



REPUBLIKA HRVATSKA

MINISTARSTVO ZAŠTITE
OKOLIŠA I PRIRODE

LESSONS LEARNED IN IMPLEMENTING CLIMATE CHANGE POLICY IN CROATIA

(Sarajevo, 8 September 2016)

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Ministry of Environmental and Nature Protection, Zagreb

Emission trading system (ETS)

Free allowances: 8.000 t
CO_{2eq}

+

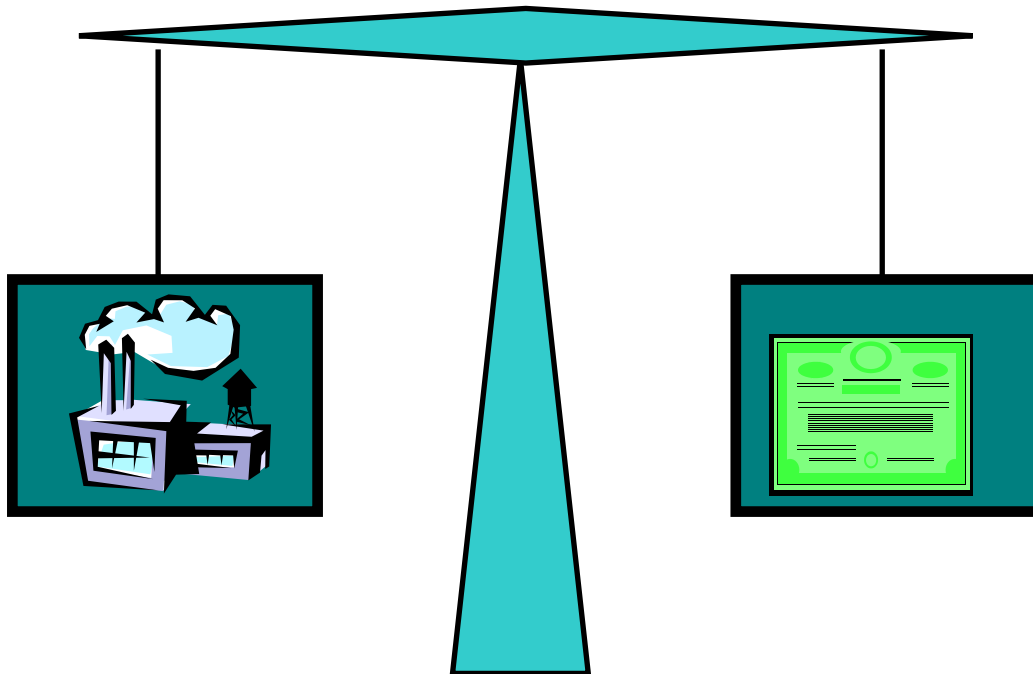
Auction: 2.000 t CO_{2eq}



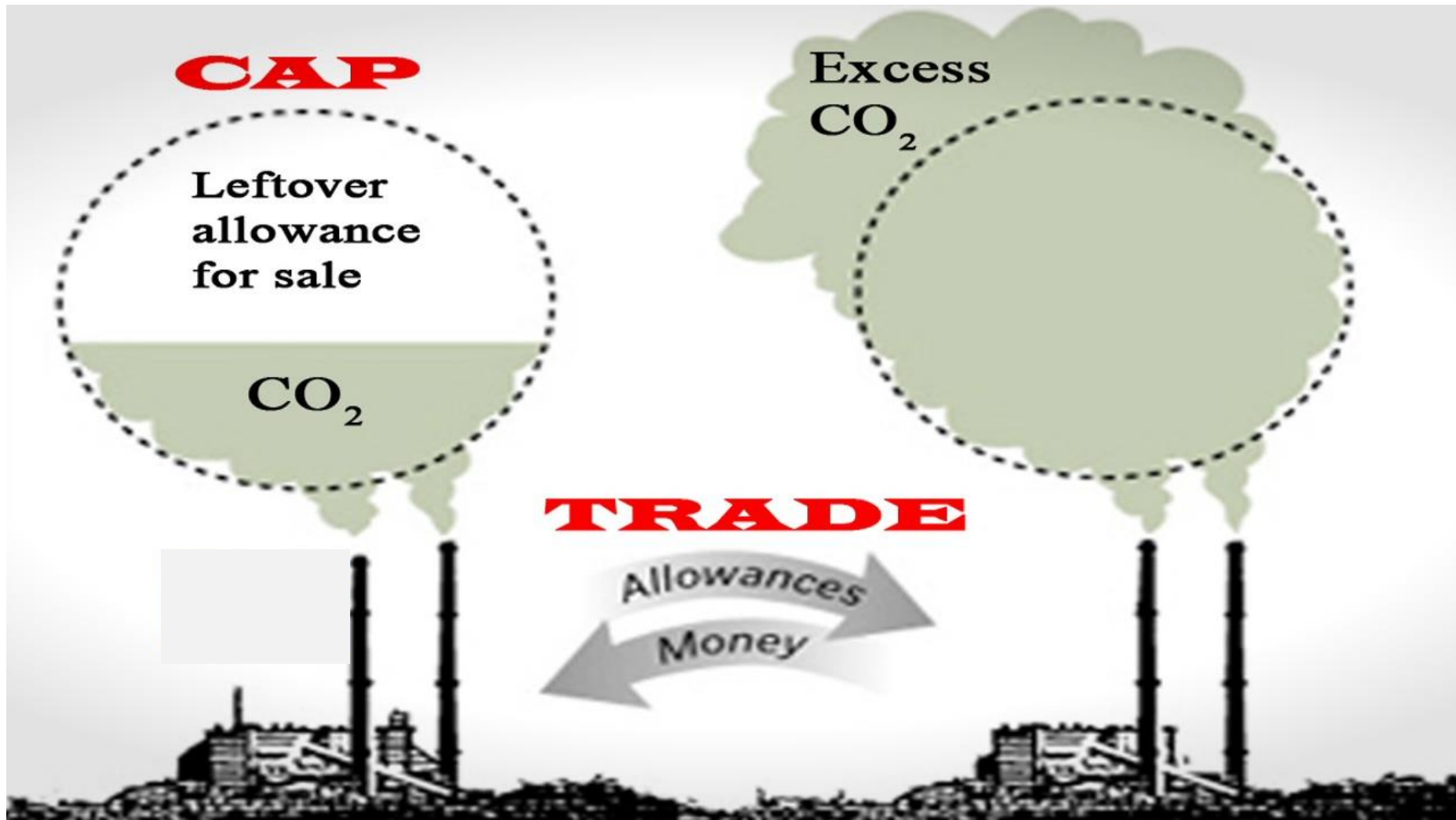
10.000 t CO_{2eq}

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10.000 t CO_{2eq}



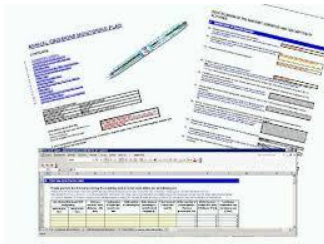
Emission trading system (ETS)



Emission trading system (ETS)



