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Enhanced environmental protection inspection for efficient control of air quality monitoring and of all entities under obligation within system of greenhouse gas emission allowance trading, in order to achieve better quality of air in Republic of Croatia



REPUBLIKA HRVATSKA

MINISTARSTVO ZAŠTITE  
OKOLIŠA I ENERGETIKE



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FINANCIARANJE I UGOVARANJE



This project is funded by the European Union



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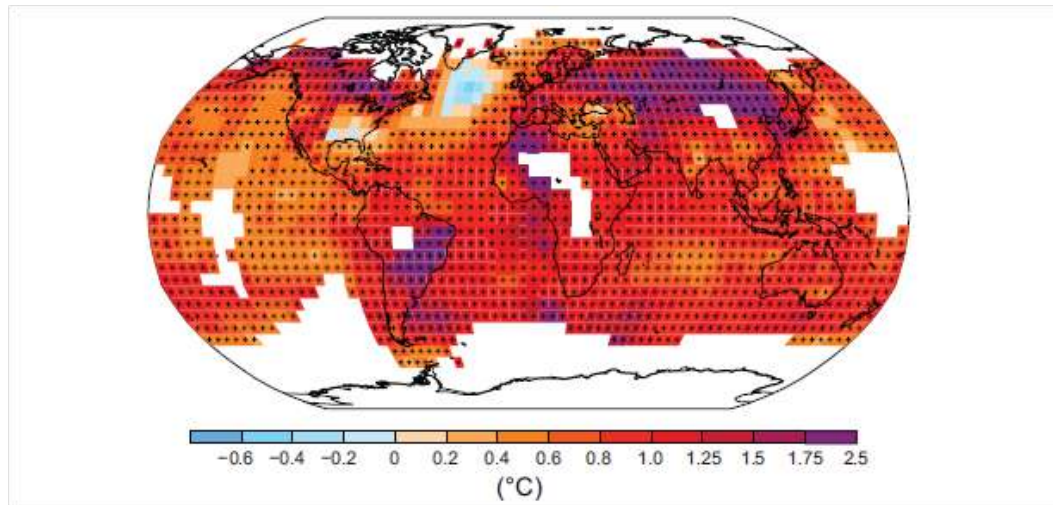
# EMISSIONS TRADING SYSTEM

# CONTENT

- **Climate change**
- **Emissions trading**
- **EU Emissions Trading System (EU ETS)**
- **Emission allowance market price (CO<sub>2</sub>)**
- **Additional information sources**

# CLIMATE CHANGE

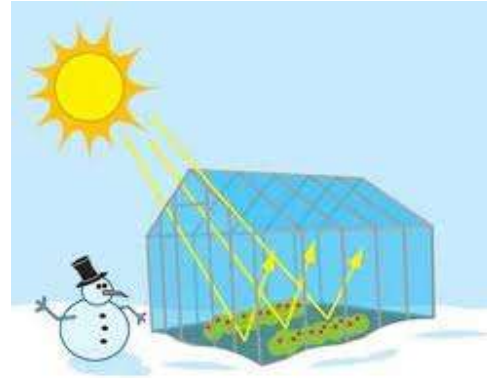
- **IPCC – Intergovernmental Panel on Climate Change**
  - Climate change is real
  - Climate change is mostly man-made
  - There is strong evidence– temperature (atmospheric, ocean), ice sheets, sea levels, ...



Observed surface temperature change from 1901 to 2012 (IPCC)

# GREENHOUSE GAS EMISSIONS

- **Greenhouse effect**



- **Greenhouse gases**



- Mostly from natural sources
- Human activity– disrupts natural balance
- CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, SF<sub>6</sub>, HFC, PFC, ...

# EFFECTS OF CLIMATE CHANGE

- **Effects in nature**
  - CO<sub>2</sub> concentration, sea level, under ice area, ocean warming
- **We notice ourselves**
  - Heavy rains, floods, droughts, fires, heat waves, storms, ...
- **Indirect effects**
  - Availability of potable water and food, disease, destruction of ecosystems, population migration

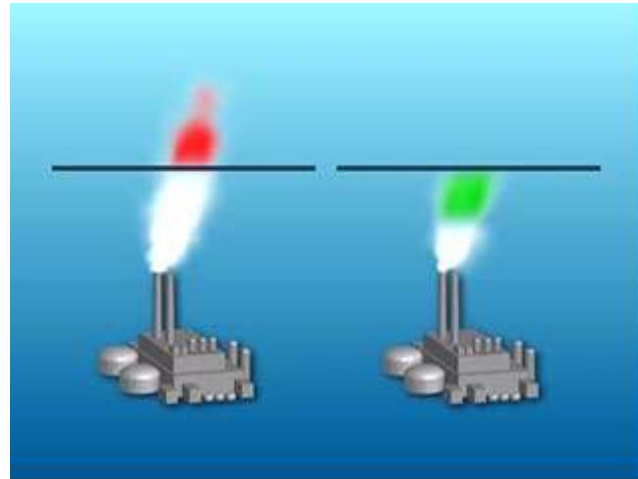


## EMISSIONS TRADING CONCEPT

- Increased greenhouse gas concentration in the atmosphere – international consensus on validity of scientific evidence
- 
- Need to reduce emissions (gas concentration in the atmosphere) – regulatory mechanisms and instruments
- 
- Emissions trading – economic instrument for emission reduction (as opposed to control regime)

# EMISSIONS TRADING SYSTEM VARIATIONS

- Cap and trade
- Baseline and credit
- Offset
  
- EU ETS
  - *cap and trade*



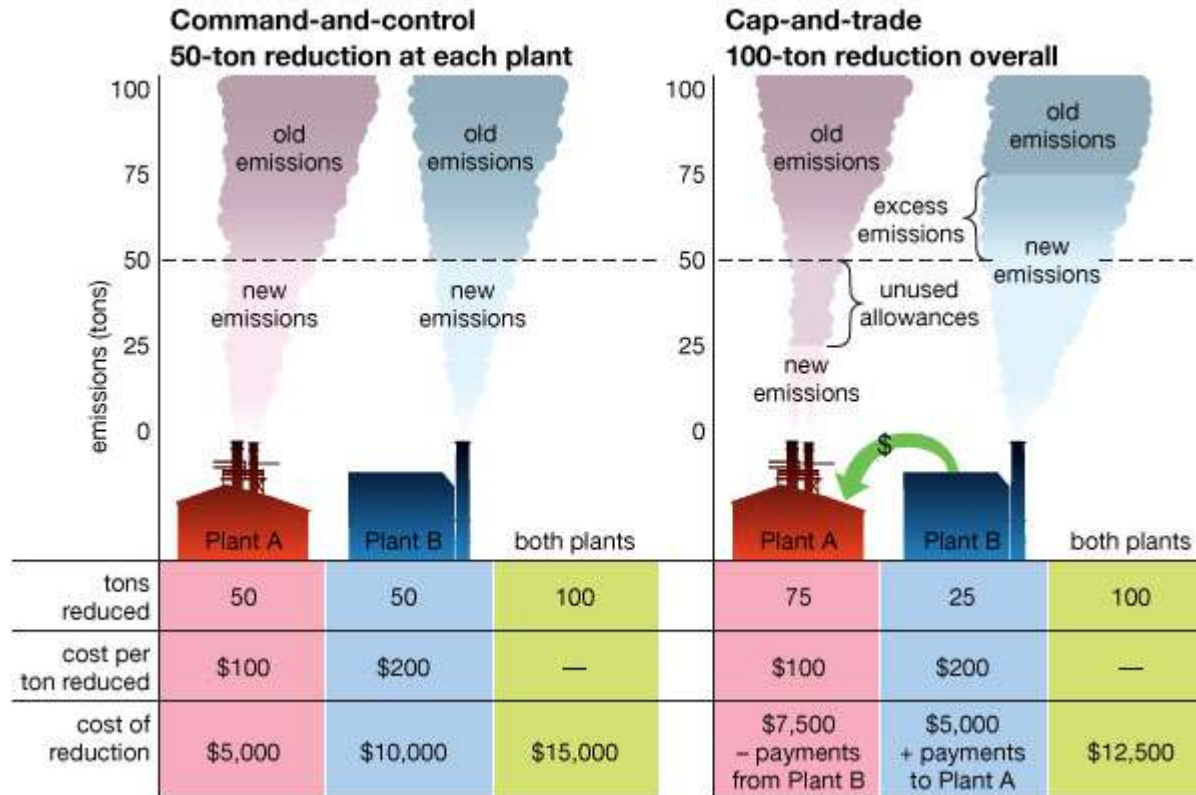


# EMISSIONS TRADING SYSTEM MAIN FEATURES

- **Environmental protection market instrument**
- **Enables reduction of emissions with minimum cost**
- **Provides an incentive to reduce emissions**
- **Reduction is achieved through interaction of entities**



