraft operators.

## 10 Sector specific and general findings

The questionnaire included a small section of questions on *sector specific and general findings*, to offer MS competent authorities the opportunity to raise any issues or experiences not picked up by the other sections of the questionnaire.

The subsections within this section are arranged in the following order of topics:

- 10.1 Sector specific findings
- 10.2 General findings
- 10.3 Resolution of issues
- 10.4 Assistance requests and suggested improvements

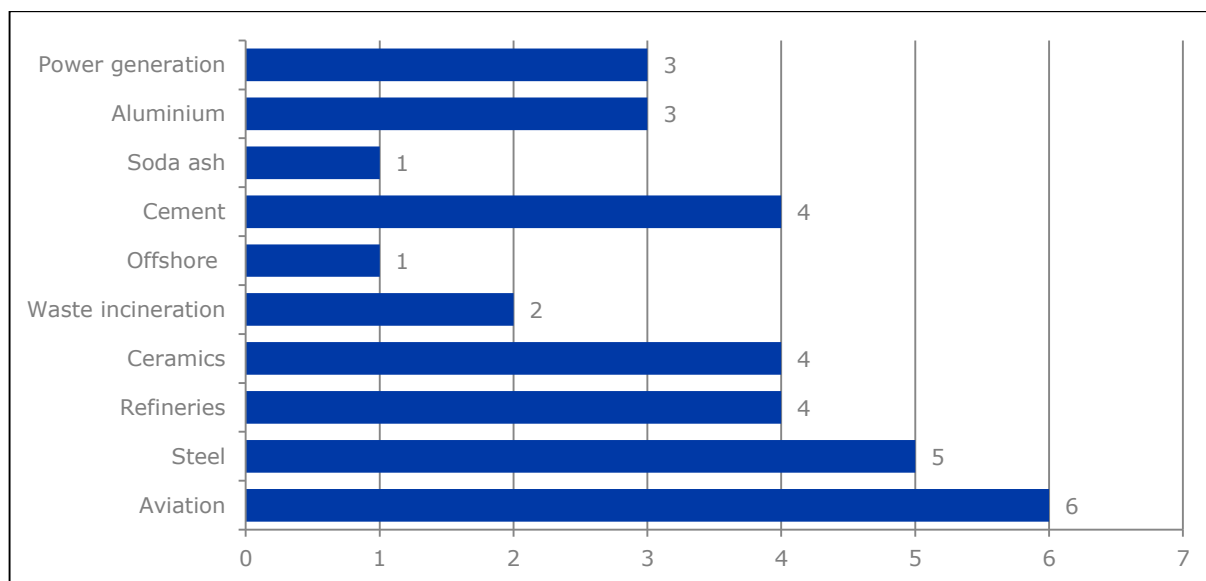
### 10.1 Sector specific findings

MS were asked two broad and open questions regarding sector-specific experiences in implementing the requirements of the EU ETS:

1. Have you come across sector specific issues that needed special attention?
2. What type of issues were these and which sectors were involved?

The following sectors were highlighted by MS as needing special attention by the CA. The numbers against the bars in Figure 12 denote the number of MS highlighting that sector.

The project team found that MS interpretation of the phrase *special attention* in question 1 meant that responses included both issues the MS has faced with administering operators/AOs in a particular sector and also sectors where the administration of that sector is considered by the CA to be particularly burdensome, although no specific issue(s) were raised by the MS.



**Figure 12: Sectors highlighted by MS for needing extra attention**

The sectors where special attention was noted by several MS are described in more detail below, along with the issues that were raised. However, although several MS highlighted certain sectors, no clear pattern emerges to indicate that any sector has a set of challenges commonly experienced across all MS. This observation indicates that there are specific tricky challenges for each sector, which affect some MS but which should not be seen as symptoms of a wider problem. Many of the issues identified in this section therefore represent the observations of one MS only.

**10.1.1 Aviation**

The aviation sector was highlighted by six MS as needing special attention. Of the six MS, four simply highlighted general enforcement and communication issues with aircraft operators.

One MS highlighted that the Commission’s aircraft operator list is not as up-to-date as needed and that it should either be updated more frequently or another option for MS to identify new AOs assigned to the MS should be considered, such as highlighting changes when a new version of the list is published.

One MS highlighted issues with the ICAO aircraft type designators, as listed in the Commission’s aircraft operator list, not assisting in the CA’s determination of the AO where this designator is the only identifier available in the aircraft operator list. This point is discussed in further detail in section 4.12 of this report. Although only one MS raised this point within this section on sector-specific issues, MS responses to section 4.12 (Monitoring, Aviation) indicate to the project team that this is a more common issue for a large proportion of MS CAs – particularly those MS with a relatively large number of assigned AOs.



**Recommendations:****Recommendation R 84**

- The Task Force on Aviation could collate MS feedback on the Commission's aircraft operator list and, based on the feedback received, put forward any recommendations to the Commission on how the list, or its contents, could be improved for CA use.

**Recommendation R 85**

- All MS should feedback to the Task Force on Aviation on their experiences in using the Commission's aircraft operator list and actively participate in the work of the Task Force.

**10.1.2 Steel**

The steel sector was highlighted by five MS as needing special attention. There was no consistent issue across the MS highlighting issues within the steel sector. Issues included:

- Determining the carbon content (CC) of scrap steel input materials
  - Readers should note that the Task Force on Monitoring and Reporting is currently discussing the CC values / range of values accepted by MS following a study undertaken by one MS
- Operators not being able to monitor blast furnace gas and coke oven gas within the required AD tier requirements regarding uncertainty, due to the corrosive environment requiring a less accurate measurement device to be used
  - Deviation from applying the required tiers is permitted, as outlined in Article 26 of the MRR, where the operator can provide a justification that doing so is necessary due to technical infeasibility or the incurrance unreasonable costs. As such, in this case the CA should assess the justification and either approve the use of a lower tier (i.e. accept the justification on the grounds of technical infeasibility) or require the operator to take corrective action (i.e. reject the justification)
- Issues undertaking uncertainty assessments for source streams in integrated steel works due to the complexity of AD measurement arrangements
  - The MRR outlines several simplifications for measurement instruments/systems either under the operator's control or under a trade partners control and either under national legal metrological control or not. The CA should be working with the operator(s) to see if these simplifications can be applied in these cases.
- Issue with a non-accredited internal laboratory not being able to demonstrate EN ISO/IEC 17025 equivalence
- Persistent and sometimes intentional non-compliance (with the MRR) by a steel operator
  - Article 16 of the Directive states that "*Member States shall lay down the rules on penalties applicable to infringements of the national provisions adopted pursuant to this Directive and shall take all measures necessary to ensure that such rules are implemented. The penalties provided for must be effective, proportionate and dissuasive.*" As such, the MS CA should have appropriate sanctions at hand to take

all necessary measures to ensure the operator complies with the requirements of the MRR.

- Issues with operators using waste tyres and a MS-derived EF not being available in the national inventory (tier 2b). The operators are therefore not able to meet the required EF tier level and revert to a standard factor (either in Annex VI of the MRR or another MS-derived value)
  - Deviation from the required tiers is permitted, subject to CA approval of a suitable estimation method in accordance with MRR Article 39(2).

### **Recommendations:**

#### **Recommendation R 86**

- All MS with installations producing pig iron or steel should actively participate in the Task Force on Monitoring and Reporting to inform the TF's work in reviewing MS-applied EFs for scrap steel.

### **10.1.3 Refineries**

The refining of mineral oil sector was highlighted by five MS as needing special attention from the CA. A number of issues relating to this sector were raised by these MS:

- In one MS the CAs have had issues with refinery operators applying lower tiers, than in the approved MP, without submitting the necessary justification (i.e. temporary deviation, unreasonable cost or technical unfeasibility claims)
- Issues with operators meeting the tier requirements for flaring (safety flares) at refineries
  - Deviation from the required tiers is permitted, subject to CA approval (MRR, Article 26).
- One MS highlighted issues with an operator (Category C installation) not being able to meet the highest tier requirements for CEMS due to claims of technical infeasibility.
  - The MS is aware that it can approve the use of a tier one level lower than required by the MRR, subject to approval by the CA.
  - Readers should note that other MS are experiencing the same issue and that this topic is being discussed in the Task Force on Monitoring and Reporting.
- The MP template provided by the Commission requires information for catalytic crackers that the CA believes to be irrelevant. In one MS, an operator cannot correctly determine the uncertainty for a source stream where the operator has applied a material and energy balance approach because of the lack of an appropriate flow meter. As noted in that MS' fiche, the MS should seek to resolve this matter with the Commission as soon as possible.

### **Recommendations:**

- There are no general recommendations for this topic.

#### 10.1.4 Cement

The cement sector was highlighted by four MS as needing special attention. Two issues were raised by these MS:

- The same issue around the use of waste tyres as outlined in section 10.1.2
- Biomass:
  - Two MS highlighted issues for operators in determining, and CA in approving, a preliminary emission factor for biomass source streams
  - One MS highlighted issues for operators in demonstrating compliance with the sustainability criteria in the RES Directive for biofuels

The biomass issues raised by two MS do not appear to be related to any specific issue with the requirements of the MRR but related to CA unfamiliarity with the new requirements, requiring additional time to be spent by the CAs in ensuring that the operators' MPs were compliant with the M&R requirements for biomass source streams. It would be reasonable to assume that such 'issues' will dissipate over time as CA experience and familiarity in working with the new requirements increases.

#### Recommendations:

##### Recommendation R 87

- Two MS should consider staff training around the requirements of using a preliminary EF for biomass source streams.

#### 10.1.5 Ceramics

The ceramics sector was highlighted by four MS as needing special attention. A number of issues relating to this sector were raised by these MS:

- Ceramic operators feel the frequency of analyses required in accordance with Annex VII on the MRR are too onerous for ceramic operators that only operate for part of the year.
- One MS CA stated the opinion that the tier 1 approach for ceramics operators (as per Annex IV, paragraph 12B), is too conservative, and so the CA has developed a specific tier 2 approach in collaboration with the sector association in the MS
- Ceramic operators are not clear on whether additives should be classified as fuels or materials. Operator took both approaches.
  - The CA has communicated to such operators that additives should be classed as fuels.

#### Recommendations:

**Recommendation R 88**

- Two MS should be reminded of the derogations permissible under Article 35 of the MRR in approving a frequency of analysis different to the minimum frequencies outlined in Annex VII.

**10.1.6 Primary Aluminium**

The primary aluminium sector was highlighted by three MS as needing special attention. A number of issues relating to this sector were raised by these MS:

- One MS CA is unclear whether the monitoring requirements for PFC emissions are being met by aluminium operators, due to the complexity of the requirements.
- One MS CA stated that if PFC emissions are calculated as per the MRR, many operators in one MS are categorised as installations with low emissions; but if the operators used their own alternative methodologies, they are categorised as category B installations and need to apply the highest tiers, leading to greater accuracy.
  - PFC emissions are to be monitored in accordance with the methodology prescribed in section 8 of Annex IV of the MRR.

One MS CA is unclear whether aluminium operators with no process emissions (i.e. cases of partial cessation) should be categorised as *Production of primary/secondary aluminium* (as per Annex I of the Directive) or *Combustion of fuels*.

**Recommendations:**

- There are no general recommendations for this topic.

**10.1.7 Power/heat generation**

The power generation sector was highlighted by three MS as needing special attention. A number of issues relating to this sector were raised by these MS:

- One MS has highlighted an issue with the Commission's AER template. It does not currently allow for the subtraction of the emissions from the co-firing of biomass, from the measured emissions, when monitored by CEMS. The template only allows for subtraction where a mixed fuel is used. For a mixed fuel a PEF must be determined and this must be done by analysis. However, in the MS the fuels are separate and co-fired. The template cannot currently accommodate this situation. The issue concerns the MS' eight large power stations.
  - Readers should note that the MS concerned has raised the issue at a meeting of the Task Force on Monitoring and Reporting and that the Commission has been made aware of this issue and an update of the template will be considered during the next planned review of all Commission guidance and templates.
- One MS highlighted the significant burden of administering a large number of district heating installations that are often installations with low emissions and relatively simple in terms of the Annex I activity (Combustion of fuels) and the small number of source streams.

- The project team is aware that this MS has not permitted the use of a simplified MP as permitted in line with Article 13 of the MRR.
- One MS highlighted cases where operators cannot find an accredited laboratory to carry out either an initial or annual validation of the gas chromatograph(s) purchased before the introduction of the MRR and so the CA has to determine that the operator cannot use the(se) gas chromatograph(s).
  - As stated by the MS concerned, the project team are aware that this issue is born from the requirements of the MS-specific legislation and not the MRR.

**Recommendations:**

- There are no general recommendations for this topic.

**10.1.8 Waste incineration**

Municipal waste incineration was highlighted by two MS as needing special attention, where the MS have opted in such activities as permitted by Article 24 of the Directive 2003/87/EC. One issue raised by both MS was:

- The MS CAs have had issues with the determination of the carbon content of the waste source stream because:
  - In practice, the permitted methods under EN 15440 for the determination of the biomass fraction (the '*balance method*' and  $^{14}\text{C}$ ) have produced different carbon contents for similar samples. The CA has permitted both techniques for different operators.
  - The waste is heterogeneous regarding the fossil and biomass fractions and so selecting representative samples has proven to be difficult.

This topic, raised by the two MS, was also raised in the section on the monitoring of biomass. The hierarchy of preferred methods for determining the fossil fraction / carbon content of municipal waste source streams is outlined in Commission Guidance Document GD3 and the Monitoring and Reporting FAQ no. 2.4. The CAs also have discretion in approving such methods. The project team are aware that these MS have already raised the issue during a meeting of the Task Force on Monitoring and Reporting.

**Recommendations:****Recommendation R 89**

- The two MS should be reminded of the Commission's Monitoring and Reporting FAQs nos. 2.4 and 4.3 regarding "What are suitable estimation methods to determine the biomass fraction?" (FAQ 2.4) and "How can it be determined whether a sample taken is "representative"?" (FAQ 4.3). The CA should also be reminded that the CA has discretion in approving methods for determining the biomass fraction / carbon content of mixed fuels. (Refer to MRR Art. 39

paragraph 1)

## 10.2 General findings

In response to the questions on sector specific findings, the project team found that many MS raised points that were more general experiences, rather than sector-specific experiences, regarding MS implementation of the regulations.

- One MS highlighted that, in their view, exclusion of CH<sub>4</sub> from the EU ETS is confusing from an environmental perspective
- One MS stated that, in their view, there is a lack of a more proportionate measurement method for back-up fuel
- One MS made reference to its confusion around the treatment of oil shale producers under the ETS
- One MS believes there is a difference between the MRR calculation method for the determination of N<sub>2</sub>O emissions and the inbuilt calculation in the Commission's AER template produces different emissions. The MS stated that this can be corrected in the AER if the N<sub>2</sub>O hourly concentration is provided as a weighted average
  - The project team has not verified this claim and no example(s) were provided by the MS concerned.
- One MS highlighted that CRF codes in the Commission's AER template are optional but Article 73 requires the reporting of each activity listed in Annex I to Directive 2003/87/EC to be labelled with the corresponding CRF code. The apparent *optionality* in the Commission's AER template (the cells are colour coded in light yellow denoting that "input is optional") has led to confusion amongst CAs in one MS as to whether the CRF codes are required and led to operators not providing the CRF codes.
- One MS highlighted issues with the NAB management report and the categorisation and actioning of findings categorised as 'Outstanding non-conformities'
  - The project team is aware that a cooperation of the Task Force on Accreditation and Verification and the European Association for Accreditation is currently reviewing the content of the Information Exchange templates and will present its recommendations to a future meeting of the Task Force.
- One MS stated it has issues regarding access to suitably accredited laboratories for analyses
- Two MS highlighted particular issues with biomass source streams and determining the fossil fraction
- One MS stated that the CA has issues identifying, or having confidence that, all components in a mass balance monitoring methodology have been accounted for
- One MS feels that further harmonisation is needed on determining the thermal rated inputs, as it feels it is not being applied consistently across all MS
- One MS feels that further guidance is needed on:
  - How to account for back-up installed capacity as there appears to be a lack of harmonisation across MS regarding the inclusion/exclusion of back-up units

- The treatment of parallel installed capacity (excluded from the determination of the 20MW threshold if the capacities cannot be used simultaneously) to achieve a more harmonised approach.
- One MS stated that the CA is uncertain if the spontaneous oxidation of coal, in large on-site coal stores, should be included in the ETS.

### 10.3 Resolution of issues

MS were then asked if their sector specific issues had been resolved or were still 'open':

- Eight MS stated that all their issues had been adequately resolved.
- Three MS outlined their procedure to resolving issues, rather than highlighting the resolution of previous issues.
- 10 MS highlighted unresolved issues.
- Six MS stated that the question was not applicable as they had not raised any specific issues.
- Seven MS did not provide a comment in answer to the question.

### 10.4 Assistance requests and suggested improvements

When asked if MS would like to see further assistance from the Commission going forward, 21 MS said 'yes', three MS said 'no' and seven MS either did not provide an answer or felt the question was not applicable, as they had not raised any sector-specific or general issues.

As concluding remarks to the interviews with MS CAs, the project team asked the participants what aspects of the EU ETS they would improve, if they could, regarding the implementation of the EU ETS. These answers represent the opinions of the member states and should not be taken as direct recommendations to the Commission. However, a catalogue of these suggestions has been provided to the Commission.

However, both the general suggestions for improvements and the specific requests for further assistance from the Commission can be categorised into several key areas: the potential for increased harmonisation, some regulatory changes, and the potential to improve or add to templates and guidance and specific details such as the provision of a helpdesk. Some examples under each category is provided below and the Commission is invited to consider some of the specific issues gathered in this study further:

#### **Harmonisation**

- A more harmonised approach regarding the treatment of biomass, transfer of CO<sub>2</sub> and the carbon content of waste.

#### **Regulatory changes**

- Consider changes to the regulations to:
  - Include methane (CH<sub>4</sub>) in the EU ETS.

**Templates**

- Amend / update templates regarding:
  - Issue in the AER with subtracting the emissions where biomass is co-fired
  - Clearer indications of the additional documentation that must be submitted alongside the MP.

**Guidance**

- Further guidance on:
  - General procedures on how to sample
  - The secondary aluminium sector
  - Bioliquids and the new definition of biomass
  - Inspections
- Review and consolidate guidance
- Finalise the guidelines for the administration of AOs (draft circulated by the Commission).

**Other Commission assistance**

- Commission assistance or determination on:
  - Implementing a Commission helpdesk for the EU ETS
  - Several specific subjects (e.g. unreasonable costs or the determination of the scope of the EU ETS) through further Commission guidance (containing more practical examples) and workshops organised by the Commission
  - Conducting a study of measurement devices used across the MS
  - Translating all Commission published guidance/tools into national languages
  - Bankruptcy cases and how to enforce
  - Spontaneous combustion of coal
  - Implementing a threshold for the soda ash sector where a mass balance is used.

Importantly, MS should be reminded that there is a strong existing structure in place for sharing ideas and recommendations with peers and the Commission that should be used, where appropriate.



## 11 Conclusions and way forward

This evaluation and the report are, by their nature, highly detailed. The purpose of these conclusions is thus to take a higher level perspective and provide an overview of all of the recommendations included in this report.

This section is organised into the following subsections:

- 11.1 Context
- 11.2 Summary of key findings
- 11.3 Findings for the Member states
- 11.4 Detailed recommendations

### 11.1 Context

The process of this EU ETS compliance cycle evaluation demonstrated that this exercise remains valuable, and was particularly valuable in the case of the 2013/14 compliance cycle. The answers provided resulted in detailed insight into the implementation of the EU ETS both at country level and across different stages in the cycle. In general, discussions with MS and other stakeholders were open and informative, demonstrating a willingness to strive for better performance. It is certainly recommended that close dialogue with the CAs and other actors continues in the future.

### 11.2 Summary of key findings

The introduction of the MRR and AVR has provided some clear improvements from the MRG. However, these improvements are often spread unevenly across countries, depending on their level of implementation previously. Broadly speaking, new regulatory elements changed the practice of about half of the countries, whereas the other half often had a broadly suitable approach in place before. Examples of this split impact included the degree to which the quality and extent of information in the permit application or MP submission improved, impact of the AVR on verifiers' understanding of the general obligations of the verifier, and enforcement practices. However, all MS agreed that the guidance provided by the Commission is very helpful.

Variation between implementation practises in different MS has reduced as a result of the MRR and AVR. However, there are still areas where significant variation is observed, such as with the use of electronic reporting formats and processes. For some of these areas, MS who have not made progress are keen to see the Commission take a further lead in providing a more centralised approach. A more centralised approach could constitute best practice provision, shared experiences etc.

The introduction of the AVR showed a particularly marked improvement in accreditation provision, as did the introduction of the new rules about uncertainty and unreasonable costs.

Discussions with the different actors in the MRAV chain seem to indicate that the system is working well, however, it is important to note that well-oiled processes do not necessarily always ensure that accuracy will prevail. There was some evidence that suggests that some errors were still being made during the verification cycle. Non-conformities were particularly highlighted during the process of recommendations to improve the MP, however, some should have been identified and resolved earlier. This is a cause for concern, and an indication that CAs should not be complacent and NABs/NCAs should be particularly strict about verifier quality and approach.

Several MS indicated that the recent financial crisis had created additional problems for some operators, including reduced operational hours or bankruptcy that was not reflected in a reduced or altered MRAV obligation, or for which there was insufficient guidance. However, it should be recognised that the MRR and AVR already contain considerable scope for proportional approaches to MRAV including special derogations for installations of low emissions and small emitters in aviation, reduced requirements for minor and de minimis source streams, consideration of technical feasibility and unreasonable costs and provisions for simplified monitoring plans.

The interviews indicated that non-compliance was more likely to occur where staffing was limited. In these circumstances, some MS had to choose to prioritise some areas for compliance over others. Whilst non-compliance cannot be sanctioned, it is recommended that further support for MS and sharing of information should be considered in order to help MS with less capacity achieve a higher level of compliance.

In several instances, such as in relation to CEMS in a MP, or during the NAB surveillance of verifiers, MS use technical experts, consultants and a variety of other external bodies to supplement their capacity and gaps in technical expertise. This approach is a sensible way to overcome shortfalls in resources.

Many MS quoted issues related to the timing of the availability of certain information such as guidance documents etc. as a barrier to achieving better compliance or clarity about an approach. This issue, whilst relevant in some cases in the 2013/14 compliance cycle, should not remain a cause for non-compliance or lack of clarity as Phase 3 progresses. Some MS still request further documents and support, whilst others specifically request that no further guidance or changes be provided until Phase 4.

The new MRR and AVR appear to have spread responsibilities well between CAs and also NABs and verifiers in a way that spreads the burden of requirements in a helpful manner and ensures independence for certain functions. MS's National Accreditation Body are existing bodies, which helps ensure continued efficiency and helps to minimise the overall costs of the MRAV administration.

The report investigated sector-specific elements, and several Member States highlighted challenging sectors: aviation, steel, refineries, ceramics, primary heat and power and waste incineration. However, there was no clear pattern or common cause for concern for each of these sectors, and therefore it is important that these individual issues are followed up on, but there appears no cause for any sector-wide investigation.

Twenty of the MS interviewed indicated that they would like to see further support from the Commission to help support them in their compliance efforts. The areas where support was requested fell into several general categories: harmonisation, regulatory changes, templates, further guidance on particular issues, and additional assistance through e.g. a helpdesk, and translation services. The Commission is invited to take note of these specific requests, some of which were requested by several parties, particularly a helpdesk, access to training and more practical and specific examples. It is also important that MS continue to make active use of the sharing platforms and processes for peer learning on MRAV practises that are already available such as the Compliance Forum Task Forces, the Compliance Conference and the peer review process.

In previous compliance cycles, the need to harmonise was acute. The introduction of the AVR and MRR has improved the situation enormously in this regard, and further improvements are now much more specific either by Member State or a very detailed stage in the compliance cycle.

### 11.3 Findings for the Member states

The fiches in Annex II provide more detail on the situation in each individual MS, but it is clear that there are some MS that are much better staffed than others, and also have more resources to allocate to adherence with the MRR and AVR. The Commission should consider the variation between MS in both resources and level of compliance and use this information to target further support.

### 11.4 Detailed recommendations

This section highlights the key findings from the different sections of the report and then lists the specific recommendations.

#### 11.4.1 Permitting and monitoring plan approval

More than half of the MS use the monitoring plan template provided by the Commission. The guidance from the Commission on the content of the monitoring plans was considered helpful by the vast majority of MS, although a minority also provide some form of additional guidance. Simplified monitoring plans are not very widely accepted, with 21 MS not allowing these, and there could be scope for expanding the uptake of this provision. The circumstances in which simplified monitoring plans are allowed vary significantly between MS.

The approach to the review of monitoring plans is also varied. In the majority of MS, all MPs were approved and permits issued by the time they were interviewed. Several MS were not compliant in this regard, however it is evident that they were aware of the issues and resolving them.

The concept of significant change varies between MS, while most use the Commission's list as a guide, several go further. Whilst most MS require the MP to be reissued, only some require a permit update, and the time within which notification is required varies significantly between MS. The treatment of temporary deviations from the MP is also very divergent. On one hand, some MS are reluctant to allow any deviations from the MP, whilst in others a temporary deviation is allowed regardless of time, provided the change is not planned to be permanent.

#### **11.4.2 Monitoring**

The majority of the MS found the definition of combustion clear, and most MS are doing some type of check to ensure that it is being applied appropriately, or had already undertaken a check in Phase 2. The provisions outlined in Article 26 of the MRR have led to greater harmonisation across MS in the application of the highest tier requirements for Category B and C installations (as outlined in Annex II of the MRR), and the application of at least the minimum tier requirements permitted for Category A installations and for source streams that are commercial standard fuels (Annex V).

The review has found that use of the fall-back methodology is very limited across all MS and that emissions determination via a tiered approach is the predominant monitoring methodology adopted by operators in their MPs and approved by MS CAs.

The uptake of CEMS is relatively low, and is mostly associated with N<sub>2</sub>O emissions. The increased uptake of CEMS relates to the change in ETS scope rather than the introduction of the MRR. The low uptake for CO<sub>2</sub> emissions is generally related to cost-efficiency considerations.

The uptake and use of biomass, bioliquid and biofuel source streams varies across MS, with some MS stating little or no experience of operators using biomass and other seeing common usage of biomass by operators in many industry sectors. This is reflected in the polarisation of MS responses, as to whether the introduction of the preliminary emission factor (PEF) has made MPs including biomass source streams more transparent to CA staff and whether this had led to greater CA confidence that emissions associated with the fossil fraction of biomass source streams are being accounted for correctly.

Several MS highlighted that although the definition of biomass in the MRR is clearer and should lead to a more harmonised approach across the EU, the CA(s) have had challenges in ensuring that the sustainability criteria enshrined in the RES Directive are being met by operators using bioliquids and/or biofuels and seeking to apply an emission factor of zero.

MS were split in their opinions on whether or not the MRRs simplification of uncertainty assessments has reduced the burden on CAs and/or operators. However, the vast majority of MS agreed that the new guidance has helped the process of completing the uncertainty assessment. Generally, there appears to be a lack of operator knowledge in how to construct an uncertainty assessment in line with the requirements and permitted simplifications outlined in the MRR. Often the CA is called upon for assistance. The nature and robustness of the uncertainty assessments vary greatly between MS.

Twenty-three MS confirmed that the new determination method for unreasonable costs has led to greater consistency in the approach within their MS. Around half of MS have used the Commission's unreasonable cost tool and have found the tool to be useful.

MS employ different methods and resources in the checking of claims of technical infeasibility, with no single resource cited by the majority of MS. It is encouraging that CAs typically take a considered approach in reviewing technical infeasibility claims, seeking inputs from either external experts or referring to other technical resources (e.g. reference documents) where the complexity of the case exceeds the expertise of CA staff.

The majority of MS have confirmed receipt and approval of sampling plans either from all, or the significant majority, of affected operators. There has been broad uptake and usage of the Commission's Guidance Document GD5 on sampling and analysis. A small number of MS have produced additional MS-specific guidance to operators regarding sampling and analysis.

There were a range of experiences with the frequency of analysis approach, including the Dutch Emission Authority's tool, which merits further attention. 24 MS confirmed that the MRR clarified the requirements for the CA regarding the determination of calculation factors via analysis. 14 MS confirmed that the provisions of Articles 23 and 65 clarified the intended approaches concerning the treatment of temporary changes to the MP and data gaps. 19 MS noted that the simplification of the fuel density measurement requirements for AOs had reduced the burden on the CA(s) or AOs.

Around a third of MS (12) cited experiences of operators transferring inherent CO<sub>2</sub>. None of these MS highlighted any particular issues faced by the CA or operators regarding the determination of emission factors including inherent CO<sub>2</sub> or emissions accounting when transferring inherent CO<sub>2</sub>. As such, the project team infers that the requirements of Article 48 of the MRR are clear to MS CAs.

MS are taking a common approach and utilising all necessary resources available to them in the identification and subsequent communication with new operators assigned to the MS in the Commission's aircraft operator list. However, the identification of new AOs can prove to be difficult for the CA due to the incompleteness of the data on the Commission's aircraft operator list compiled by Eurocontrol. Establishing initial communication with new AOs assigned to the MS has also proven difficult for a large number of MS CAs, as the CA(s) have often struggled to make contact with non-commercial AOs and smaller commercial AOs. The treatment of AOs as regards to timing and expectations of scope for AERs in the 2013/14 cycle showed wide variation.

### 11.4.3 Reporting

Twenty MS used reporting templates that ensure compliance with the requirement to provide relevant codes of other reporting schemes, 11 MS were non-compliant in this regard.

Nineteen MS use a translated version of the Commission template for the AER and verification reports, whilst 11 provide an AER in their electronic reporting system and one MS developed its own template in in standard office software. Twenty-two CAs do not provide guidance on completing the AER templates beyond the Commission's guidance, indicating that the Commission's guidance has been valuable in this regard. 11 MS are concerned that the reporting templates do not provide sufficient information to prepare their Article 21 reports. There are a variety of approaches taken to reviewing the AERs with nine MS lacking any formal review procedures. It would be beneficial for these MS to consider introducing some type of structured review procedure. There is wide variation in the way consistency checks are carried out, particularly in the cases where only some submissions are checked.

Nineteen MS have translated the Commission's template for improvement reports. The majority of MS (24) require improvement reports in accordance with the time intervals defined in the MRR, however, there are a range of other dates also used. 26 MS require improvement reports related to verification reports by 30 June the same year, in compliance with the MRR. The majority of the verifiers' recommendations related to operators' procedures including their risk assessment, with improvements to the MP related to small source streams also relatively common. It seems clear that the new requirement for reporting on improvements is a valuable addition to the compliance cycle that will help to improve the quality of the monitoring and reporting process.

There is a gradual shift towards electronic submissions, however, several MS use a combination of hard copy and electronic versions, in particular to retain signed copies and to make allowances for smaller operators. 16 MS use IT systems for MP approval and/or for reporting purposes. The majority of CAs do not use IT reporting tools to perform automated checks, however, automated checks are performed by a significant number. As a result, despite the progress in the increased use of IT, there is still potential for an even greater use of electronic reporting. Theoretically a wider implementation of IT will improve consistency and could also reduce costs for operators and CAs.

### 11.4.4 Verification

While verifiers from seven countries indicated that the AVR has not led to overall processes changing, the majority of verifiers noted several general areas of improvement, including formalising the verification process, and adding more details to ensure a harmonised approach. The principle of continuous improvement has led to an increased number of improvements being identified, and cross-border accreditation has been welcomed. The detail of the AVR has helped verifiers, but the more harmonised assurance now provided has sometimes also resulted in an increase in the amount of time required for verification.

For verification purposes, the Commission has developed a verification report template, which has a role in harmonising the verifier's external report and confirming coverage of verifier obligations. This template is used by at least 11 MS. Verifiers from 26 MS found the Commission's guidance useful to their work, indicating that this guidance has been used very widely. Verifiers from 10 MS found that the pre-contractual approaches have helped formalise their work at the early stages and verifiers from 11 MS indicated that the requirements for time allocation helped them justify additional time to clients. All verifiers indicated that they use some type of checklist for verification activities. Verifiers from 21 MS stated that independent reviews of their verification reports were already carried out before the AVR required this to be the case. In the majority of cases, simplified verifications were not carried out, with the exception of some small emitters in the aviation sector.

There is scope for verifiers to share information better between each other, and also to make better use of the Task Forces and sharing mechanisms that already exist between CAs. CAs should consider the need for verifiers to share more information, and consider how to use existing channels to do so.

#### **11.4.5 Accreditation**

Twenty-seven MS have appointed a NAB, whilst four others have not appointed a NAB or NCA and rely solely on cross-border accreditation. In this regard, all MS are in compliance with the AVR. One MS only has appointed an NCA which has only certified one natural-person verifier, limiting the impact of this approach on the 2013/14 compliance cycle. 20 MS appear to have effective information exchange between their NAB/NCA and CA and in many cases it goes beyond the submission of formal reports. 21 MS submitted a work programme in time to their CA, and 17 of these were considered sufficient.

The work programmes provided by NABs to CAs within the deadline were often incomplete in regards to anticipated time and place of verifications. Verifiers were often contracted only after the deadline for notifying their NABs and provided the information to the relevant NAB through updates. Yet, this updated information was not always passed on to relevant CAs. CAs would value regular updates, which is beyond the current requirement of the AVR.

Various reasons were given for the lack of timely notification, however, this should be tightened up in future compliance cycles. Updates from verifiers, where provided, were usually very helpful, containing much more detailed information.

Similarly, management reports were deemed broadly satisfactory with some areas of improvement. Although at the time of interviewing, only two MS had filed issues with their NABs regarding verifiers' performance, it seems eight more intend to notify the NAB at a later date. 14 of the NABs received notifications from all of their accredited verifiers on planned verification activities, with another eight receiving notifications for more than half.



Exchange of information between NABs and CAs on work programmes where verifiers are operating across borders does not appear to satisfy the requirements of the AVR. All NABs maintain a database of accredited verifiers on their website and for the majority of NABs updates take place as soon as the accreditation status of a verifier changes. Yet, for the remaining four NABs updates take place at varying frequencies ranging from only weekly updates to as frequent as every 24 hours or even 3 hours. 20 NABs/NCA provided additional information to verifiers about their processes, in addition to the AVR and Commission guidance notes. There is some variation in the length of the validity of accreditation certificates (four or five years) which might need to be checked in some cases.

Nine of the NABs interviewed used the Commission AVR guidance note as the basis for procedures for checking verifiers' competences whilst 17 NABs have established their own procedures, based on EN ISO 14065, as is the AVR requirement. These checking procedures resulted in refusal to accredit verifiers for phase 3 in some cases, which indicates that, at least to some degree, they are being implemented seriously. Procedures are in place for appeals. All 25 NABs confirmed that they carry out surveillance on an annual basis, and 22 NABs/NCA confirmed that they use additional technical experts for this task. There have been two cases where verifiers encountered an initial lack of fair treatment when operating in a MS that was not where they were accredited.

#### **11.4.6 Coordination and communication**

There has been a trend towards centralisation of responsibilities compared to Phase 2, but there still is great variety in the number of CAs in each MS and coordination approaches. 15 MS have one CA, and 16 MS have more than one. Of those with multiple CAs, four MS have more than 50 CAs. In all but one MS with multiple CAs, there is one coordinating CA. However approaches to sharing work and coordination differ. Most MS have some procedures for communication within their one CA, or between CAs, which include daily exchanges, meetings once or twice a year, workshops and central information sharing locations. There appears to be room for improvement in terms of communication between CAs where more than one CA is involved. Some lessons might be learned from the good communication observed in all MS between the CAs and the NAB. However, it is not the case that multiple CAs generally perform the MRV tasks worse than single CAs. There are some situations where more centralisation of tasks to CAs may help efficiency and some MS have changed the division of tasks between CAs to reflect these efficiencies.

All but one MS have implemented specific measures for ensuring their staff's competence. These provisions vary in their level of detail, ranging from on the job training, to specific internal competence requirements combined with specific training on relevant topics. There is merit in sharing best practise in relation to training as good, competent staff are central to being able to manage the complex details of the MRV requirements.



#### **11.4.7 Inspection and Enforcement**

The approach to inspections varies widely, with 14 CA carrying out inspections as part of their duties concerning other permits and 14 carrying out EU ETS-specific inspections. Five MS have intentions to carry out EU ETS specific inspections but have not done so yet. The level of knowledge of the inspectors is also varied as there is no consistent approach to ensuring that inspectors have EU ETS-specific expertise. In some MS, the approach to inspection also varies between regional CAs.

Nineteen MS indicated that the introduction of the MRR has not resulted in significant changes to their enforcement processes, which is not surprising as enforcement is not an area specifically addressed by the regulation. Challenges with enforcement have primarily arisen in cases of bankruptcy or in relation to foreign-owned aircraft operators. The level of penalties and the choice of related infringements also vary, however, the existence of a range of significant penalties across the MS demonstrates that the majority take enforcement seriously and convey this clearly to the operators.

#### **11.4.8 Recommendations**

Each section lists more broadly applicable recommendations, while recommendations specific only to an individual MS are included in the respective fiches. In some places in the report some observations are provided about potential actions that the Commission could also take to further enhance the MRAV cycle. Although the purpose of the report is to make recommendations to the MS, where recommendations given by interviewees to the Commission seemed more generally supported, these are also provided for information purposes.

## 12 Appendix I - data collection and evaluation methodology

This section is organised into the following subsections:

- 12.1 Identification of a list of issues (task 1)
- 12.2 Questionnaire development (task 2)
- 12.3 Cases
- 12.4 In-country visit selection criteria / justifications
- 12.5 Scheduling of interviews
- 12.6 Types of data collected in the questionnaire
- 12.7 Aggregation and analysis of questionnaire responses

### 12.1 Identification of a list of issues (task 1)

In order to identify which data are relevant in the context of this review, a list of key issues was compiled. This list included key topics and related sub-topics, which were compiled through a thorough review of the following documents:

- MRR
- AVR
- Commission's guidance documents
- Reports of the previous reviews of the compliance cycles of 2008/2009 and 2009/2010
- Experiences gained by the project team through other projects related to the compliance cycle of the EU ETS.

Through this review the relevant subjects were identified by focussing on the issues that were considered 'new' due to the new regulations as well as issues that have shown a lack of harmonisation across MS or a low degree of compliance in the past. Significance categories of high, medium, and low, were assigned to each issue on the list in order to focus on the issues that were of interest to the Commission.

Upon request by the Commission, the issues assigned as being of high significance were initially developed into draft questions for the questionnaire (task 2). Only through seeing the developed draft questions on each of the issues was it possible to evaluate whether or not the issue was relevant and whether it was aiming to retrieve the required/useful information. It was therefore agreed that before officially completing task 1, task 2 would have to be started. Therefore, the drafting of the questionnaire started earlier than anticipated.

## 12.2 Questionnaire development (task 2)

### 12.2.1 Step 1 – questionnaire development

The questionnaire was developed based on the issues that were identified as being of medium and high significance to this review under task 1. The questionnaire structure follows largely the steps of the compliance cycle. Its outline was as follows:

- Permitting
  - Submission of Permit Application and monitoring plan
  - Connection to other permits
  - Content of monitoring plan
  - Content of Standardised/simplified monitoring plan
  - Assessment of the Permit Application and the monitoring plan
  - Notification of Changes and Updating of Permit and monitoring plan
- Monitoring
  - Annex I and the definition of combustion
  - Tier requirements and categorisation
  - Measurement based methodologies
  - Biomass
  - Uncertainty assessment
  - Unreasonable costs and technical feasibility
  - Sampling Plans
  - Frequency of analyses
  - Laboratories
  - Inherent and transferred CO<sub>2</sub>
  - Data gaps
  - Global warming potentials
  - Aviation
- Reporting
  - Consistency with other reporting schemes
  - Reporting on the improvements to the monitoring methodology
  - Format and Submission of annual emission report and verification reports
  - Content of annual emission report
  - Review share and approach
  - Determination of the emission figure
- Verification
  - Obligations of the verifier
  - Verification activities and procedures
  - Findings of, concluding and reporting on the outcomes of verification
  - Simplified verifications
- Inspection
  - Inspection procedures
  - Who does inspect

- Findings and conclusions
- Accreditation
  - Appointment of National Accreditation Bodies/National Certification Authorities
  - Information exchange
  - Accreditation of verifiers
  - Surveillance and extraordinary assessments of verifiers
  - Reassessment of accreditation certificate
  - Cross-border accreditation
- Electronic reporting
- Enforcement
- Competent Authority Organisation
- Sector specific and general findings.

The following authorities and documents were identified as being relevant information sources to understand the compliance of, and practices within, a MS:

- Competent Authorities
- National Accreditation Bodies/National Certification Authorities
- Verifiers
- Cases, i.e. installations/airline operators and the relevant documentation for the 2013/2014 compliance period.

The questionnaire was developed to incorporate different question styles to solicit different quantitative and/or qualitative responses from MS interviewees. The questionnaire thus incorporates a mixture of three question styles:

- "select one" – where two or more possible responses were perceived as being possible/permitted but were mutually exclusive of one another
- "select multiple" – where two or more possible responses were perceived as being possible/permitted
- "comment only" – where the expected answer was MS-specific (e.g. experience based responses).

### **12.2.2 Questionnaire development meeting**

A meeting was held on 18 March 2014 with the Commission's project officers Robert Gemmill and Edoardo Turano and Carsten Warnecke (who joined by teleconference), Cathrine Sachweh from Ecofys and Richard Eaton and Sina Wartmann from Ricardo-AEA to discuss the drafting of the questions and the structure of the questionnaire.

During this meeting the working draft template of the questionnaire was presented, which included relevant references for the questions and topics, the information source (i.e. to which body the questions will be asked), the actual questions, the expected response type (i.e. open question or closed), as well as predefined answers which have been developed, for consultant use only, with the

aim of being able to better aggregate responses to formulate overall conclusions and recommendations.

At this stage, the questionnaire contained 193 questions.

The detailed discussions during the meeting helped the project team to better understand how this review should differ from the past reviews and which issues should receive more attention than others. While this step was originally envisioned through agreement of a list of issues in task 1, an in-person meeting using a draft questionnaire was ultimately seen as being more effective.

Also, attention was paid to the phrasing of questions as, on the one hand the aim of the questions is to receive honest answers from the interviewee, the questions should not give the impression that non-compliance is in any way acceptable. Therefore a careful balance needed to be struck in the way the questions are phrased. In order to not pre-empt the interviewee in his/her answer it was confirmed that the predefined answers will not be shared with the interviewee(s).

As agreed with the Commission, a preliminary final version of the questionnaire was submitted by 25 March and an outline of its content presented to the WG 3 meeting held on 2 April in Brussels.

Further comments were submitted by the Commission on 15 April 2014 that were addressed in the final version of the questionnaire.

### **12.2.3 Finalisation of the questionnaire**

The further comments were incorporated into the final version by the project team. The final version of the questionnaire proposed for use in the calibration interview was submitted to the Commission on 22 April 2014, and is included in Appendix B.

For each of the four information sources, CAs, verifiers, NAB/NCA and 'cases', a subset of the questions from the overall questionnaire has been developed, to list only the relevant topics for each specific interviewee.

The final list of the high, medium and low priority issues was provided to the Commission.

## **12.3 Cases**

In addition to retrieving data through interviews, 150 cases were assessed by the project team. Each case represents an installation or aircraft operator and its documentation for the compliance year 2013/2014.

The objective of the case assessment was to retrieve factual confirmation of findings from the interviews regarding, for example, the use of templates, completeness and quality of submissions. This assessment was also used to assist in the identification of sector-specific issues.

Documents assessed included:

- *Installations*
  - Permit
  - Monitoring plan, including where applicable documentation such as sampling plan, etc.
  - Verification report
  - Annual emission report
- *Airline operators*
  - Monitoring plan
  - Annual emission report.

### 12.3.1 Sector selection

For the selection of cases, five priority sectors were chosen with regards to complexity and share of total GHG emissions. These sectors were also selected in anticipation of finding examples of the application of the fall-back methodology and sector specific MRV requirements, as well as installations transferring blast furnace gas (BFG) and coke oven gas (COG):

- Production of pig iron and steel
- Production of nitric acid
- Production of bulk organic chemical
- Manufacturing of ceramics
- Aviation.

### 12.3.2 Case selection methodology

The selection of the cases in each MS and sector is not statistically significant but was followed to achieve a good spread over the target sectors. The initial aim was to assess five cases per MS.

MS with less than five installations, or with only a few of the target sectors represented, were compensated for by seeking an additional case from the larger MS. In cases where there were no installations/aircraft operators in any of the priority sectors in a MS, cases were picked from the secondary priority sectors – cement and combustion of fuels – as necessary to reach the required number of cases for sampling.

If a MS had cases from at least three of the priority sectors, the approach taken was to 'oversample' two of the sector categories, where possible.

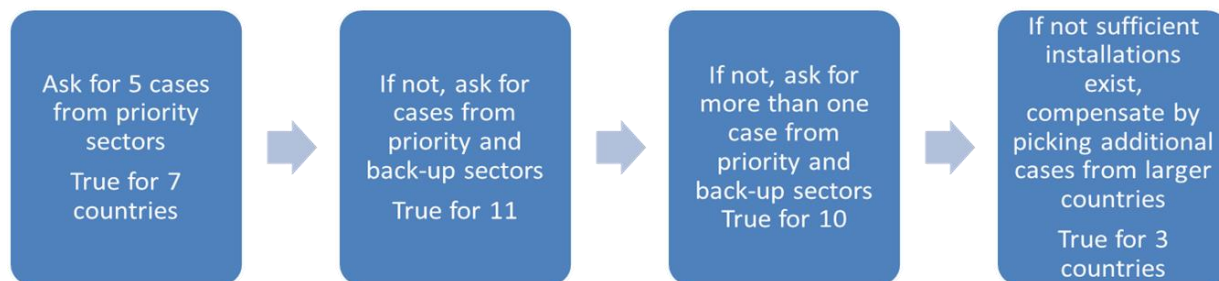


Figure 13 Flow diagram of case selection approach

## 12.4 In-country visit selection criteria / justifications

The compliance cycle data (see section 12.6) was primarily collected through interviews with the relevant bodies at a MS level. For 14 MS (just less than half of MS) the interview was undertaken through an in-country visit, while for the remaining 17 countries the interview was undertaken remotely through telephone and video conference interactions. Selection criteria were defined in order to decide which countries were visited and which ones were interviewed over the phone / video conference.

Based on discussions with the Commission, experience from the past reviews and a qualitative assessment of countries, the following criteria were defined for selecting a MS for an in-country visit:

- Quantitative: importance of countries due to large share of total emissions and high number of installations
- Qualitative: issues identified in previous reviews, e.g. non-conformities or special provisions
- Sector specific importance (e.g. for aviation)
- Regional balance: Nordic, Baltic, Eastern European and Western European MS.

Table 16 below lists all countries subject to the compliance cycle review and also outlines the chosen interview mode and the corresponding criteria for why an in-country interview mode was selected:

**Table 16: Interview modes per country**

Country code	Country	Interview approach	Reason for in-country visit
AT	Austria	Phone/web-based	N/A
BE	Belgium	Phone/web-based	N/A
BG	Bulgaria	Phone/web-based	N/A
HR	Croatia	In-country visit	New EU MS, first compliance cycle review
CY	Cyprus	Phone/web-based	N/A
CZ	Czech Republic	In-country visit	Quantitative: importance due to large emissions; Qualitative issues
DK	Denmark	In-country visit	Qualitative: specific provisions for small installations
EE	Estonia	Phone/web-based	N/A
FI	Finland	Phone/web-based	N/A
FR	France	In-country visit	Quantitative: importance due to large emissions
DE	Germany	In-country visit	Quantitative: importance due to large emissions; Calibration interview
GR	Greece	In-country visit	Quantitative: importance due to large emissions; Qualitative issues
HU	Hungary	In-country visit	Qualitative issues
IS	Iceland	Phone/web-based	N/A
IE	Ireland	Phone/web-based	N/A
IT	Italy	Phone/web-based	Quantitative: importance due to large emissions
LV	Latvia	Phone/web-based	N/A
LI	Liechtenstein	Phone/web-based	N/A
LI	Lithuania	In-country visit	Regional balance: largest emission in the Baltic region; Qualitative: issues identified during last review
LU	Luxemburg	Phone/web-based	N/A
MT	Malta	In-country visit	Sector specific importance: aviation sector
NL	Netherlands	In-country visit	Quantitative: importance due to large emissions
NO	Norway	Phone/web-based	N/A
PL	Poland	In-country visit	Quantitative: importance due to large emissions
PT	Portugal	Phone/web-based	N/A
RO	Romania	Phone/web-based	N/A
SK	Slovakia	Phone/web-based	N/A
SI	Slovenia	Phone/web-based	N/A
ES	Spain	In-country visit	Quantitative: importance due to large emissions
SE	Sweden	In-country visit	Qualitative: own electronic reporting system; Regional balance
UK	United Kingdom	In-country visit	Quantitative: importance due to large emissions



## 12.5 Scheduling of interviews

In order to split the interviews between the consultant partners, the 31 countries were divided between Ecofys and Ricardo-AEA in a way to balance complexity of countries as well as achieving an even split between in-country visits and telephone/video interviews.

Concerns regarding conflicts of interest were addressed by switching the consultant partner for any MS where these conflicts became apparent, ensuring that no interviewer would hold an interview with an authority he/she was currently working with / for (or had), on topics related to the current MRV compliance cycle review.

After having announced the project to MS during a meeting of Working Group III of the Climate Change Committee, MS were informed in more detail of the process and aims of the project through a first email communication by the Commission on 11 April 2014. This email was also to prompt MS' active participation in the project and to request confirmation of MS focal point contacts.

The project team then followed up on this communication both by email and telephone to confirm the focal-point assignment and to propose dates for the MS interviews.

The updated list of focal point contacts has been provided to the Commission.

### 12.5.1 Calibration interview

A calibration meeting took place on 22/23 May 2014 in Berlin at the German Emissions Trading Authority (DEHSt), which is the main EU ETS competent authority in Germany, along with the national accreditation body of Germany (Deutsche Akkreditierungsstelle, DAKs).

The aim of this calibration interview was to align the interview team (five individuals) on how to conduct the interview, as well as to test the questionnaire and to confirm that the time allocated for each of the questionnaire topics was sufficient. Each member of the interview team took a turn in asking questions to one of the German authorities (DEHSt, DAKs).

The timetable of the interview with Germany allowed many opportunities for the interview team to de-brief one another during the two day programme and to provide feedback on how the interview was going and whether the relevant information was retrieved. A more in-depth de-briefing of the interview team took place on 27 May 2014.

The interview team perceived this calibration interview as very valuable in achieving the objectives. Outcomes included:

- Some questions proved to be redundant or led to a misunderstanding / lack of understanding by the interviewee

- Interviewers gained a better understanding of how to manage the interview process, such as when or how to clarify questions, which follow-up questions should be asked and when, and/or in what situations more background or supporting information should be provided
- The case assessment approach required a revised approach especially for countries that do not use the Commission's templates for MPs and AERs or where there are significant language barriers
- While the overall agenda for this meeting worked as planned, some topics required more time than anticipated, while others required less time.

Based on these findings the questionnaire was updated and the agendas for the ensuing interviews were amended.

Similarly, each member of the interview team knew which topics would require additional preparation based upon their background knowledge or the unique characteristics of that MS.

## 12.6 Types of data collected in the questionnaire

The types of data collected included:

- Descriptive, qualitative information on national implementation, e.g. the approaches taken, the personnel involved, information flows and channels as well as tools used.
- Quantitative information on national implementation, e.g. share of AERs reviewed, number of inspections undertaken.
- Information allowing assessment of compliance with the new regulations, e.g. identifying the changes in structures, approaches, procedures, etc. due to the new requirements and how these have improved.
- Information on the use and applicability of Commission guidance documents, tools and templates.
- Information to evaluate the quality of the implementation of the compliance cycle processes, in regards to the principle objective of the compliance cycle of ensuring that a tonne of CO<sub>2</sub>-eq. emitted is also a tonne of CO<sub>2</sub>-eq. accounted for.
- Information on how the recommendations received as part of the previous evaluation project have been addressed by the MS.
- Identification of MS good practices and how these can be used to develop further guidance and tools to support other MS.
- Identification of MS' recommendations for issues where more harmonisation is required at national level or throughout the EU ETS.

## 12.7 Aggregation and analysis of questionnaire responses

Following successful completion of all MS interviews, the completed questionnaire form was reviewed and finalised by the interviewer.

Any instances where an unforeseen answer was provided to a “select one” or “select multiple” were highlighted in the questionnaire form using an internally agreed coding system between the consultant partners.

The finalised questionnaires were then aggregated into a single master file that allowed the project team to select a question and the data source (CA, NAB or verifier). Based on these selections, the master file tabulated the quantitative results to questions with pre-defined answers (select one / select multiple) with any comments provided by the MS in its response outlined below the table in alphabetical order based on the MS code (AT, BE... etc.).

### **12.7.1 Analysis of questionnaire responses**

Analysis of the questionnaire responses was split amongst the interview team based on the main sections of the questionnaire (e.g. “monitoring”).

Responses to questions under a sub-topic (e.g. “monitoring > uncertainty assessments”) were analysed looking for trends in the selected pre-defined answers for *select one/multiple* style questions, as well as the supporting comments provided by MS. The project team were also careful to check:

- That the comment supported the answer the interviewer selected
- If the comment contained other valuable information not represented by the pre-defined answers.

*Comment only* style questions were analysed by reviewing all comments provided by MSs and then categorising the responses based on the commonality of the experiences/views/issues being expressed by the MS. Any so-called “outlier comments”, where a MS highlighted something of value or expressed a view significantly different from the majority view, were also noted by the project team and included into the relevant section of this report where appropriate. A further effort has been made by the authors to identify the most relevant of these additional comments.

## 13 Annex II – Member State fiches

[Attached separately]





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# ECOFYS



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