- **Monitoring emissions (Monitoring Plan as part of Permit)**



- **Reporting of emissions**



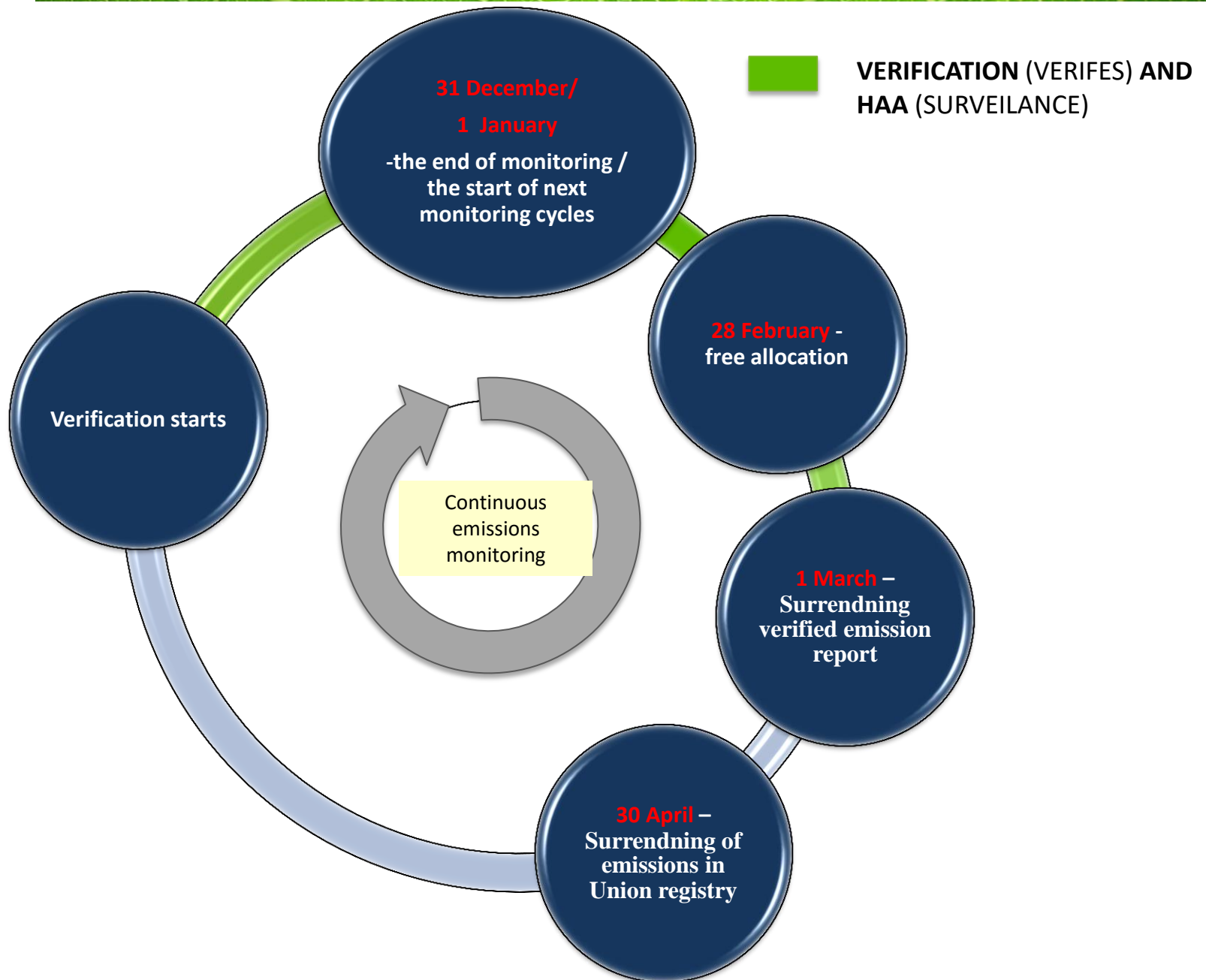
- **Verification of emission report (accredited verifiers)**



Installation Name	Location	Sector	Status
Power Gen	Germany	Power	Active
Chemical	France	Chemical	Active
Refinery	Italy	Refining	Active
Steel	Spain	Iron and steel	Active
Alumina	Greece	Non-ferrous metal	Active
Aluminum	Finland	Non-ferrous metal	Active
Aluminum	Sweden	Non-ferrous metal	Active
Aluminum	Denmark	Non-ferrous metal	Active
Aluminum	Poland	Non-ferrous metal	Active
Aluminum	Czechia	Non-ferrous metal	Active
Aluminum	Slovakia	Non-ferrous metal	Active
Aluminum	Slovenia	Non-ferrous metal	Active
Aluminum	Hungary	Non-ferrous metal	Active
Aluminum	Croatia	Non-ferrous metal	Active
Aluminum	Bulgaria	Non-ferrous metal	Active
Aluminum	Romania	Non-ferrous metal	Active
Aluminum	Ukraine	Non-ferrous metal	Active
Aluminum	Belarus	Non-ferrous metal	Active
Aluminum	Belgium	Non-ferrous metal	Active
Aluminum	Netherlands	Non-ferrous metal	Active
Aluminum	Luxembourg	Non-ferrous metal	Active
Aluminum	Austria	Non-ferrous metal	Active
Aluminum	Switzerland	Non-ferrous metal	Active
Aluminum	Portugal	Non-ferrous metal	Active
Aluminum	Spain	Non-ferrous metal	Active
Aluminum	France	Non-ferrous metal	Active
Aluminum	Germany	Non-ferrous metal	Active
Aluminum	Italy	Non-ferrous metal	Active
Aluminum	Greece	Non-ferrous metal	Active
Aluminum	Turkey	Non-ferrous metal	Active
Aluminum	China	Non-ferrous metal	Active
Aluminum	India	Non-ferrous metal	Active
Aluminum	Japan	Non-ferrous metal	Active
Aluminum	South Korea	Non-ferrous metal	Active
Aluminum	United States	Non-ferrous metal	Active
Aluminum	Canada	Non-ferrous metal	Active
Aluminum	Mexico	Non-ferrous metal	Active
Aluminum	Brazil	Non-ferrous metal	Active
Aluminum	Argentina	Non-ferrous metal	Active
Aluminum	Chile	Non-ferrous metal	Active
Aluminum	Colombia	Non-ferrous metal	Active
Aluminum	Venezuela	Non-ferrous metal	Active
Aluminum	Guatemala	Non-ferrous metal	Active
Aluminum	El Salvador	Non-ferrous metal	Active
Aluminum	Honduras	Non-ferrous metal	Active
Aluminum	Nicaragua	Non-ferrous metal	Active
Aluminum	Costa Rica	Non-ferrous metal	Active
Aluminum	Panama	Non-ferrous metal	Active
Aluminum	Dominican Republic	Non-ferrous metal	Active
Aluminum	Jamaica	Non-ferrous metal	Active
Aluminum	Trinidad and Tobago	Non-ferrous metal	Active
Aluminum	Suriname	Non-ferrous metal	Active
Aluminum	Guyana	Non-ferrous metal	Active
Aluminum	Paraguay	Non-ferrous metal	Active
Aluminum	Uruguay	Non-ferrous metal	Active
Aluminum	Peru	Non-ferrous metal	Active
Aluminum	Ecuador	Non-ferrous metal	Active
Aluminum	Bolivia	Non-ferrous metal	Active
Aluminum	Paraguay	Non-ferrous metal	Active
Aluminum	Uruguay	Non-ferrous metal	Active
Aluminum	Peru	Non-ferrous metal	Active
Aluminum	Ecuador	Non-ferrous metal	Active
Aluminum	Bolivia	Non-ferrous metal	Active

- **Surrendering of emissions in Union registry**

Monitoring, Reporting, Verification, Accreditation



EU & CROATIAN LEGAL ARRANGEMENT

Directive 2003/87/EC establishing a scheme for greenhouse gas emission allowance trading within the Community

M&R, V&A

Commission Regulation **601/2012** on the monitoring and reporting of greenhouse gas emissions

Commission Regulation **600/2012** on the verification of greenhouse gas emission reports and tonne-kilometre reports and the accreditation of verifiers

FREE ALLOCATION

Decision **2011/278/EU** determining transitional Union-wide rules for harmonized free allocation of emission allowances

REGISTRY, AUCTION

Commission Regulation **389/2013** establishing a Union Registry

Commission Regulation **1143/2013** on the timing, administration and other aspects of auctioning of greenhouse gas emission

- **Air protection Act (OG No. 130/11, 47/14)**
 - Regulation on trading greenhouse gas emission allowances (OG No. 69/12, 154/14)
 - Regulation on auctioning of greenhouse gas emission allowances (OG No. 19/13)
 - Ordinance on the manner of using the European Union Registry (OG No. 26/15)
 - Ordinance on the manner of free allocation of emission allowances to installations and on the monitoring, reporting and verification of reports on greenhouse gas emissions from installations and aircraft in the period beginning from 1 January 2013 (OG No. 70/15)

EU LEGAL ARRANGEMENT

Directive 2003/87/EC establishing a scheme for greenhouse gas emission allowance trading within the Community

M&R

Commission Regulation **601/2012** on the monitoring and reporting of greenhouse gas emissions

V&A

Commission Regulation **600/2012** on the verification of greenhouse gas emission reports and tonne-kilometre reports and the accreditation of verifiers

ALLOCATION

Decision **2011/278/EU** determining transitional Union-wide rules for harmonized free allocation of emission allowances

REGISTRY

Commission Regulation **389/2013** establishing a Union Registry

AUCTION

Commission Regulation **1143/2013** on the timing, administration and other aspects of auctioning of greenhouse gas emission

Air protection Act (OG No. 130/11, 47/14)

- contains provisions in compliance with the following acts of the European Union:

Directive **2003/87/EC** establishing a scheme for greenhouse gas emission allowance trading within the Community

Directive **2004/101/EC** amending Directive 2003/87/EC establishing a scheme for greenhouse gas emission allowance trading within the Community, in respect of the Kyoto Protocol's project mechanisms

Directive **2008/101/EC** amending Directive 2003/87/EC so as to include aviation activities in the scheme for greenhouse gas emission allowance trading within the Community

Directive **2009/29/EC** amending Directive 2003/87/EC so as to improve and extend the greenhouse gas emission allowance trading scheme of the Community

Air protection Act (OG No. 130/11, 47/14)

- establishes the authorities and duties of the competent authorities, administrative and inspection supervision and prescribe penalty provisions for the implementation of the following acts of the European Union:

- Commission Decision 406/2009/EC on the effort of Member States to reduce their greenhouse gas emissions to meet the Community's greenhouse gas emission reduction commitments up to 2020
- Commission Decision 2011/278/EC determining transitional Union-wide rules for harmonised free allocation of emission allowances pursuant to Article 10a of Directive 2003/87/EC
- Commission Regulation 1031/2010 on the timing, administration and other aspects of auctioning of greenhouse gas emission allowances pursuant to Directive 2003/87/EC establishing a scheme for greenhouse gas emission allowances trading within the Community
- Commission Decision 2007/589/EC establishing guidelines for the monitoring and reporting of greenhouse gas emissions pursuant to Directive 2003/87/EC as last amended by Commission Decision 2011/540/EU
- Commission Regulation 601/2012 on the monitoring and reporting of greenhouse gas emissions pursuant to Directive 2003/87/EC
- Commission Regulation 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

Regulation on trading greenhouse gas emission allowances (OG No. 69/12, 154/14)

- the activities and greenhouse gases for which an obligation to obtain permits for greenhouse gas emissions
- aviation activities
- exclusion of small installations subject to equivalent measures and installations
- obligations of installation operators and the aircraft operators
- the method of monitoring and reporting emissions and tonne-kilometer data,
- monitoring and verifying the data in the emissions report,
- verification and quality assurance of data
- mode of delivery of data to the competent authorities of the European Union and public participation.

Ordinance on the manner of free allocation of emission allowances to installations and on the monitoring, reporting and verification of reports on greenhouse gas emissions from installations and aircraft in the period beginning from 1 January 2013 (OG No. 70/15)

- regulates the method of delivery, and verification reports and activity data for the free allocation, the way of fulfilling the tasks of the competent authorities for the implementation of:
 - Commission Decision 2011/278 / EU determining transitional Union-wide rules for harmonised free allocation of emission allowances pursuant to Article 10a of Directive 2003/87/EC
 - Commission Regulation 601/2012 on the monitoring and reporting of greenhouse gas emissions pursuant to Directive 2003/87/EC
 - Commission Regulation 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

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 - Commission Regulation 601/2012 on the monitoring and reporting of greenhouse gas emissions pursuant to Directive 2003/87/EC
 - Commission Regulation 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

Ordinance on the manner of using the European Union Registry (OG No. 26/15)

- regulates the implementation of Commission Regulation (EU) 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 and repealing Commission Regulations (EU) No 920/2010 and No 1193/2011


















Regulation on auctioning of greenhouse gas emission allowances (OG No. 19/13)

























This Regulation lays down the framework for the implementation of the following acts of the European Union:

- Commission Regulation 1031/2010 on the timing, administration and other aspects of auctioning of greenhouse gas emission allowances establishing a scheme for greenhouse gas emission allowances trading within the Community
- Commission Regulation (EU) No 1210/2011 amending Regulation No 1031/2010 in particular to determine the volume of greenhouse gas emission allowances to be auctioned prior to 2013
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MONITORING AND REPORTING



Monitoring and Reporting Regulation (MRR): Guidance and templates

- 22/11/2012 - Guidance document No. 1 - [The Monitoring and Reporting Regulation – General guidance for installations](#)  (736 kB) 
 - [Template No. 1: Monitoring plan for the emissions of stationary installations](#)  (1.7 Mb) 
 - [Template No. 4: Annual emissions report of stationary source installations](#)  (4.4 Mb) 
 - [Template No. 7: Improvement report for stationary installations](#)  (1.07 Mb) 
 - [Unreasonable costs determination tool](#) 
 - [Exemplar checklist for assessing installation MPs](#)  (115 kB) 
 - [Exemplar monitoring plan](#)  (2.12 Mb) 
 - [Exemplar improvement report](#)  (1.07 Mb) 
 - [Exemplar monitoring plan update](#)  (2.13 Mb) 
- 11/10/2012 - Guidance document No. 2 - [The Monitoring and Reporting Regulation – General guidance for aircraft operators](#)  (556 kB) 
 - [Template No. 2: Monitoring plan for the emissions of aircraft operators](#)  (401 kB) 
 - [Template No. 3: Monitoring plan for the tonne-kilometre data of aircraft operators](#)  (381 kB) 

- [Template No. 5: Annual emissions report of aircraft operators](#)  (441 kB) 
- [Template No. 6: Tonne-kilometre data report of aircraft operators](#)  (356 kB) 
- [Template No. 8: Improvement report for aircraft operators](#)  (354 kB) 
- 17/10/2012 - Guidance document No. 3 - [Biomass issues](#)  (244 kB) 
- 11/10/2012 - Guidance document No. 4 - [Uncertainty Assessment](#)  (1.05 Mb) 
 - [GD No. 4a - Exemplar Uncertainty Assessment \(for an installation with low emissions\)](#)  (87 kB) 
- 11/10/2012 - Guidance document No. 5 - [Sampling and Analysis](#)  (731 kB) 
 - [Frequency of Analysis Tool](#)  (490 kB) 
 - [GD No. 5a – Exemplar Sampling Plan](#)  (59 kB) 
- 17/10/2012 - Guidance document No. 6 - [Data flow activities and control system](#)  (268 kB) 
 - [GD No. 6a – Risk assessment and control activities - examples](#)  (124 kB) 
 - [Tool for operator risk assessment](#)  (199 kB) 

http://ec.europa.eu/clima/policies/ets/monitoring/documentation_en.htm

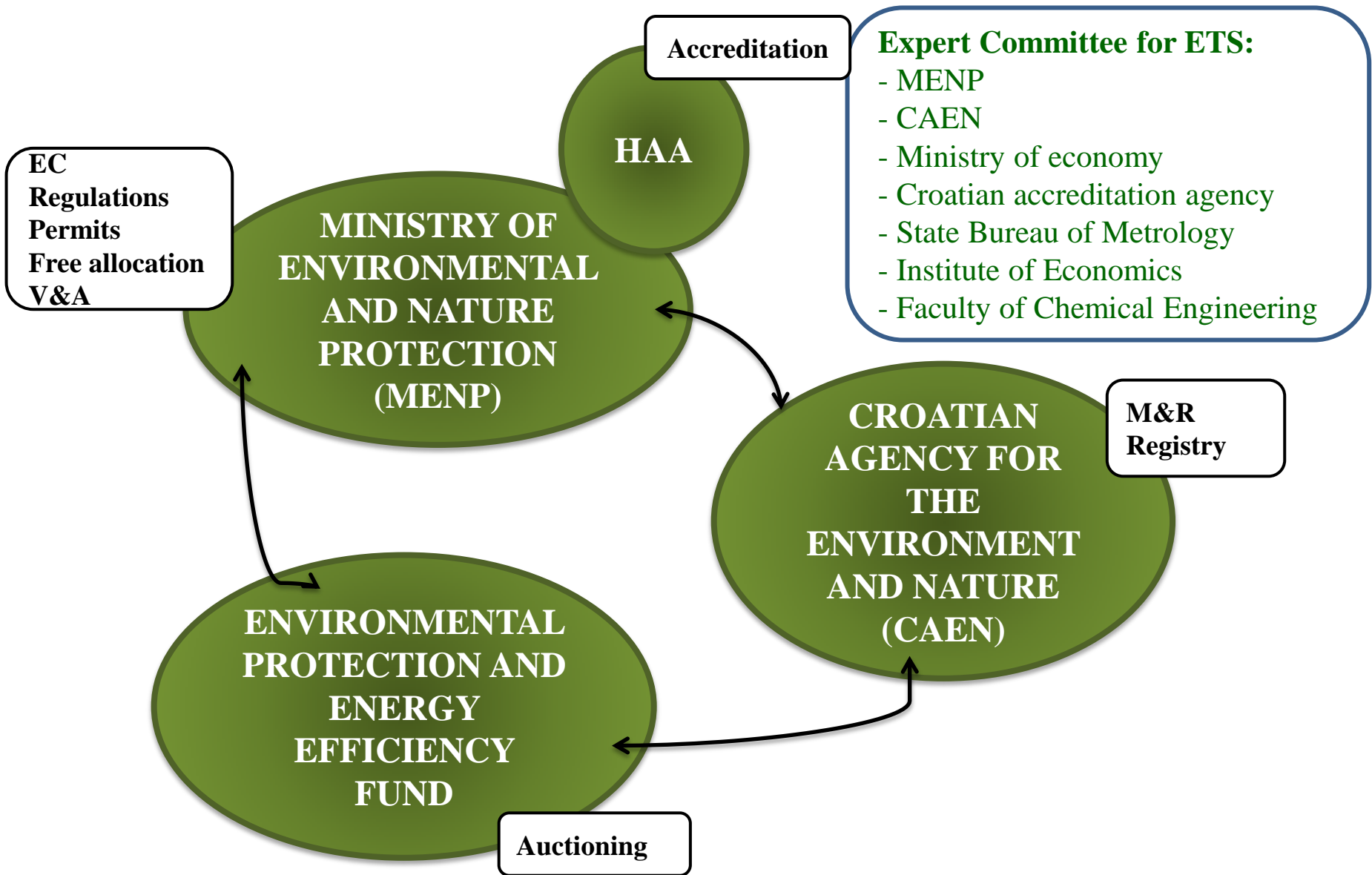
ACCREDITATION & VERIFICATION

- 11/10/2012 - The Accreditation and Verification Regulation - [Explanatory Guidance Document No.1](#)  (1.47 Mb) 
 - [Quick guide on the role of the verifier and the CA](#)  (352 kB) 
 - [Quick guide on verification for operators and aircraft operators](#)  (729 kB) 
- 13/08/2012 - Guidance document - [Key guidance note II.1 on the scope verification](#)  (312 kB) 
- 12/07/2012 - Guidance document - [Key guidance note II.2 on risk analysis](#)  (21 kB) 
 - [Risk analysis example No. 1](#)  (144 kB) 
 - [Risk analysis example No. 2](#)  (87 kB) 
- 29/10/2012 - Guidance document - [Key guidance note II.3 on process analysis](#)  (688 kB) 
- 22/11/2012 - Guidance document - [Key guidance note II.4 on sampling](#)  (935 kB) 
 - [Risk analysis with verification sampling plan example](#)  (129 kB) 
- 29/10/2012 - Guidance document - [Key guidance note II.5 on site visits concerning installations](#)  (453 kB) 
 - [Site visit waiver risk assessment exemplar](#)  (134 kB) 
- 12/07/2012 - Guidance document - [Key guidance note II.6 on the verification report](#)  (202 kB) 
 - [Verification report template](#)  (303 kB) 
 - [Exemplar verification report for an installation](#)  (117 kB) 
 - [Exemplar verification report for an aircraft operator](#)  (124 kB) 
 - [Classification of outstanding items in the verification report](#)  (687 kB) 

- 11/10/2012 - Guidance document - [Key guidance note II.7 on competence of verifiers](#)  (427 kB) 
- 11/10/2012 - Guidance document - [Key guidance note II.8 on the relation between EN ISO 14065 and AVR](#)  (492 kB) 
 - [Good practice on application of EN ISO 14065: Management system](#)  (578 kB) 
 - [Good practice on application of EN ISO 14065: Impartiality and independence](#)  (587 kB) 
- 11/10/2012 - Guidance document - [Key guidance note II.9 on the relation between EN ISO/IEC 17011 and AVR](#)  (493 kB) 
- 11/10/2012 - Guidance document - [Key guidance note II.10 on information exchange](#)  (451 kB) 
 - Information exchange template No. 1 - [Notification template \(Article 76 AVR\) from the verifier to the National Accreditation Body/National Certification Authority \(by 15 November each year\)](#) 
 - Information exchange template No. 2 - [Work programme \(Article 70\(1\) AVR\) from the National Accreditation Body/National Certification Authority to the Competent Authority \(by 31 December each year\)](#) 
 - Information exchange template No. 3 - [Management report \(Article 70\(3\) AVR\) from the National Accreditation Body/National Certification Authority to the Competent Authority \(by 1 June each year\)](#)  (237 kB) 
 - Information exchange template No. 4 - [Information exchange \(Article 72 AVR\) from the Competent Authority to the National Accreditation Body/National Certification Authority \(recommended by 30 September each year\)](#)  (241 kB) 
- 29/10/2012 - Guidance document - [Key guidance note II.11 on certification](#)  (531 kB) 
- 28/10/2013 - Guidance document - [Key guidance note II.12 on time allocation in verification](#)  (510 kB) 
 - [Man-day guidance tool for NABs/NCAs](#)  (457 kB) 
- 22/11/2012 - [The Accreditation and Verification Regulation - Verification Guidance for EU ETS Aviation \(GD III\)](#)  (1.67 Mb) 
 - [Addendum: Quick guide to verification of small emitters \(EU ETS Aviation\)](#)  (372 kB) 

http://ec.europa.eu/clima/policies/ets/monitoring/documentation_en.htm

ORGANISATION ETS SCHEME IN CROATIA



EMISSION TRADING SYSTEM IN CROATIA

- It has been applied in the period from 2010 to 2012 (Phase 2).
- From 1st January 2010 till 31st December 2012 - monitoring and reporting on emissions from installations
- Since **1st January 2013** (Phase 3). - joining the EU ETS in full extension (1 July 2013 Croatia join to EU!)
- Environmental Protection and Energy Efficiency Fund is the auctioneer for Croatia
- The Republic of Croatia has been included in the central auction platform in Leipzig

EMISSION TRADING SYSTEM IN CROATIA

- 53 (59) operators of installations included in ETS (combustion, refinery, paper, cement, steel, lime, ceramics, glass, mineral wool insulation material, nitric acid and ammonia)
 - 4 electricity generators
- 5 (13) operators of installations are excluded from ETS as small operators (less than 25000 tone CO₂ annually, approved by EC)
- 1 aircraft operators

ACCREDITATION

Commission Regulation **600/2012** on the verification of greenhouse gas emission reports and tonne-kilometre reports and the accreditation of verifiers

Before 2013: 18 verifiers, no accreditation, Ministry approvals for verifiers

During 2013: - evaluation of Croatian Accreditation Agency for Accreditation of GHG verifiers (HRN EN ISO 14065) by EA (European co-operation for accreditation)

- Accreditation of 3 GHG verifiers

After 2013: - 3 (2 from 2015) accredited HR verifiers (better knowledge, continuous improvement in Verification reports, workshops, meeting)
- working group GHG (Croatian Accreditation Agency, verifiers, Ministry, Croatian agency for the environment and nature)

- Information exchange:

Notification template - from the verifier to the National Accreditation Body/National Certification Authority (by 15 November each year)

Work programme (Article 70(1) AVR) from the National Accreditation Body/National Certification Authority to the Competent Authority (by 31 December each year)

Management report (Article 70(3) AVR) from the National Accreditation Body/National Certification Authority to the Competent Authority (by 1 June each year)

Information exchange (Article 72 AVR) from the Competent Authority to the National Accreditation Body/National Certification Authority (recommended by 30 September each year)

INSPECTION AND ENFORCEMENT

Penalties for infringements pursuant of Directive 2003/87/EC establishing a scheme for greenhouse gas emission allowance trading within the Community for each tonne emitted for which the operator has not surrendered allowances 100 €!!!!

Croatia - Type of infringement nad Fines in euros:13.350 € - 40.000 €

- Failure to hold a monitoring plan approved by the competent authority
- Failure to monitor in accordance with the approved monitoring plan and Regulation (EU) No 601/2012
- Failure to notify changes to the monitoring plan and to update the monitoring plan
- Failure to submit a verified emissions report in due time
- The verified emissions report is found not to be in line with Regulation (EU) No 601/2012
- Failure to notify planned or effective changes to capacity, activity levels and operation of an installation by 31 December of the reporting period in accordance with Article 24 of Decision 2011/278/EU

For each of these infringements shall be fined the responsible person in the legal entity in the amount 3.350 € – 6. 670 €

CHALLENGES

- 1. Lack of human resources**
- 2. Lack of intersectoral cooperation**
- 3. Lack of awareness on importance of climate change issues, public, entrepreneurship owners, public institutions**
- 4. Economy crises**
- 5. Lack of our knowledge**
- 6. Lack of operators' knowledge**
- 7. Parallel activities**
- 8. Lack of energy and technology experts in public institutions**
- 9. Long period is needed that employee became expert**

LESSONS LEARNT

- 1. Start as soon as possible with activities**
- 2. Determine, provide and accept technical and financial support**
- 3. Importance of team work and positive attitude**
- 4. Accurate determination of the goals and means of implementation, including technical and IT support**
- 5. Establishment of the horizontal and vertical, flexible procedures in competent authorities**
- 6. Constant involvement in EC policy developments**
- 7. Importance of the participation at the relevant meetings and workshops organized by the EC**

Thank you for your attention!



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