# HOW THE EMISSIONS TRADING SYSTEM WORKS



Source: Encyclopedia Britannica, 2012

## SUBJECT OF TRADE

- Emission allowance - equivalent to 1 tonne of CO<sub>2</sub>



## KEY ELEMENTS OF THE „CAP AND TRADE” SYSTEM

- Dimension emission caps and the obligations of the participants
- Include enough participants
- Enable the existence of foreign supply and demand
- Ensure correct recording of emissions
- Control fulfillment of obligations



# EU IN THE FIGHT AGAINST CLIMATE CHANGE


- **Climate change – one of five EU strategy priorities**
- **Emissions reduction targets in relation to 1990 emissions:**
  - by 2020 – 20 % reduction
  - by 2030 – 40 % reduction
  - by 2050 –80 % reduction – transition towards a low-carbon economy
- **EU ETS emissions trading system – leading policy instrument**
  - where greatest reduction is expected


## SECTORS INCLUDED IN THE ETS

- **Combustion installations with a rated thermal input greater than 20 MW**
- **Petrochemical industry**
- **Cement industry**
- **Ironworks, steelworks**
- **Oil refineries**
- **Aviation**
- **Other ...**



# OBLIGATIONS OF ETS PARTICIPANTS

- **calculate annual greenhouse gas emissions**
  - From installations
  - From aircrafts

**MONITORING**
- **Earn emission allowances**
  - Free allocation
  - Auctions – primary market
  - Secondary market

**MARKET**
- **Submit emission allowances to the Union Registry**
  - Amount of allowances corresponds to annual emission

# HOW TRADING WORKS?

- **A user account in the Union registry is needed**
  - Electronic date base
  - To record ownership of emission allowances
- **Transactions are conducted**
  - Transmission of emission allowances between accounts
  - Prices are not recorded, only the amount of allowances
- **Price is determined on the market**





# WHAT IS THE MARKET PRICE OF 1 TONNE OF CO<sub>2</sub> ?

- **Emission allowance average annual prices**
  - 2013 – 2016 period

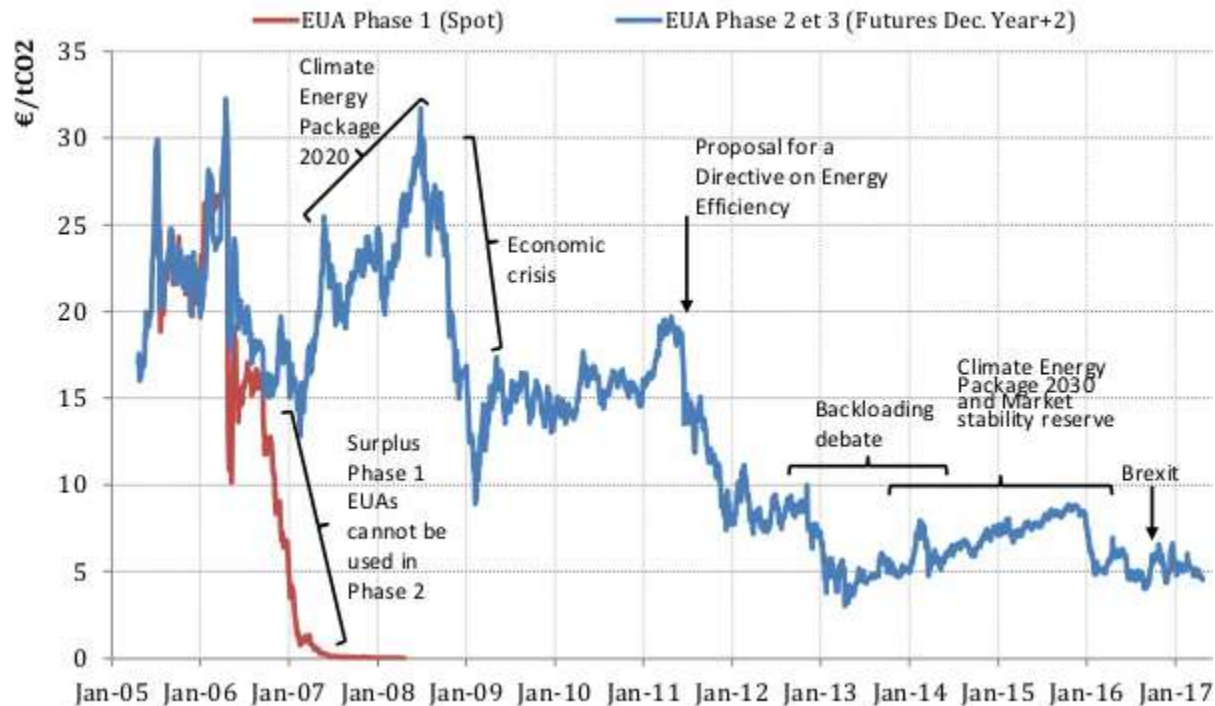
YEAR	PRICE [HRK/t CO <sub>2</sub> eq]	PRICE [EUR/t CO <sub>2</sub> eq]
2013	32.78	4.33
2014	45.40	5.95
2015	58.29	7.66
2016	39.53	5.25

Source: Decision on the level of remuneration for greenhouse gas emissions for operators of installations excluded from the emission allowance trading system

- **Emission allowance current price (*spot price*)**
  - Approximately EUR 9 (source: European Energy Exchange)

# HISTORICAL TREND OF EMISSION ALLOWANCE PRICES (1)

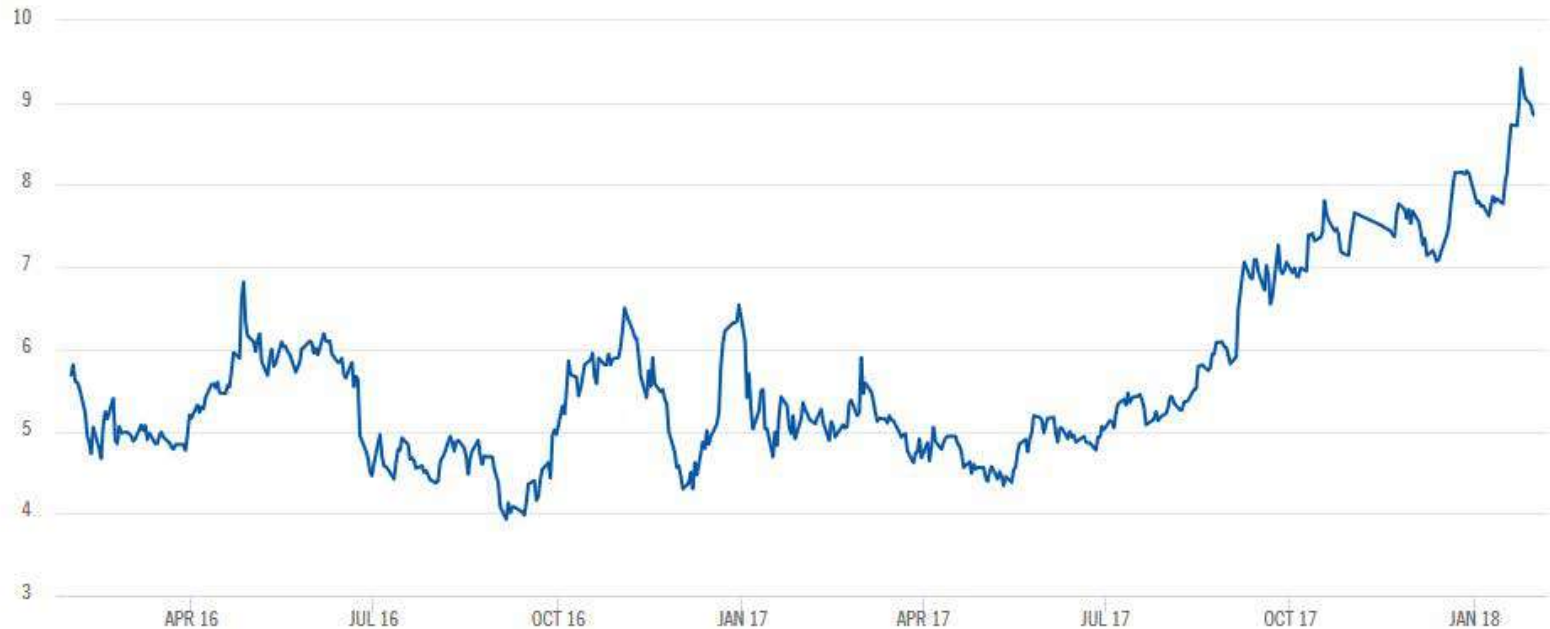
- From the beginning of the EU ETS



Source: Climate Economics Chair from Bluenext and ICE ECX Futures, 2017

# HISTORICAL TREND OF EMISSION ALLOWANCE PRICES (2)

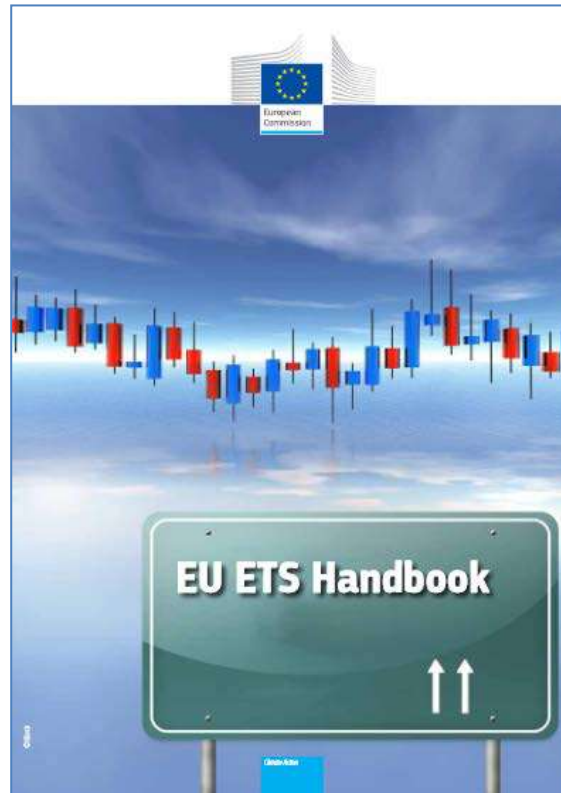
- Last two years



Source: Intercontinental Exchange - ICE, 2018

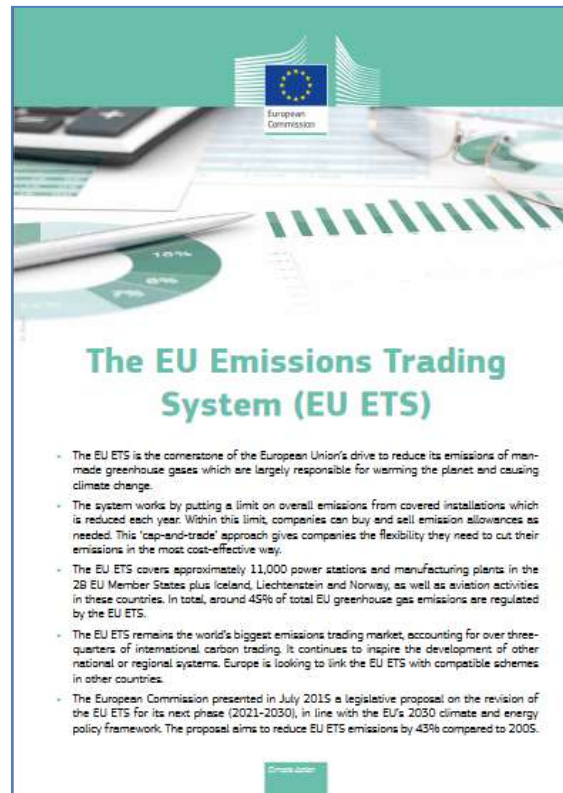
# ADDITIONAL INFORMATION- HANDBOOK

- [https://ec.europa.eu/clima/sites/clima/files/docs/ets\\_handbook\\_en.pdf](https://ec.europa.eu/clima/sites/clima/files/docs/ets_handbook_en.pdf)



# ADDITIONAL INFORMATION– FACTSHEET

- [https://ec.europa.eu/clima/sites/clima/files/factsheet\\_ets\\_en.pdf](https://ec.europa.eu/clima/sites/clima/files/factsheet_ets_en.pdf)





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# CROATIAN NATIONAL LEGISLATION AND EU LEGISLATION DIRECTLY APPLICABLE TO ETS



## MARITIME TRANSPORT AND ETS

Inspection over implementation of Regulation (EU) 2015/757 and the ACT ON IMPLEMENTATION OF REGULATION (EU) 2015/757 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL OF 29 APRIL 2015 ON THE MONITORING, REPORTING AND VERIFICATION OF CARBON DIOXIDE EMISSIONS FROM MARITIME TRANSPORT, AND AMENDING DIRECTIVE 2009/16/EC is carried out by the competent maritime central government body within which Maritime Safety Inspection operates

# CONTENT

- **Air Protection Act (Official gazette 130/11, 47/14, 61/17)**
- **Regulation on the Method of Greenhouse Gas Emission Allowance Trading (OG 69/12, 154/14)**
- **Ordinance on the Method of Free Allocation of Emission Allowances to Installations and on the Monitoring, Reporting and Verification of Reports on Greenhouse Gas Emissions from Installations And aircrafts in the Period Commencing 1 January 2013 (OG 70/15)**
- **Ordinance on the Manner of Using the European Union Registry (OG 26/15)**



# AIR PROTECTION ACT

- **Official gazette 130/11, 47/14, 61/17**
  - Provides competence and responsibility for air and ozone layer protection, mitigation of climate change, and adaptation to climate change
  - Monitoring of greenhouse gas emissions and measures for mitigation and adaptation to climate change, funding of air and ozone layer protection, climate change mitigation and adaptation to climate change
  - Administrative oversight and inspection
- **Contains provisions in accordance with the following EU acts**
  - **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 in respect of the Kyoto Protocol's project mechanisms;

# AIR PROTECTION ACT

- **Contains provisions in accordance with EU acts**
  - 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;
  - **Commission Regulation (EU) 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;**
  - **Commission Regulation (EU) No 601/2012 on the monitoring and reporting of greenhouse gas emissions pursuant to Directive 2003/87/EC.**

# AIR PROTECTION ACT

- **Contains provisions in accordance with EU acts**
  - Commission Regulation (EU) No 1031/2010 of 12 November 2010 on the timing, administration and other aspects of auctioning of greenhouse gas emission allowances,
  - Commission Decision 2011/278/EU of 27 April 2011 determining transitional Union-wide rules for harmonised free allocation of emission allowances pursuant to Article 10a of Directive 2003/87/EC,
  - Commission Regulation (EU) No 389/2013 of 2 May 2013 establishing a Union Registry pursuant to Directive 2003/87/EC,
  - Decision No 1359/2013/EU of the European Parliament and of the Council of 17 December 2013 amending Directive 2003/87/EC clarifying provisions on the timing of auctions of greenhouse gas allowances

# AIR PROTECTION ACT

- **Contains provisions in accordance with EU acts**
  - Directive 2008/101/EC of the European Parliament and of the Council 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 of the European Parliament and of the Council amending Directive 2003/87/EC so as to improve and extend the greenhouse gas emission allowance trading scheme of the Community

## AIR PROTECTION ACT

- **Air Protection Act defines ETS implementation through the following activities**
- **Greenhouse Gas Emission Permit (Articles 82-88)**
  - Operator must submit a request to the Ministry to obtain the Permit
  - With the request, a greenhouse gas emission monitoring plan must be submitted, on which the Agency gives its expert opinion
  - The Ministry issues the Permit with the obligation of monitoring and reporting on emissions, and the obligation of submitting the amount of emission allowances by 30 April each year, in the amount corresponding to the total greenhouse gas emission from the installation in the previous calendar year, verified pursuant to Article 109 of this Act
  - Greenhouse gas emission from the installation monitoring plan is an integral part of the Permit

# AIR PROTECTION ACT

- Greenhouse Gas Emission Permit (Articles 82-88)
  - Installation operator shall notify the Ministry of all planned changes to the technical-technological characteristics of the installation, including changes of the type of fuel, raw material or other substances used at the installation, increase or reduction of the rated thermal input, i.e. the installation's capacity, and planned change of the person installation operator
  - Installation operator shall notify the Ministry of the planned date of cessation of activities at the installation within 8 days



## AIR PROTECTION ACT

- Allocation of emission allowances (Article 89)
- Emission allowances are allocated to installation operators who hold a Permit referred to in Article 82 of this Act and aircraft operators who have an approved monitoring plan pursuant to Article 93 of this Act
- Free allocation of emission allowances to installation operators (Articles 90-91) and aircraft operators (Articles 94-95)
  - An Ordinance issued by the Minister prescribes the method of free allocation of emission allowances and the list of sectors or sub-sectors that are exposed to a greater risk of greenhouse gas relocation to third countries

# AIR PROTECTION ACT

- Auction (Articles 99-100)
  - Funds from the sale of emission allowances at auctions are paid into a special account of the Environmental Protection and Energy Efficiency Fund
  - The funds are earmarked for reduction of greenhouse gas emissions, adaptation to climate change, funding the mitigation of climate change, funding renewable energy sources
- Registry (Articles 101-107)
  - Emission allowances issued after 1 January 2013 are logged in the Union Registry
  - HAOP (Croatian Environment and Nature Agency) runs the Registry
  - The Ministry manages Croatian accounts in the Union Registry on behalf of Croatia

# AIR PROTECTION ACT

- Monitoring and reporting on greenhouse gas emissions (Articles 108-111)
- Installation operator who was issued a Permit referred to in Article 82 of this Act shall monitor greenhouse gas emissions and submit an emissions report and a verification report to the Agency by March 1 of the current year for the previous year
  - The Agency checks the integrity of the report and reports on it to the Ministry
  - Data from the report must be verified
  - Verification is performed by a legal entity authorized for report verification pursuant to the Environmental Protection Act
- Verification (Articles 109, 109a, 110)
  - Data from the report must be verified
  - Verification is performed by a legal entity authorized for report verification pursuant to the Environmental Protection Act

## AIR PROTECTION ACT

- Expert Panel for ETS technical matters (Article 109b)
  - For special expert activities and consulting the Minister may issue a Decision to establish an Expert Panel for technical matters
- Sale, purchase or borrowing of allowances of allocated quotas, for the purposes of fulfilling obligations from the Kyoto Protocol (Article 111)
- A Decision on borrowing allowances of allocated quotas, i.e. on purchase of allowances of allocated quotas may be brought under the Report on Fulfillment of Obligations from the Kyoto Protocol
- Funds of the Environmental Protection and Energy Efficiency Fund are used for the purchase of allowances
- The Government brings the Decision on the Ministry's proposal

## AIR PROTECTION ACT

- Exclusion of an installation from emission allowance trading (Articles 112-114)
  - Operator of an installation that obtained the Permit from the Ministry may submit a request for exclusion from the emission allowance trading system if:
    - each of the previous 3 years greenhouse gas emissions were under 25,000 tons carbon dioxide equivalent, in accordance with the verified emission report,
    - rated thermal input of the combustion installation is under 35 MW,
  - The Ministry compiles a list and submits it to the EC for approval
  - Operator of an installation excluded from the emission allowance trading shall monitor greenhouse gas emissions and submit a verified report to the Agency by 1 March of the current year for the previous year

# AIR PROTECTION ACT

- Inspection (Articles 129, 132, 138, 140)
- During an inspection, an inspector has the right and the obligation to issue an order to the inspected person for prohibition of performance of activities at the installation that emit greenhouse gases if there is no Permit
- Inspection monitoring over the application of this Act and regulations brought on the grounds of this Act is carried out by an inspector of the Ministry of Environmental Protection (hereinafter: inspector) on the basis of the provisions of laws governing environmental protection, unless otherwise specified in this Act
- Inspector shall issue an order banning the monitored person from activities that release greenhouse gases if: they do not have a Permit from the Ministry, if they do not fulfill the conditions on the basis of which the Permit was obtained (Article 138(4))

# AIR PROTECTION ACT

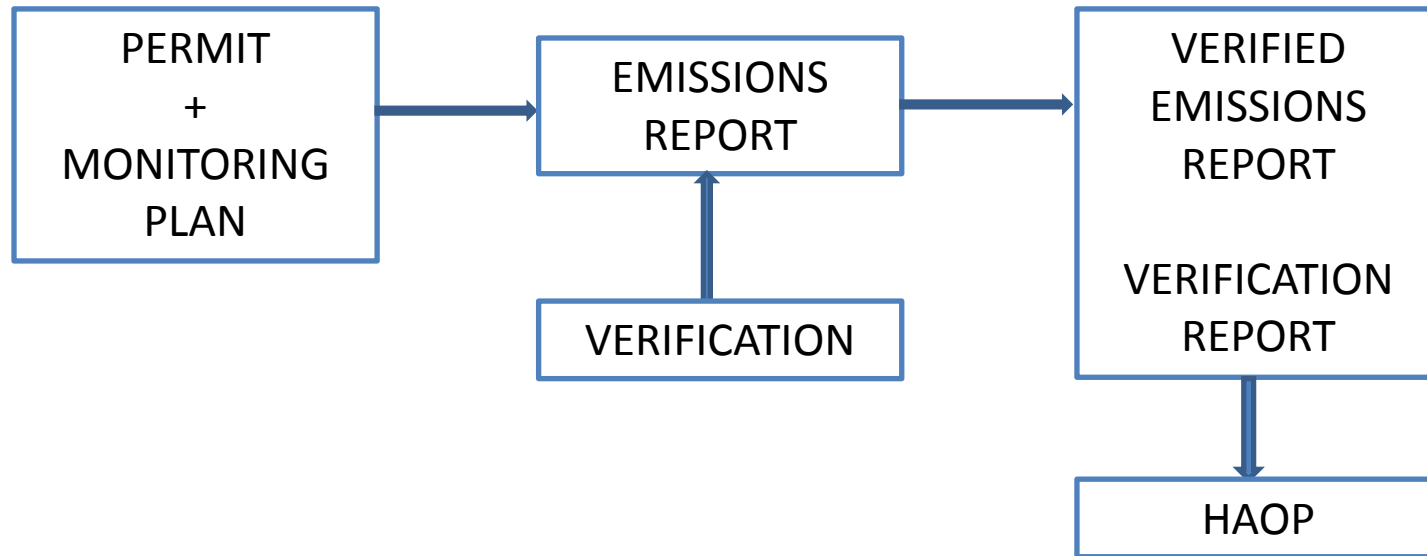
- Penalty provisions (Article 146)-operator
- A legal entity shall be fined for an offence if:
  - It performs activities that release greenhouse gas without a permit
  - Does not notify the Ministry of planned changes
  - Does not notify the Ministry of planned changes of the person
  - Does not notify the Ministry of planned cessation of operations of the installation
  - Does not submit a verified report to the Ministry as prescribed
  - Does not obtain the Ministry's approval of the monitoring and reporting on greenhouse gas emission from an aircraft plan
  - Does not open an account at the Union Registry
  - Does not monitor greenhouse gas emissions and does not submit a verified report to the Agency by 31 March of the current year for the previous year

# AIR PROTECTION ACT

- Penalty provisions (Article 147)-verifiers
- A legal entity shall be fined for an offence if:
  - It leaves an irregularity out of the verification report
  - Does not counsel the installation operator or aircraft operator to obtain the necessary approval of the monitoring plan from the Ministry
  - Does not timely notify the installation operator or aircraft operator and does not demand appropriate corrections of determined inaccuracies or non-compliances
  - Does not document and mark in the internal verification documentation all inaccuracies or non-compliances
  - Does not ensure that the verification procedure is fully documented in the internal verification documentation
  - Does not issue the verification report to the installation operator or the aircraft operator
  - Does not ensure impartiality and independence
  - ...



# AIR PROTECTION ACT



# REGULATION ON THE METHOD OF EMISSION ALLOWANCE TRADING

- **Official gazette 69/12, 154/14**
  - Regulates:
    - Method of greenhouse gas emission allowance trading
    - Activities and greenhouse gases under the obligation of obtaining a greenhouse gas emission permit
    - Aviation activities under the obligation of emissions monitoring
    - Method and criteria for exclusion of small installations subject to equivalent measures, and installations who have ceased operations
    - Measures for achieving equivalent contribution to reduction of emissions
    - Method and scope of usage of clean development mechanisms and joint project mechanisms

# REGULATION ON THE METHOD OF EMISSION ALLOWANCE TRADING

- Regulates:
  - Obligations of the installation operator and the aircraft operator
  - Method of emissions monitoring and reporting
  - Benchmarks for monitoring and reporting of data from emission reports
  - Method of verification and data quality assurance
  - Method of emission allowance disposition
  - Method of emission allowance reserves disposition
  - Access to information
  - Method of data submission to competent EU bodies, and method of public participation.

# REGULATION ON THE METHOD OF EMISSION ALLOWANCE TRADING

- **Activities for which a Permit for greenhouse gas emission must be obtained and aviation activities for which emissions must be monitored are prescribed in [Annex I](#)**
- **Greenhouse gases are determined in Annex II**
  - Carbon dioxide (CO<sub>2</sub>)
  - Methane (CH<sub>4</sub>)
  - Nitrous oxide (N<sub>2</sub>O)
  - Hydrofluorocarbons (HFC compounds)
  - Perfluorocarbons (PFC compounds)
  - Sulfur hexafluoride (SF<sub>6</sub>)

# REGULATION ON THE METHOD OF EMISSION ALLOWANCE TRADING

- **Monitoring and reporting principles are set out in Annex III**
  - PART A – Monitoring and reporting of emissions from stationary installations
    - Carbon dioxide emission monitoring, Calculation, Measurements, Other greenhouse gas emissions monitoring, Emission reporting
  - PART B - Monitoring and reporting of emissions from aviation activities
    - Carbon dioxide emission monitoring, Emission reporting, Monitoring data on tonne-kilometres for the purposes of filing a request for free allocation of emission allowances and a request for free allocation of emission allowances from a special reserve, Reporting data on tonne-kilometres for the purposes of filing a request for free allocation of emission allowances and a request for free allocation of emission allowances from a special reserve

# REGULATION ON THE METHOD OF EMISSION ALLOWANCE TRADING

- **PART A – Monitoring and reporting of emissions from stationary installations**

- Carbon dioxide emission monitoring:

- In a calculation or on the basis of measurements

- Calculation:

- activity information × emission factor × oxidation factor

↓  
amount of used fuel  
quantity of products

↓  
activity-specific factors  
standard factors

↓  
In case some of the carbon not oxidizing  
wasn't included in the calculation

- A separate calculation is made for each activity, each installation and each fuel

# REGULATION ON THE METHOD OF EMISSION ALLOWANCE TRADING

- **Measurements**
  - Standardized or accepted methods are used, and measurement results are substantiated with an accompanying emission calculation
- **Monitoring of other greenhouse gas emissions**
  - Standardized or accepted methods developed by the European Commission in cooperation with all relevant interested parties are used
- **Emission reporting**
  - A. Data identifying the installation:
    - name of the installation,
    - installation's address, postal code and country
    - type and number from Annex I of this Regulation of the activity performed at the installation,
    - contact person's address, phone and fax numbers and e-mail address, and
    - name of the owner of the installation and of the parent company

# REGULATION ON THE METHOD OF EMISSION ALLOWANCE TRADING

- **Emission reporting**

- B. For each activity from Annex I of this Regulation for which an emission calculation is carried out:
  - activity data,
  - emission factors,
  - oxidation factors
  - total emissions, and
  - uncertainty
- C. For each activity from Annex I of this Regulation for which emissions are determined by measurements:
  - total emissions,
  - information on reliability of measurement methods, and
  - uncertainty
- D. For combustion emissions the report also includes the oxidation factor



# REGULATION ON THE METHOD OF EMISSION ALLOWANCE TRADING

- **PART B - Monitoring and reporting of emissions from aviation activities**

- Carbon dioxide emission monitoring: - calculation

- Fuel consumption × emission factor



Standard, from the IPCC 2006 Guidelines

Actual consumption of each flight is used, which is calculated as follows:

Amount of fuel in the aircraft's tanks after the fueling for a flight – amount of fuel in the aircraft's tanks after the fueling for the next flight + amount of fuel filled for the next flight

(used flight2=remaining flight1+added for flight2-remaining from flight2)

If actual fuel consumption data is unavailable, standard method is used to estimate fuel consumption data

# REGULATION ON THE METHOD OF EMISSION ALLOWANCE TRADING

- **Emission reporting**

- A. Information identifying the aircraft operator:

- Name of the aircraft operator,
    - Member State the operator is assigned to,
    - Operator's address, including postal code and state and, if different, operator's contact address in the Member State the operator is assigned to,
    - Registration marking of the aircraft and types of aircrafts used in the period covered in the report from Annex I of this Regulation for activities performed by the aircraft operator,
    - Certificate number and the administrative body that issued the certificate and the operating license on the grounds of which the aircraft operator performed activities from Annex I of this Regulation,
    - Contact person's address, phone and fax numbers and e-mail address, and
    - Name of the owner of the aircraft

# REGULATION ON THE METHOD OF EMISSION ALLOWANCE TRADING

- **Emission reporting**

- B. For each fuel type the emission calculation is performed for:
  - Fuel consumption,
  - Emission factor
  - Total aggregated emissions from all flights during the period covered by the report that belong to aviation activities referred to in Annex I of this Regulation and are performed by the aircraft operator,
  - Aggregated emissions from:
    - All flights in the period covered by the report that belong to aviation activities referred to in Annex I of this Regulation and are performed by the aircraft operator, with takeoff from an airport located in the territory of a Member State and landing at an airport located in that same Member State,
    - All other flights during the period covered by the report that belong to aviation activities referred to in Annex I of this Regulation and are performed by the aircraft operator,

# REGULATION ON THE METHOD OF EMISSION ALLOWANCE TRADING

- **Emission reporting**

- B. For each fuel type the emission calculation is performed for:
  - Aggregated emissions from all flights during the period covered by the report from Annex I of this Regulation and are performed by the aircraft operator with:
    - Takeoff from each Member State, and
    - Landing in each Member State from a third country,
    - Uncertainty

# REGULATION ON THE METHOD OF EMISSION ALLOWANCE TRADING

- **Emission reporting**

- Monitoring data on tonne-kilometres for the purposes of filing a request for free allocation of emission allowances and a request for free allocation of emission allowances from a special reserve:

- Tonne-kilometres = distance × payload



Great circle distance between the airport of takeoff and the landing airport, plus an additional 95 kilometre fixed factor



Total mass of freight, mail and passengers being transported

# REGULATION ON THE METHOD OF EMISSION ALLOWANCE TRADING

- **Verification criteria - Annex IV**
  - PART A – Verification of emissions from stationary installations
    - Emissions from all activities referred to in Annex I of this regulation are subject to verification
    - The verification process includes consideration of greenhouse gas emissions from the installation report and monitoring from the previous year
    - Emissions from the report may be checked only if there is reliable and credible data and information that enable determination of emissions with a high level of certainty
    - The verifier shall be ensured access to all locations and information related to the subject of the verification
    - The verifier shall take into account whether the installation is registered pursuant to the independent audit and environmental management system (EMAS)

# REGULATION ON THE METHOD OF EMISSION ALLOWANCE TRADING

- **Verification criteria - Annex IV**
  - PART A – Verification of emissions from stationary installations
    - The verifier drafts a report on the verification process in which he states whether the greenhouse gas emissions from the installation report is satisfactory or not. This report contains all matters relevant for the concluded job. The verifier may issue a statement that the greenhouse gas emissions from the installation report is satisfactory if, in his opinion, total emissions are not materially incorrect

# REGULATION ON THE METHOD OF EMISSION ALLOWANCE TRADING

- **Verification criteria - Annex IV**
  - PART B – Verification of emissions from aviation activities
    - The verifier will ensure that all flights belonging to aviation activities referred to in Annex I of this Regulation are included
    - The verifier will ensure that the data on fuel consumption fully matches the data on bought or otherwise acquired fuel for the aircraft performing an aviation activity
    - The verifier must especially be convinced that only flights that were actually performed and that belong to aviation activities the aircraft operator is responsible for are in the request for free allocation of emission allowances and a request for free allocation of emission allowances from a special reserve



# ORDINANCE ON THE METHOD OF FREE ALLOCATION OF EMISSION ALLOWANCES TO PLANTS

- **Ordinance on the Method of Free Allocation of Emission Allowances to Installations and on the Monitoring, Reporting and Verification of Reports on Greenhouse Gas Emissions from Installations And Aircrafts in the Period from 1 January 2013 (OG 70/15)**
  - Regulates the method of submission, processing and verification of reports and data on activities for free allocation of emission allowances,
  - Ministry of Environmental Protection and Energy (competent body) by way of a committee conducts division of installations for free allocation of allowances
  - Receives installation operator's request for free allocation of emission allowances which contains:
    - Request for free allocation of emission allowances,
    - Data on activities,
    - Methodological report and verified report

# ORDINANCE ON THE MANNER OF USING THE EU REGISTRY

- **Official gazette 26/15**
  - Prescribes the manner of fulfilling tasks of the Ministry of Environmental Protection and Energy and HAOP, and manner, deadlines and conditions for opening, closing and other procedures related to accounts at the EU Registry (hereinafter referred to as the Union Registry)
  - The Agency prescribes Union Registry Terms of Use based on the Commission Regulation (EU) No 389/2013, the Act, the Regulation and this Ordinance, published on the websites of the Agency and the Ministry
  - Request for opening of a personal account or a trading account may be submitted to the Agency by any natural person resident of Croatia, or any legal entity, registered in Croatia pursuant to Article 18 of the Commission Regulation (EU) No 389/2013

# ORDINANCE ON THE MANNER OF USING THE EU

## REGISTRY

- **Official gazette 26/15**
  - Each account must have at least two authorized representatives, except for the account of the verifier, which has at least one authorized representative. Authorized representatives initiate transactions and other procedures on behalf of the owner
  - Accredited verifiers approve annual verified greenhouse gas emissions from installations and aviation activities, and mark the emissions as verified in the Union Registry



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# CROATIAN NATIONAL LEGISLATION AND EU LEGISLATION DIRECTLY APPLICABLE TO ETS

# CONTENT

- **Commission Regulation (EU) No 600/2012 on the verification of greenhouse gas emission reports and tonne-kilometre reports and the accreditation of verifiers**
- **Commission Regulation (EU) No 601/2012 on the monitoring and reporting of greenhouse gas emissions**
- **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**

# CONTENT

- **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 Decision 2014/746/EU determining, pursuant to Directive 2003/87/EC of the European Parliament and of the Council, a list of sectors and subsectors which are deemed to be exposed to a significant risk of carbon leakage, for the period 2015 to 2019**
- **Proposal to amend the Directive 2003/87/EC**



# COMMISSION REGULATION 600/2012 ON THE VERIFICATION OF REPORTS

- **Commission Regulation (EU) No 600/2012 on the verification of greenhouse gas emission reports and tonne-kilometre reports and the accreditation of verifiers**
- **Directly applicable in Croatia**
  - Two areas :
    - Verification of emission reports and tonne-kilometre reports
    - Accreditation of verifiers

# COMMISSION REGULATION 600/2012 ON THE VERIFICATION OF REPORTS

- **Commission Regulation (EU) No 600/2012 on the verification of greenhouse gas emission reports and tonne-kilometre reports and the accreditation of verifiers**
  - Establishes provisions on verification of reports submitted in accordance with Directive 2003/87/EC and accreditation and oversight of verifiers
  - Applicable to verification of data on greenhouse gas emissions and tonne-kilometres logged after 1 January 2013 and presented in reports

# COMMISSION REGULATION 600/2012 ON THE VERIFICATION OF REPORTS

- **Verification**

- The process of verifying emission reports shall be an effective and reliable tool in support of quality assurance and quality control procedures, providing information upon which an operator or aircraft operator can act to improve performance in monitoring and reporting emissions.

- **General obligations of the verifier**

- The verifier shall carry out the verification with the aim of providing a verification report that concludes with reasonable assurance that the operator's or aircraft operator's report is free from material misstatements.

# COMMISSION REGULATION 600/2012 ON THE VERIFICATION OF REPORTS

- **General obligations of the verifier**
  - During the verification, the verifier shall assess whether:
    - the operator's or aircraft operator's report is complete and meets the requirements laid down in Annex X of Regulation (EU) No 601/2012
    - 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
    - the data in the operator's or aircraft operator's report are free from material misstatements
    - information can be provided in support of the operator's or aircraft operator's data flow activities, control system and associated procedures

# COMMISSION REGULATION 600/2012 ON THE VERIFICATION OF REPORTS

- **Information from an operator or aircraft operator**
  - the operator's greenhouse gas emissions **permit** when this concerns the verification of an operator's emission report
  - **the latest version of the operator's or aircraft operator's monitoring plan** as well as any other relevant versions of the monitoring plan approved by the competent authority, including evidence of the approval
  - a description of the operator's or aircraft operator's **data flow** activities
  - the operator's or aircraft operator's **risk assessment** and an outline of the overall control system
  - the procedures mentioned in the monitoring plan as approved by the competent authority
  - the operator's or aircraft operator's **annual emission or tonne-kilometre report**

# COMMISSION REGULATION 600/2012 ON THE VERIFICATION OF REPORTS

- **Information from an operator or aircraft operator**
  - where applicable, the operator's sampling plan
  - where the monitoring plan was modified during the reporting period, a record of all those modifications
  - Where applicable, the improvement report
  - the verification report from the previous year if the verifier did not carry out the verification for that particular operator or aircraft operator the previous year
  - all relevant correspondence with the competent authority, in particular information related to the notification of modifications of the monitoring plan
  - information on databases and data sources used for monitoring and reporting purposes
  - any other relevant information necessary for the planning and carrying out of the verification

# COMMISSION REGULATION 600/2012 ON THE VERIFICATION OF REPORTS

- **Concluding on the findings of verification**
- **Independent review**
  - The verifier shall submit the internal verification documentation and the verification report to an independent reviewer prior to the issuance of the verification report
- **Internal verification documentation**
- **Verification report**
  - The verifier shall issue a verification report to the operator or aircraft operator on each emission report or tonne kilometre report that was subject to verification
- **Addressing outstanding non-material non-conformities**
  - The verifier shall report in the verification report whether non-conformities have been resolved by the operator or aircraft operator

# COMMISSION REGULATION 601/2012 ON MONITORING

- **Commission Regulation (EU) No 601/2012 on the monitoring and reporting of greenhouse gas emissions**
  - lays down rules for the monitoring and reporting of greenhouse gas emissions and activity data pursuant to Directive 2003/87/EC in the trading period of the Union emissions trading scheme commencing on 1 January 2013 and subsequent trading periods
  - Monitoring and reporting shall be complete and cover all process and combustion emissions from all emission sources and source streams belonging to activities listed in Annex I to Directive 2003/87/EC and other relevant activities included pursuant to Article 24 of that Directive, and of all greenhouse gases specified in relation to those activities
  - Reporting must be complete, consistent, transparent and accurate



# COMMISSION REGULATION 601/2012 ON MONITORING

- **Commission Regulation (EU) No 601/2012 on the monitoring and reporting of greenhouse gas emissions**
  - Lays down rules for the monitoring and reporting of greenhouse gas emissions
  - Emissions reporting
  - General principles:
    - Completeness
    - Consistency, comparability and transparency
    - Accuracy
    - Integrity of methodology
    - Continuous improvement

# COMMISSION REGULATION 601/2012 ON MONITORING

- **Monitoring plan**

- Each operator or aircraft operator shall monitor greenhouse gas emissions, based on a monitoring plan approved by the competent authority

- **Content and submission of the monitoring plan**

- An operator or an aircraft operator shall submit a monitoring plan to the competent authority for approval
- The monitoring plan 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
- Together with the monitoring plan, the operator or aircraft operator shall submit:
  - evidence for each source stream and emission source demonstrating compliance with the uncertainty thresholds for activity data and calculation factors, where applicable, for the applied tiers as defined in Annex II and Annex III

# COMMISSION REGULATION 601/2012 ON MONITORING

- Together with the monitoring plan, the operator or aircraft operator shall submit:
  - the results of a risk assessment providing evidence that the proposed control activities and procedures for control activities are commensurate with the inherent risks and control risks identified
- **Standardised and simplified monitoring plans**
  - Member States may allow operators and aircraft operators to use standardised or simplified monitoring plans
- **Modifications of the monitoring plan**
  - If new emissions occur due to new activities carried out or due to the use of new fuels or materials not yet contained in the monitoring plan
  - If there is change in the availability of data, due to the use of new measuring instrument types, sampling methods or analysis methods. or for other reasons

# COMMISSION REGULATION 601/2012 ON MONITORING

- **Modifications of the monitoring plan**
  - data resulting from the previously applied monitoring methodology has been found incorrect
  - changing the monitoring plan improves the accuracy of the reported data
  - the monitoring plan is not in conformity with the requirements of this Regulation and the competent authority requests the operator or aircraft operator to modify it
  - it is necessary to respond to the suggestions for improvement of the monitoring plan contained in a verification report
- **Approval of modifications of the monitoring plan**
  - Any significant modification of the monitoring plan shall be subject to approval by the competent authority

# COMMISSION REGULATION 601/2012 ON MONITORING

- **Monitoring of emissions of stationary installations**
  - Categorisation of installations and source streams: a, b, c
    - $A \leq 50\,000$  tonnes of CO<sub>2(e)</sub>
    - $50\,000$  tonnes of CO<sub>2(e)</sub> <  $B \leq 500\,000$  tonnes of CO<sub>2(e)</sub>
    - $C > 500\,000$  tonnes of CO<sub>2(e)</sub>
  - The operator shall classify each source stream in one of the following categories:
    - De-minimis
    - Minor source streams
    - Major source streams

# COMMISSION REGULATION 601/2012 ON MONITORING

- **Monitoring boundaries**
  - An operator shall define the monitoring boundaries for each installation:
    - all relevant greenhouse gas emissions from all emission sources and source streams belonging to activities carried out at the installation and listed in [Annex I](#).
- **Choice of methodology**
  - Calculation-based
  - Measurement-based

# COMMISSION REGULATION 601/2012 ON MONITORING

- **Measurement systems under the operator's control**
  - the operator must carry out an uncertainty assessment and ensures that the uncertainty threshold of the relevant tier level is met
  - the operator must ensure at least once per year, and after each calibration of measuring instruments, that the calibration results multiplied by a conservative adjustment factor are compared with the relevant uncertainty thresholds
- **Measurement systems outside the operator's own control**
  - amounts from invoices issued by a trade partner
  - direct readings from the measurement systems

# COMMISSION REGULATION 601/2012 ON MONITORING

- **Calculation factors**
  - Determined calculation factors
  - Default values for calculation factors
  - Calculation factors based on analyses
- **Use of laboratories**
  - Laboratories accredited in accordance with EN ISO/IEC 17025
- **Frequencies for analyses**
  - minimum frequencies listed in Annex VII



# COMMISSION REGULATION 601/2012 ON MONITORING

- **Specific calculation factors**
  - Emission factors for CO<sub>2</sub>: t CO<sub>2</sub>/TJ- fuel (exceptionally t CO<sub>2</sub>/t or t CO<sub>2</sub>/Nm<sup>3</sup>)
  - Conversion of C content into CO<sub>2</sub> factor 3 664 t CO<sub>2</sub>/t C
- **Oxidation and conversion factors**
  - Minimum tier 1 = complete oxidation
- **Treatment of biomass**
  - The operator may determine the activity data of biomass source streams without using tiers and providing analytical evidence regarding the biomass content
  - The emission factor of biomass shall be zero

# COMMISSION REGULATION 601/2012 ON MONITORING

- **Reporting requirements**

- The operator or aircraft operator shall submit to the competent authority by **31 March of each year** an emission report that covers the annual emissions of the reporting period and that is verified in accordance with Regulation (EU) No 600/2012
- The annual emission reports and tonne-kilometre data reports shall at least contain the information listed in Annex X
- Reporting on improvements to the monitoring methodology:
  - for a category A installation, by 30 June every four years;
  - for a category B installation, by 30 June every two years;
  - for a category C installation, by 30 June every year.

# COMMISSION REGULATION 601/2012 ON MONITORING

- **Annex I**
  - Minimum content of the monitoring plan for installations
  - Minimum content of monitoring plans for aviation emissions
  - Minimum content of monitoring plans for tonne-kilometre data
- **Annex II**
  - Tier thresholds for calculation-based methodologies related to installations
- **Annex III**
  - Monitoring methodologies for calculation of greenhouse gas emissions in aviation
- **Annex IV**
  - Activity-specific monitoring methodologies related to installations

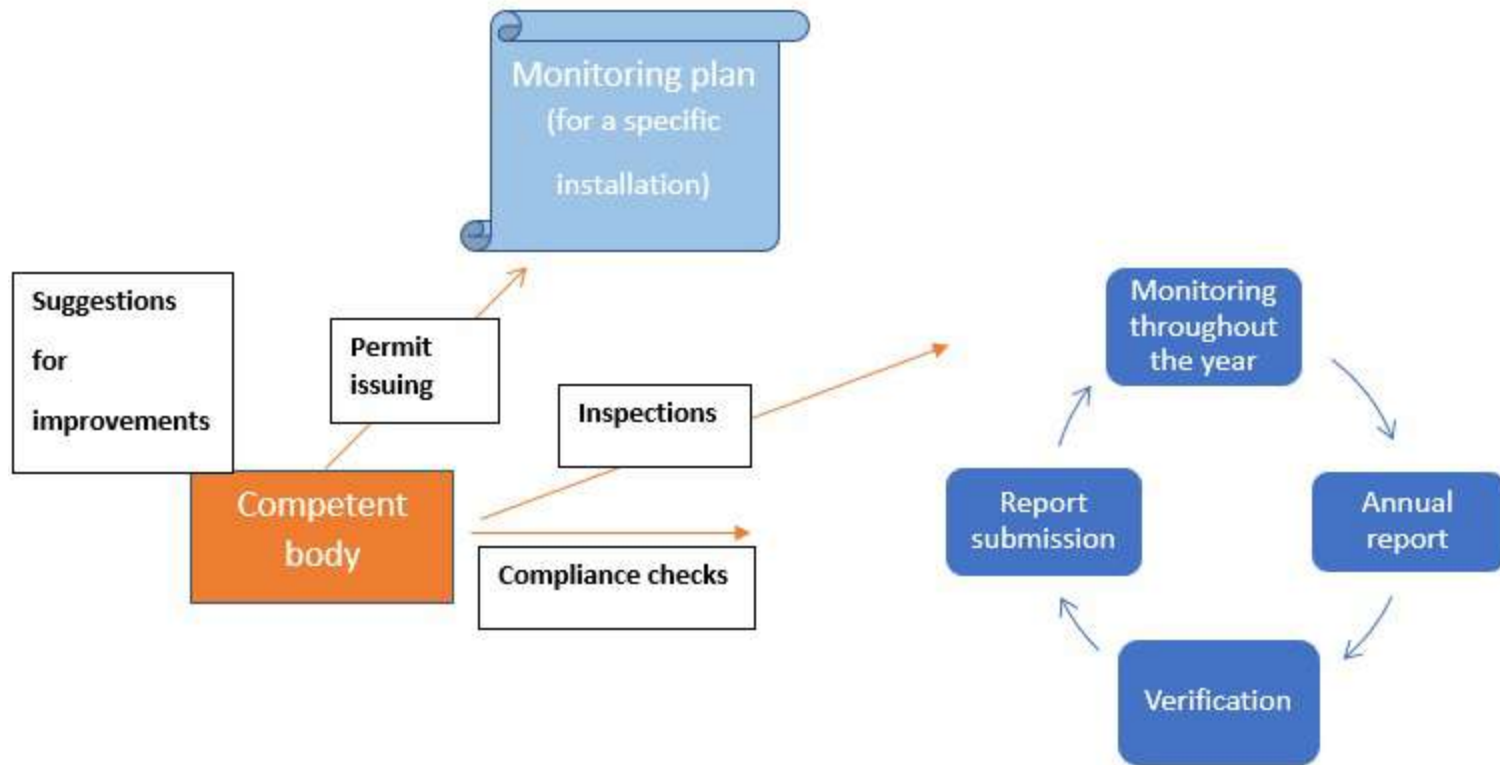
# COMMISSION REGULATION 601/2012 ON MONITORING

- **Annex V**
  - Minimum tier requirements for calculation-based methodologies involving Category A installations and calculation factors for commercial standard fuels used by Category B and C installations
- **Annex VI**
  - Reference values for calculation factors (EF, DOV)
- **Annex VII**
  - Minimum frequency of analyses
- **Annex VIII**
  - Measurement-based methodologies

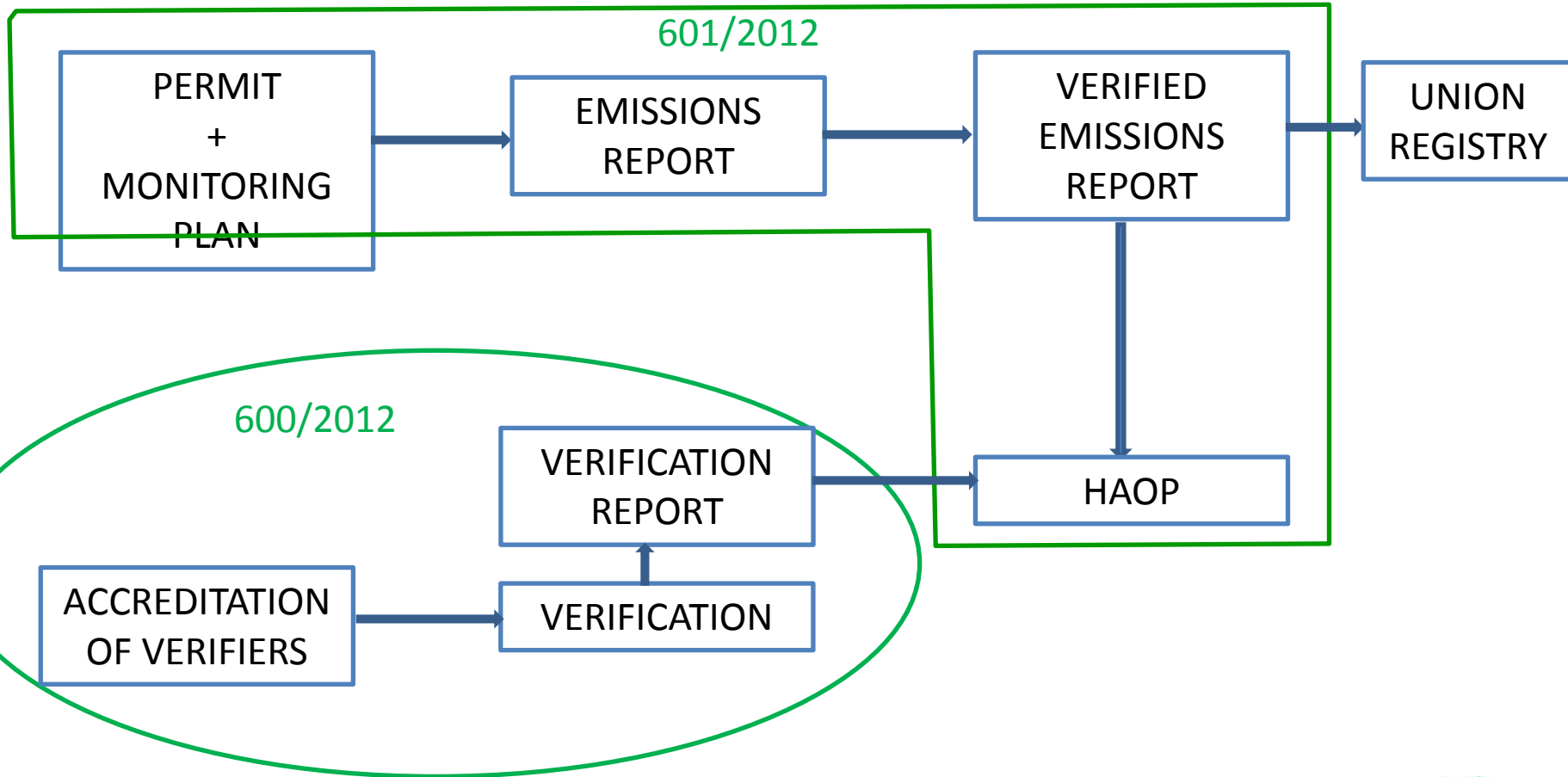
# COMMISSION REGULATION 601/2012 ON MONITORING

- **Annex IX**
  - Minimum data and information to be retained
- **Annex X**
  - Minimum content of Annual Reports

# COMMISSION REGULATION 601/2012 ON MONITORING



# COMMISSION REGULATION 600/2012 and 601/2012



## COMMISSION REGULATION 389/2013

- **Commission Regulation (EU) No 389/2013 establishing a Union Registry pursuant to Directive 2003/87/EC, Decisions No 280/2004/EC and No 406/2009/EC and repealing Commission Regulations (EU) No 920/2010 and No 1193/2011**
  - This Regulation lays down general, operational and maintenance requirements concerning the Union Registry for the trading period commencing on 1 January 2013 and subsequent periods, concerning the independent transaction log, and concerning registries
  - It establishes the European Union Transaction Log (EUTL) in the form of a standardised electronic database
  - The EUTL shall also serve to record all information relating to the holdings and transfers of Kyoto units made available



## COMMISSION DECISION 2011/278/EU

- **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**
  - Transitional Union-wide rules for the harmonised free allocation of emission allowances
  - Based on the data collected, Member States shall, for each year, calculate the number of emission allowances allocated free of charge from 2013 onwards to each incumbent installation on their territory

## COMMISSION DECISION 2014/746/EU

- **Commission Decision 2014/746/EU determining, pursuant to Directive 2003/87/EC, a list of sectors and subsectors which are deemed to be exposed to a significant risk of carbon leakage, for the period 2015 to 2019**
  - Directive 2003/87/EC provides that auctioning should be the basic principle for allocation of greenhouse gas emission allowances
  - The absence of binding action at the international level could lead to an increase in greenhouse gas emissions in third countries where industry is not subject to comparable carbon constraints (**'carbon leakage'**)
  - To address this risk of carbon leakage a list of sectors and subsectors deemed to be exposed to a significant risk of carbon leakage is determined – free emission allowances

# PROPOSAL TO AMEND THE DIRECTIVE 2003/87/EC

- According to the Proposal to amend Directive 2003/87/EC, the fourth ETS period shall be from 2021 to 2030
- Amendments to the Directive 2003/87/EC result from energy-climate framework for period ending in 2030
- Fundamental objective by 2030 is to reduce greenhouse gas emissions by at least 40% below the 1990 level – ETS 43% in relation to 2005
- Improve the Greenhouse Gas Emission Allowance Trading System based on knowledge acquired in the current third trading period
- It is expected that the new ETS Directive shall enter into force at the beginning of 2018



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**THANK YOU FOR YOUR ATTENTION**

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INZRAK

Enhanced environmental protection inspection for efficient control of air quality monitoring and of all entities under obligation within system of greenhouse gas emission allowance trading, in order to achieve better quality of air in Republic of Croatia



REPUBLIKA HRVATSKA

MINISTARSTVO ZAŠTITE  
OKOLIŠA I ENERGETIKE



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## **2. DESCRIPTION OF ROLES, OBLIGATIONS AND CONDUCT OF INDIVIDUAL ETS PARTICIPANTS**

# CONTENT

- **ETS participants**
  - role
  - obligations
  - conduct
- **ETS activities**
- **State of ETS in Croatia**
  - ETS mandatory participants in Croatia
  - Plants excluded from the ETS
  - Accredited verifiers
  - Total greenhouse gas emissions of ETS mandatory participants
  - Emission allowances allocated for free

# ETS PARTICIPANTS

- **Institutions**

- Ministry of Environmental Protection and Energy
  - Directorate for Climate Activities, Sustainable Development, and Air, Soil and Sea Protection - Climate Activities and Ozone Layer Protection Service (Ministry)
  - Directorate for Inspection Affairs – Environmental Protection Inspection Sector (Inspection)
- Croatian Environment and Nature Agency – Climate Change Department (Agency)
- Croatian Accreditation Agency (Accreditation Agency)
- Fund for Environmental Protection and Energy Efficiency (Fund)

- **Installation operator and aircraft operator**

- **Accredited verifier**



## ETS ACTIVITIES

- **Greenhouse gas emission permit**
  - Greenhouse gas emission monitoring plan
- **Monitoring and reporting on greenhouse gas emissions**
  - Emission Report and Verification Report
  - