

NATIONAL REGISTRY OF ESTONIA

**STANDARD INDEPENDENT ASSESSMENT
REPORT**

to the UNFCCC secretariat

2009

Tallinn 2010

PREFACE

Standard Independent Assessment Report of National Registry of Estonia under the United Framework Convention on Climate Change (UNFCCC) contains the following parts:

Part I. Description Kyoto Protocol Units

Part II. Changes to National Registry

Part III Appendixes

Mrs. Getlyn Makke (Registry System Administrator (hereinafter as RSA) of National Registry (hereinafter as NR) of Estonia) from Climate and Ozone Bureau of Estonian Environment Information Centre (hereinafter as EEIC) and Mr. Nikke Suominen and Mr. Jukka Katainen from Innofactor Ltd (NR hosting company representatives) have prepared the Standard Independent Assessment Report (hereinafter as SIAR) and other information included in this report.

ABBREVIATIONS

UNFCCC – United Nations Framework on Climate Change Convention

EE – Estonia

CDM – Clean Development Mechanism

EEIC – Estonian Environment Information Centre

NR – National Registry

CPR – Commitment Period Reserve

RSA – Registry System Administrator

SEF – Standard Electronic Format

ITL – International Transaction Log

CITL – Community Transaction Log

KP – Kyoto Protocol

CR – Community Registry

ERT – Expert Review Team

IAR – Independent Assessment Report

SIAR – Standard Independent Assessment Report

EU ETS – European Union Emission Trading Scheme

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1. PART I. Kyoto Protocol Units

1.2 Information on Accounting of the Kyoto Protocol Units (Chapter 12 of NIR)

The following reports are described in this document and correspond to the requirements of decisions 14/CMP.1 and 15/CMP.1. Information required under Decision 15/CMP.1 paragraph 11 is displayed as required by UNFCCC ITL Administrators' "Standard Independent Assessment Report. Reporting Requirements and Guidance for Registries v4.0" in "SEF_EE_2010_1_10_43-28 13-1-2010.xls". The Standard Electronic Format (hereinafter as SEF) report for 2009 has been submitted to the UNFCCC Secretariat electronically and the contents of the report can also be found as Appendix 1 of this document.

Annual Submission Item	Reporting Guidance
15/CMP.1 annex I.E paragraph 11: Standard electronic format (SEF)	<p>The Standard Electronic Format report for 2009 has been submitted to the UNFCCC Secretariat electronically. SEF, containing the information required in paragraph 11 of the annex to decision 15/CMP.1, is included in the NIR in Chapter 12.2 "Summary of information reported in the SEF tables" and the report is a part of NIR as Annex 6.</p> <p>This SEF report is referenced as report R-1 in this document. See Appendix 1 for more details related to the SEF report.</p>
15/CMP.1 annex I.E paragraph 12: List of discrepant transactions	<p>Information of discrepant transactions is included in the NIR in Chapter 12.3 "Discrepancies and notifications" and the report is a part of NIR as Annex 6.</p> <p>The report of discrepant transactions is referenced as report R-2 in this document. See Appendix 2 for more details related to the discrepant transactions.</p> <p>Discrepant transactions occurred in 2009 are listed in Appendix 2 in report R-2 of this document.</p>

Annual Submission Item	Reporting Guidance
15/CMP.1 annex I.E paragraph 13 & 14: List of CDM notifications	<p>Information on CDM notifications is included in the NIR in Chapter 12.3 "Discrepancies and notifications" and report is a part of NIR as Annex 6.</p> <p>The report of CDM notifications is referenced as report R-3 in this document. See Appendix 3 for more details related to the discrepant transactions.</p> <p>No CDM notifications occurred in 2009.</p>
15/CMP.1 annex I.E paragraph 15: List of non- replacements	<p>Information on non-replacements is included in the NIR as Chapter 12.3 "Discrepancies and notifications" and report is a part of NIR as Annex 6.</p> <p>The report on non-replacements is referenced as report R-4 in this document. See Appendix 4 for more details related to the non-replacements.</p> <p>No non-replacements occurred in 2009.</p>
15/CMP.1 annex I.E paragraph 16: List of invalid units	<p>Information of invalid units is included in the NIR as Chapter 12.3 "Discrepancies and notifications" and report is a part of NIR as Annex 6.</p> <p>The report of invalid units is referenced as report R-5 of this document. See Appendix 5 for more details related to the list of invalid units.</p> <p>No invalid units exist as at 31 December 2009".</p>
15/CMP.1 annex I.E paragraph 17 Actions and changes to address discrepancies	<p>No actions were taken or changes made to address discrepancies for the period under review.</p>

Annual Submission Item	Reporting Guidance
15/CMP.1 annex I.E Publicly accessible information	<p>Following information is publicly accessible through the user interface of the registry web page (https://khgregister.envir.ee)</p> <p>Account information (Information on paragraph 45 of the annex to the decision 13/CMP.1); JI projects in Estonia (Information on paragraph 46 of the annex to the decision 13/CMP.1); Information about unit holdings and transactions (Information on paragraph 47 of the annex to the decision 13/CMP.1); Information about Entities Authorized to Hold Units (Information on paragraph 48 of the annex to the decision 13/CMP.1);</p> <p><u>Information on paragraph 45 of the annex to the decision 13/CMP.1:</u> Information is available at NR web page: https://khgregister.envir.ee (Selecting from the left hand menu “Public Reports”)</p> <p><u>Information on paragraph 46 of the annex to the decision 13/CMP.1:</u></p> <p>Information is available at Climate web: http://www.keskkonnainfo.ee/index.php?lan=EE&sid=582&tid=525&l3=339&l2=323&l1=320</p> <p><u>Information on paragraph 47 of the annex to the decision 13/CMP.1:</u></p> <p>Information is available at NR web page: https://khgregister.envir.ee (Selecting from the left hand menu “Public Reports”)</p> <p><u>Information on paragraph 48 of the annex to the decision 13/CMP.1:</u></p> <p>The Decision 280/2004/EC of the European Parliament and of the Council requires EU Member States to provide information on the legal entities authorized to participate in the mechanism under Articles 6, 12 and 17 of the Kyoto Protocol in the NIR. According to the Estonian national legislation (Te Ambient Air Protection Act) §117) the Ministry of the Environment as competent authority is authorized to trade with AAUs, RMUs, ERUs and CERs. Installations</p>

Annual Submission Item	Reporting Guidance
	<p>falling under the scope of the Directive 2003/87/EC are authorized to use ERUs and CERs for compliance according to the percentage set out in National Allocation Plan for 2008-2012.</p> <p>This information is available at Climate web: http://www.keskkonnainfo.ee/index.php?lan=EE&sid=582&tid=525&l3=339&l2=323&l1=320</p> <p>Public information required by Commission regulation (EC) No 2216/2004 (in addition to the above-mentioned public information):</p> <p>Installation and permit details (available on the Estonian NR interface – Under “Public Reports”: https://khgregister.envir.ee/);</p> <p>Information about verified emissions, surrenders and compliance status of installations (On Estonian Environment Information Centre Climate web page: http://www.keskkonnainfo.ee/index.php?lan=EE&sid=352&tid=332&l2=326&l1=320 – available in Estonian);</p> <p>National allocation plan for Estonia (NAP) (On Estonian Environment Information Centre Climate web page: http://www.keskkonnainfo.ee/index.php?lan=EE&sid=352&tid=332&l2=326&l1=320 – available in Estonian).</p> <p>Other public information is available in Estonian Environment Information Centre Climate web page (in Estonian and in English) (http://www.keskkonnainfo.ee/index.php?lan=EE&sid=582&tid=525&l3=339&l2=323&l1=320);</p> <p>Allocated allowances vs. verified emissions (On Estonian Environment Information Centre Climate web page: http://www.keskkonnainfo.ee/index.php?lan=EE&sid=352&tid=332&l2=326&l1=320 – available in Estonian).</p>
15/CMP.1 annex I.E paragraph 18	<p>The commitment period reserve, in accordance with the annex to decision 18/CP.7, is included in the NIR as Chapter 12.5 "Calculation of the commitment period reserve (CPR)."</p> <p>The commitment period reserve is calculated in accordance with decision 11/CMP.1 as 90% of</p>

Annual Submission Item	Reporting Guidance
CPR Calculation	<p>the proposed assigned amount or 100% of its most recently reviewed inventory times five, whichever is lowest.</p> <p>Estonia has interpreted the “most recently reviewed inventory” the inventory for the year 2008. This would mean that five times the emissions from the total inventory of 2008 would be lower, than 90% of the assigned amount. This would give an estimated commitment period reserve of 101 267 900 tonnes CO₂ eq.</p> <p>$20\,253,58 \times 5 = 101\,267,9 \text{ Gg CO}_2 = 101\,267\,900 \text{ t CO}_2$</p>

2.PART II. Changes in National Registry

2.1 Information on Changes in National Registry

During autumn 2009 The Estonian Environment Information Centre changed the software used for the EE emissions trading registry. The decision for the registry software change was based mainly on the need to make more a robust, less expensive and better supported software into use. From the EE registry point of view, the CR software has some preferable qualities over the previously used Greta software. For example, the user interface of the CR software is more user-friendly and certain repetitive operations are more easy and flexible to carry out.

Before the registry software change, software called Greta was used by the Estonian registry. Greta software was developed by Defra (Department for Environment, Food and Rural Affairs of UK). The CR software, which is now in use in the EE registry, is developed by the European Commission. Whereas Greta software was a closed system (apart from the user interface components) based on .NET and Microsoft technologies (MS IIS and MS SQL database), the CR is open-source software (based on J2EE, using WebLogic and Oracle database), provided free-of-charge for EU members states.

Due to the fact, that the CR software is open source, all developments and fixes carried out by other registries for the CR software are freely available for other registries as well. The access to the source code of the software also enables more efficient problem solving and localizations. In addition, some of the heaviest functionalities related to registry activities, which require a lot of processing, are more optimized in CR software, thus making it easier to perform these activities.

Currently only the user interface of the EE registry is localized to Estonian language. No further localizations are planned at this time.

The process of changing the registry software from Greta software to CR registry included the following high-level steps:

- 1) Creating the needed migration scripts, in order to transfer the registry database as fully as possible from Greta to CR;
- 2) Testing the CR internally (including the language term changes);
- 3) Validating the migrated data in the localized CR software. Due to the comprehensive changes between Greta and CR software, not all data could be migrated from Greta to CR. However, the data that could not be migrated, was stored, and can be accessed by the EE registry admin at any time;
- 4) Completing the official ITL and CITL acceptance tests (Annex H and ETS test, respectively) with the CR software (detailed test cases and reports are included in this document as Appendix 8);
- 5) Performing the Go-live migration for the production registry instance.

The description of the functions of national registry and its conformity with DES under the Kyoto Protocol is also provided in table 1 in this report.

Table 1 Functions of Estonian NR and its conformity with DES

Reporting Item	Contents
15/CMP.1 annex II.E paragraph 32.(a) Change of name or contact	Getlyn Makke Estonian Environment Information Centre Mustamäe tee 33, Tallinn 10616 Tel +372 6737 581 No change occurred during the reported period.
15/CMP.1 annex II.E paragraph 32.(b) Change of cooperation arrangement	Estonian NR is not a part of any consolidated registry system. However, the VPN connection to the ITL is shared with several countries using the same tunnel. No change occurred during the reported period

<p>15/CMP.1 annex II.E paragraph 32.(c)</p> <p>Change to database or the capacity of national registry</p>	<p>Estonian NR system is based on CR software (since October 2009). CR software uses and Oracle 9i relation database dedicated data model for supporting the registry operations.</p>
<p>15/CMP.1 annex II.E paragraph 32.(d)</p> <p>Change of conformance to technical standards</p>	<p>The CR registry system was developed for the EU ETS by the EC. The scheme requires the Member States' registries to be compliant with the UN Data Exchange Standards (DES) specified for the Kyoto Protocol. CR contains the functionality to perform issuance, conversion, external transfer, (voluntary) cancellation, retirement and reconciliation processes using XML messages and web services as specified in the UN DES document. In addition, it also contains 24-hour clean-up, transaction status enquiry, time synchronization, data logging requirements (including transaction log, reconciliation log, internal audit log and message archive) and the different identifier formats specified in the UN DES documents.</p> <p>Updated Registry Readiness Questionnaire has been submitted to ITL electronically. All information, what has confidential contents, has been also stated so.</p>

<p>15/CMP.1 annex II.E</p> <p>paragraph 32.(e)</p> <p>Change of discrepancies procedures</p>	<p>In order to minimize discrepancies between Estonian NR and the transaction log, the following approach has been adopted for the registry system development under the EU ETS and UN DES:</p> <ul style="list-style-type: none"> • Communication between the NR and the ITL is via web services using XML messages as specified in the UN DES document. These web services, XML message format and the processing sequence are as specified in the UN DES document. • As far as possible, the NR validates data entries against the list of checks that are performed by the ITL (as documented in Annex E of the UN DES annexes document) before forwarding the request to the ITL for processing. This will help to minimize the sending of incorrect information to the ITL for approval. This also holds for any incoming transaction or message relating to a transaction. The registry validates all communication using checks described in the DES and the EU ETS regulation before processing the request further. If any check fails, the process is terminated and rolled back according to the requirements. • All units that are involved in a transaction shall be earmarked internally within the registry, thereby preventing the units from being involved in another transaction until a response has been received from the ITL and the current transaction completed. • The web service that sends the message to the ITL for processing will ensure that an acknowledgement message is received from the ITL before completing the submission of the message. Where no acknowledgement message is received following a number of retries, the web service will terminate the submission and roll back any changes made to the unit blocks that were involved.
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			<ul style="list-style-type: none"> Where a 24-hour clean-up message is received from the ITL, the web service will roll back any pending transactions and the units that were involved, thereby preventing any discrepancies in the unit blocks between the registry and the ITL. Finally, if any unforeseen failure were to occur, the data discrepancies between the registry and the ITL can be corrected via a manual intervention function within the registry. Following this, reconciliation will be performed to validate that the data is synchronized between registry and the ITL.
15/CMP.1	annex	II.E	No change occurred during the reporting period
paragraph 32.(f)			
Change of security			
15/CMP.1	annex	II.E	No change occurred during the reporting period.
paragraph 32.(g)			
Change of list of publicly available information			
15/CMP.1	annex	II.E	https://khgregister.envir.ee
paragraph 32.(h)			No change occurred during the reporting period
Change of Internet address			
15/CMP.1	annex	II.E	No change occurred during the reporting period
paragraph 32.(i)			
Change of data integrity measure			

<p>15/CMP.1 annex II.E paragraph 32.(j) Change of test results</p>	<p>In the preparation process for the software change of the NR of Estonia a new test plan has been submitted electronically to the ITL. Also after the successful testing (the Go-Live process for CR) the test results have been submitted electronically to the ITL.</p> <p>See more detailed information about the Test Plan and Test Report in Appendix 8 of this document.</p>
<p>The previous Annual Review recommendations</p>	<p>During the review visit to Tallinn in 2009, the ERT noted in their “2009 Estonia National GHG Inventory In-Country Review Findings and Recommendations” that the contract for outsourcing registry hardware and software will expire within the year 2009 and a tender procedure has been started to decide the host for next years. Estonia will report on these changes in its next submission.</p> <p><u>Estonian NR response actions to ERT recommendations:</u></p> <p>The procurement process (Procurement no 1147989 “Eesti heitkogustega kauplemise registri majutus- ja hooldusteenus 2010 ja 2011 vastavalt aastaks”) for hosting Estonian NR for years 2010 and 2011 was successfully finished before the end of the year 2009. New hosting agreement with selected provider was signed in Tallinn, on 21th of December 2009.</p>

PART III. APPENDIXES

Appendix 1 – Report R-1: Standard Electronic Format (SEF)

UNFCCC SEF application
 Version 1.2

Workflow <div style="text-align: center; margin-bottom: 5px;">Unlock file</div> <div style="text-align: center; margin-bottom: 5px;">Completeness Check</div> <div style="text-align: center; margin-bottom: 5px;">Consistency Check</div> <div style="text-align: center;">Lock file</div>	Settings <div> Party: Estonia ISO: EE Submission year: 2010 Reported year: 2009 Commitment period: 1 </div> <div style="margin-top: 10px;"> Completeness check: YES Consistency check: YES File locked: YES </div> <div style="margin-top: 10px;"> Lock timestamp: 13.01.2010 10:43 Submission version number: 1 Submission type: Official </div>
Functions <div style="text-align: center; margin-bottom: 5px;">Mandatory data</div> <div style="text-align: center; margin-bottom: 5px;">Import XML</div> <div style="text-align: center; margin-bottom: 5px;">Reset SEF</div> <div style="text-align: center; margin-bottom: 5px;">Export XML</div> <div style="text-align: center;">Export XML (Imported)</div>	

Main / Table 1 / Table 2a / Table 2b and 2c / Table 3 / Table 4 / Table 5a, 5b and 5c / Table 6a, 6b and 6c / Messages

A	B	C	D	E	F	G	H
			Party		Estonia		
			Submission year		2010		
			Reported year		2009		
			Commitment period		1		
Table 1. Total quantities of Kyoto Protocol units by account type at beginning of reported year							
Account type	Unit type						
	AAUs	ERUs	RMUs	CERs	tCERs	ICERs	
Party holding accounts	184384380	NO	NO	NO	NO	NO	
Entity holding accounts	12826257	NO	NO	NO	NO	NO	
Article 3.3/3.4 net source cancellation accounts	NO	NO	NO	NO			
Non-compliance cancellation accounts	NO	NO	NO	NO			
Other cancellation accounts	NO	NO	NO	NO	NO	NO	
Retirement account	NO	NO	NO	NO	NO	NO	
tCER replacement account for expiry	NO	NO	NO	NO	NO		
ICER replacement account for expiry	NO	NO	NO	NO			
ICER replacement account for reversal of storage	NO	NO	NO	NO			NO
ICER replacement account for non-submission of certification report	NO	NO	NO	NO			NO
Total	197210637	NO	NO	NO	NO	NO	

A	B	C	D	E	F	G	H	I	J	K	L	M	N
									Party	Estonia			
									Submission year	2010			
									Reported year	2009			
									Commitment period	1			

Table 2 (a). Annual internal transactions

Transaction type	Additions						Subtractions					
	Unit type						Unit type					
	AAUs	ERUs	RMUs	CERs	tCERs	ICERs	AAUs	ERUs	RMUs	CERs	tCERs	ICERs
Article 6 issuance and conversion												
Party-verified projects		NO					NO		NO			
Independently verified projects		NO					NO		NO			
Article 3.3 and 3.4 issuance or cancellation												
3.3 Afforestation and reforestation			NO				NO	NO	NO	NO		
3.3 Deforestation			NO				NO	NO	NO	NO		
3.4 Forest management			NO				NO	NO	NO	NO		
3.4 Cropland management			NO				NO	NO	NO	NO		
3.4 Grazing land management			NO				NO	NO	NO	NO		
3.4 Revegetation			NO				NO	NO	NO	NO		
Article 12 afforestation and reforestation												
Replacement of expired tCERs							NO	NO	NO	NO	NO	
Replacement of expired ICERs							NO	NO	NO	NO		
Replacement for reversal of storage							NO	NO	NO	NO		NO
Replacement for non-submission of certification report							NO	NO	NO	NO		NO
Other cancellation							NO	NO	NO	NO	NO	NO
Sub-total		NO	NO				NO	NO	NO	NO	NO	NO

Transaction type	Retirement					
	Unit type					
	AAUs	ERUs	RMUs	CERs	tCERs	ICERs
Retirement	1,4E+07	NO	NO	NO	NO	NO

	Party	Estonia
	Submission year	2010
	Reported year	2009
	Commitment period	1

Add registry

Delete registry

No external transactions

Table 2 (b). Annual external transactions

	Additions						Subtractions					
	Unit type						Unit type					
	AAUs	ERUs	RMUs	CERs	tCERs	ICERs	AAUs	ERUs	RMUs	CERs	tCERs	ICERs
Transfers and acquisitions												
AT	3018	NO	NO	957	NO	NO	57930	NO	NO	NO	NO	NO
DE	NO	NO	NO	NO	NO	NO	11200	NO	NO	NO	NO	NO
DK	21000	NO	NO	NO	NO	NO	108600	NO	NO	NO	NO	NO
FI	NO	NO	NO	NO	NO	NO	285617	NO	NO	NO	NO	NO
FR	30600	NO	NO	NO	NO	NO	235660	NO	NO	NO	NO	NO
GB	150000	NO	NO	NO	NO	NO	283280	NO	NO	NO	NO	NO
LT	104700	44934	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
NL	NO	NO	NO	NO	NO	NO	73864	NO	NO	NO	NO	NO
Sub-total	309318	44934	NO	957	NO	NO	1056151	NO	NO	NO	NO	NO

Additional information

Independently verified ERUs							NO					
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Table 2 (c). Total annual transactions

Total (Sum of tables 2a and 2b)	309318	44934	NO	957	NO	NO	1056151	NO	NO	NO	NO	NO
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Party Estonia
 Submission year 2010
 Reported year 2009
 Commitment period 1

Table 3. Expiry, cancellation and replacement

Transaction or event type	Expiry, cancellation and requirement to replace	Replacement							
	Unit type		Unit type						
	tCERs	ICERs	AAUs	ERUs	RMUs	CERs	tCERs	ICERs	
Temporary CERs (tCERs)									
Expired in retirement and replacement accounts	NO								
Replacement of expired tCERs			NO	NO	NO	NO	NO		
Expired in holding accounts	NO								
Cancellation of tCERs expired in holding accounts	NO								
Long-term CERs (ICERs)									
Expired in retirement and replacement accounts		NO							
Replacement of expired ICERs			NO	NO	NO	NO			
Expired in holding accounts		NO							
Cancellation of ICERs expired in holding accounts		NO							
Subject to replacement for reversal of storage		NO							
Replacement for reversal of storage			NO	NO	NO	NO		NO	
Subject to replacement for non-submission of certification report		NO							
Replacement for non-submission of certification report			NO	NO	NO	NO		NO	
Total			NO	NO	NO	NO	NO	NO	

Party Estonia
 Submission year 2010
 Reported year 2009
 Commitment period 1

Table 4. Total quantities of Kyoto Protocol units by account type at end of reported year

Account type	Unit type					
	AAUs	ERUs	RMUs	CERs	tCERs	ICERs
Party holding accounts	172427649	NO	NO	NO	NO	NO
Entity holding accounts	10483580	44934	NO	957	NO	NO
Article 3.3/3.4 net source cancellation accounts	NO	NO	NO	NO		
Non-compliance cancellation accounts	NO	NO	NO	NO		
Other cancellation accounts	NO	NO	NO	NO	NO	NO
Retirement account	13552575	NO	NO	NO	NO	NO
tCER replacement account for expiry	NO	NO	NO	NO	NO	
ICER replacement account for expiry	NO	NO	NO	NO		
ICER replacement account for reversal of storage	NO	NO	NO	NO		NO
ICER replacement account for non-submission of certification report	NO	NO	NO	NO		NO
Total	196463804	44934	NO	957	NO	NO

Party Estonia
 Submission year 2010
 Reported year 2009
 Commitment period 1

Table 5 (a). Summary information on additions and subtractions

	Additions						Subtractions					
	Unit type						Unit type					
	AAUs	ERUs	RMUs	CERs	tCERs	ICERs	AAUs	ERUs	RMUs	CERs	tCERs	ICERs
Starting values	196062637											
Issuance pursuant to Article 3.7 and Non-compliance cancellation												
Carry-over	NO	NO		NO			NO	NO	NO	NO		
Sub-total	196062637	NO		NO			NO	NO	NO	NO		
Annual transactions												
Year 0 (2007)	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Year 1 (2008)	1238538	NO	NO	NO	NO	NO	90538	NO	NO	NO	NO	NO
Year 2 (2009)	309318	44934	NO	957	NO	NO	1056151	NO	NO	NO	NO	NO
Year 3 (2010)	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Year 4 (2011)	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Year 5 (2012)	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Year 6 (2013)	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Year 7 (2014)	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Year 8 (2015)	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Sub-total	1547856	44934	NO	957	NO	NO	1146689	NO	NO	NO	NO	NO
Total	197610493	44934	NO	957	NO	NO	1146689	NO	NO	NO	NO	NO

Table 5 (b). Summary information on replacement

	Requirement for replacement		Replacement					
	Unit type		Unit type					
	tCERs	ICERs	AAUs	ERUs	RMUs	CERs	tCERs	ICERs
Previous CPs			NO	NO	NO	NO	NO	NO
Year 1 (2008)	NO	NO	NO	NO	NO	NO	NO	NO
Year 2 (2009)	NO	NO	NO	NO	NO	NO	NO	NO
Year 3 (2010)	NO	NO	NO	NO	NO	NO	NO	NO
Year 4 (2011)	NO	NO	NO	NO	NO	NO	NO	NO
Year 5 (2012)	NO	NO	NO	NO	NO	NO	NO	NO
Year 6 (2013)	NO	NO	NO	NO	NO	NO	NO	NO
Year 7 (2014)	NO	NO	NO	NO	NO	NO	NO	NO
Year 8 (2015)	NO	NO	NO	NO	NO	NO	NO	NO
Total	NO	NO	NO	NO	NO	NO	NO	NO

Table 5 (c). Summary information on retirement

Year	Retirement					
	Unit type					
	AAUs	ERUs	RMUs	CERs	tCERs	ICERs
Year 1 (2008)	NO	NO	NO	NO	NO	NO
Year 2 (2009)	1,4E+07	NO	NO	NO	NO	NO
Year 3 (2010)	NO	NO	NO	NO	NO	NO
Year 4 (2011)	NO	NO	NO	NO	NO	NO
Year 5 (2012)	NO	NO	NO	NO	NO	NO
Year 6 (2013)	NO	NO	NO	NO	NO	NO
Year 7 (2014)	NO	NO	NO	NO	NO	NO
Year 8 (2015)	NO	NO	NO	NO	NO	NO
Total	1,4E+07	NO	NO	NO	NO	NO

Party Estonia
 Submission year 2010
 Reported year 2009
 Commitment period 1

Add transaction

Delete transaction

No corrective transaction

Table 6 (a). Memo item: Corrective transactions relating to additions and subtractions

	Additions						Subtractions					
	Unit type						Unit type					
	AAUs	ERUs	RMUs	CERs	tCERs	ICERs	AAUs	ERUs	RMUs	CERs	tCERs	ICERs

Add transaction

Delete transaction

No corrective transaction

Table 6 (b). Memo item: Corrective transactions relating to replacement

	Requirement for replacement		Replacement					
	Unit type		Unit type					
	tCERs	ICERs	AAUs	ERUs	RMUs	CERs	tCERs	ICERs

Add transaction

Delete transaction

No corrective transaction

Table 6 (c). Memo item: Corrective transactions relating to retirement

	Retirement					
	Unit type					
	AAUs	ERUs	RMUs	CERs	tCERs	ICERs

Appendix 2 – Report R-2: List of Discrepant Transactions

DES Response Code	Average number of occurrences per transaction (X 100,000)		Transaction Number	Proposal Date Time	Transaction Type	Final State	Explanation	Units Involved abbreviated		
	Reported Year	Prior to the Reported Year						Serial Number	Unit Type	Quantity
2006	1111,11	0								
			EE1249	2009-11-23 14:49:14	External Transfer	Terminated	The account type code for the acquiring account was not valid	EE-229629027-229632522	AAU	3496
								EE-241307284-241310779	AAU	3496
								ES-1903504900-1903507480	AAU	2581
			EE1353	2009-12-10 09:37:23	External Transfer	Terminated	The account type code for the acquiring account was not valid	EE-229629027-229632522	AAU	3496
								EE-241307284-241310779	AAU	3496
								ES-1903504900-1903507480	AAU	2581
4007	555,56	0								
			EE1450	2009-12-22 15:00:27	External Transfer	Terminated	Incorrect use of the registry software	EE-231067349-231067349	AAU	1
7005	555,56	0								

			EE1248	2009-11-19 14:33:51	Internal- Internal transfer of unit/supp program transactio n	Termina ted	The acquiring registry was not able accept transactions at the time of this transaction taking place	DE- 15759268 63- 15759270 36	AAU	174
								DE- 15759270 37- 15759271 26	AAU	90
								DE- 15761329 17- 15761341 78	AAU	1262
								DE- 15989494 46- 15989503 93	AAU	948
								DE- 35679422 00- 35679477 99	AAU	5600
								EE- 19375937 9- 20291241 0	AAU	9153032
								EE- 22956512 4- 22957946 7	AAU	14344
								EE- 22957959 0- 22961758 5	AAU	37996
								EE- 22963252 3- 22963623 4	AAU	3712
								EE- 23100279 6- 23106497 5	AAU	62180
								EE- 23109898	AAU	17695

								2- 23111667 6		
								EE- 23117220 7- 23118476 5	AAU	12559
								EE- 23118476 6- 23125790 4	AAU	73139
								EE- 23125797 9- 23125857 3	AAU	595
								EE- 23125857 4- 23126043 9	AAU	1866
								EE- 23126409 0- 23126667 8	AAU	2589
								EE- 23126736 6- 23127374 8	AAU	6383
								EE- 23132398 4- 23132543 9	AAU	1456
								EE- 23147116 6- 23157528 6	AAU	104121
								EE- 23161884 5- 23167374 9	AAU	54905
								EE- 23167375 0- 23177016 7	AAU	96418
								EE- 23226068 1-	AAU	313860

								23257454 0		
								EE- 23978904 5- 24124338 0	AAU	1454336
								EE- 24124707 4- 24125772 4	AAU	10651
								EE- 24131078 0- 24131685 6	AAU	6077
								EE- 24196772 0- 24224443 0	AAU	276711
								EE- 24247311 5- 24248184 9	AAU	8735
								EE- 24249528 1- 24250227 8	AAU	6998
								EE- 24252815 0- 24253330 2	AAU	5153
								EE- 24256533 6- 24256690 6	AAU	1571
								EE- 24280642 1- 24280789 1	AAU	1471
								EE- 24281086 3- 24281087 6	AAU	14
								EE- 24292014 8- 24293616	AAU	16014

								1		
								EE- 24295592 7- 24295736 2	AAU	1436
								EE- 24295736 4- 24295932 1	AAU	1958
								EE- 24337897 0- 24344842 4	AAU	69455
								EE- 24366055 3- 24370263 2	AAU	42080
								EE- 25039921 4- 25146730 1	AAU	1068088
								EE- 25240473 5- 25292163 7	AAU	516903
								NL- 32245849 04- 32246849 03	AAU	100000
7006	555,56	0								
			EE1248	2009- 11-19 14:33:51	Internal- Internal transfer of unit/supp program transactio n	Termina ted	The acquiring registry was not able accept transactions at the time of this transaction taking place	DE- 15759268 63- 15759270 36	AAU	174
								DE- 15759270 37- 15759271 26	AAU	90
								DE- 15761329 17- 15761341	AAU	1262

								78		
								DE- 15989494 46- 15989503 93	AAU	948
								DE- 35679422 00- 35679477 99	AAU	5600
								EE- 19375937 9- 20291241 0	AAU	9153032
								EE- 22956512 4- 22957946 7	AAU	14344
								EE- 22957959 0- 22961758 5	AAU	37996
								EE- 22963252 3- 22963623 4	AAU	3712
								EE- 23100279 6- 23106497 5	AAU	62180
								EE- 23109898 2- 23111667 6	AAU	17695
								EE- 23117220 7- 23118476 5	AAU	12559
								EE- 23118476 6- 23125790 4	AAU	73139
								EE- 23125797 9- 23125857	AAU	595

								3		
								EE- 23125857 4- 23126043 9	AAU	1866
								EE- 23126409 0- 23126667 8	AAU	2589
								EE- 23126736 6- 23127374 8	AAU	6383
								EE- 23132398 4- 23132543 9	AAU	1456
								EE- 23147116 6- 23157528 6	AAU	104121
								EE- 23161884 5- 23167374 9	AAU	54905
								EE- 23167375 0- 23177016 7	AAU	96418
								EE- 23226068 1- 23257454 0	AAU	313860
								EE- 23978904 5- 24124338 0	AAU	1454336
								EE- 24124707 4- 24125772 4	AAU	10651
								EE- 24131078 0- 24131685	AAU	6077

								6		
								EE- 24196772 0- 24224443 0	AAU	276711
								EE- 24247311 5- 24248184 9	AAU	8735
								EE- 24249528 1- 24250227 8	AAU	6998
								EE- 24252815 0- 24253330 2	AAU	5153
								EE- 24256533 6- 24256690 6	AAU	1571
								EE- 24280642 1- 24280789 1	AAU	1471
								EE- 24281086 3- 24281087 6	AAU	14
								EE- 24292014 8- 24293616 1	AAU	16014
								EE- 24295592 7- 24295736 2	AAU	1436
								EE- 24295736 4- 24295932 1	AAU	1958
								EE- 24337897 0- 24344842	AAU	69455

								4		
								EE- 24366055 3- 24370263 2	AAU	42080
								EE- 25039921 4- 25146730 1	AAU	1068088
								EE- 25240473 5- 25292163 7	AAU	516903
								NL- 32245849 04- 32246849 03	AAU	100000
7020	1111,11	0								
			EE1354	2009- 12-10 09:41:58		Terminated	Wrong account number was inserted by the user	EE- 22962902 7- 22963252 2	AAU	3496
								EE- 24130728 4- 24131077 9	AAU	3496
								ES- 19035049 00- 19035074 80	AAU	2581
			EE1447	2009- 12-22 13:29:54		Terminated	Wrong account number was inserted by the user	EE- 23106734 9- 23108446 9	AAU	17121
								EE- 24274560 6- 24277398 4	AAU	28379
7407	1111,11	0								
			EE1354	2009- 12-10 09:41:58		Terminated	Wrong account number was inserted by the user	EE- 22962902 7- 22963252 2	AAU	3496

								EE- 24130728 4- 24131077 9	AAU	3496
								ES- 19035049 00- 19035074 80	AAU	2581
			EE1447	2009- 12-22 13:29:54		Terminated	Wrong account number was inserted by the user	EE- 23106734 9- 23108446 9	AAU	17121
								EE- 24274560 6- 24277398 4	AAU	28379

Appendix 3 – Report R-3: List of CDM Notifications

Notification Type	Notification Number	Notification Date_Time	Target Number of Units	Number of Units Cancelled	Number of Units Replaced	Difference between target and cancellation or replacements		Explanat ion
						At target date	Post target date	
<Notification Type>								
<Notification Type>								

No CDM notifications where received by the Registry during the reporting period

Appendix 4 – Report R-4: List of Non-replacements

Units Concerned		
Serial Number	Unit Type	Quantity

<i>Non-replacement record for impending expiry of ICER or tCER</i>								
Notification Number	Notification Type	Notification Date_Time	Target Number of Units	Number of Units Cancelled	Number of Units Replaced	Difference between target and cancellation or replacement		Explanation
						At target date	Post target date	

Units Concerned		
Serial Number	Unit Type	Quantity

<i>Non-replacement record for non-submission of certification report</i>								
Notification Number	Notification Type	Notification Date_Time	Target Number of Units	Number of Units Cancelled	Number of Units Replaced	Difference between target and cancellation or replacement		Explanation
						At target date	Post target date	

Units Concerned		
Serial Number	Unit Type	Quantity

No non-replacements occurred during the reporting period

Appendix 5 – Report R-5: List of Invalid Units

Serial Number	Unit Type	Quantity	Transaction Number

No invalid units to list for the reporting period.

Appendix 6 – Further Detailed Information about Reporting Changes to National Registry

During autumn 2009 The Estonian Environment Information Centre changed the software used for the EE emissions trading registry. The decision for the registry software change was based mainly on the need to make more a robust, less expensive and better supported software into use. From the EE registry point of view, the CR software has some preferable qualities over the previously used Greta software. For example, the user interface of the CR software is more user-friendly and certain repetitive operations are more easy and flexible to carry out.

Before the registry software change, software called Greta was used by the Estonian registry. Greta software was developed by Defra (Department for Environment, Food and Rural Affairs of UK). The CR software, which is now in use in the EE registry, is developed by the European Commission. Whereas Greta software was a closed system (apart from the user interface components) based on .NET and Microsoft technologies (MS IIS and MS SQL database), the CR is open-source software (based on J2EE, using WebLogic and Oracle database), provided free-of-charge for EU members states.

Due to the fact, that the CR software is open source, all developments and fixes carried out by other registries for the CR software are freely available for other registries as well. The access to the source code of the software also enables more efficient problem solving and localizations. In addition, some of the heaviest functionalities related to registry activities, which require a lot of processing, are more optimized in CR software, thus making it easier to perform these activities.

Currently only the user interface of the EE registry is localized to Estonian language. No further localizations are planned at this time.

The process of changing the registry software from Greta software to CR registry included the following high-level steps:

- 6) Creating the needed migration scripts, in order to transfer the registry database as fully as possible from Greta to CR;

- 7) Testing the CR internally (including the language term changes);
- 8) Validating the migrated data in the localized CR software. Due to the comprehensive changes between Greta and CR software, not all data could be migrated from Greta to CR. However, the data that could not be migrated, was stored, and can be accessed by the EE registry admin at any time;
- 9) Completing the official ITL and CITL acceptance tests (Annex H and ETS test, respectively) with the CR software (detailed test cases and reports are included in updated RRQ documentation);
- 10) Performing the Go-live migration for the production registry instance.

Appendix 7 – Registry Readiness Documentation

Updated Registry Readiness Documentation has been submitted to the ITL. Files containing confidential information have been designated and are not meant to be in general use for public. Please see more detailed information in “SIAR_sub2010.zip” files.

Appendix 8 – Registry testing plan and test cases

For the software change and Go-Live with the new software the Estonian NR team has prepared testing plans, test cases according to the DES and EU ETS requirements. Test cases and results are described in the “EE_EC test plan for CR 15-16.10.09”, “EE Annex H test 07_10-09” and in “EE Annex H logs” files (also included in updated Registry Readiness Questionnaire document as Appendix 2.8.1 and Appendix 2.8.3). Relevant testing documents have been submitted to the ITL during the Go-Live process.

REFERENCES

1. GREENHOUSE GAS EMISSIONS IN ESTONIA 1990–2007. NATIONAL INVENTORY REPORT to the UNFCCC secretariat. Common Reporting Formats (CRF) 1990-2007;
2. Potential Problems and Further Questions from the ERT formulated in the course of the in-country review of Estonia's Initial Report under the Kyoto Protocol and 2006 Inventory Submission. For the ERT, Estonia, Tallinn, 9th of June 2007;
3. ETS Go-Live with ITL. Procedures and Planning, version 5.5 (8th of September 2008).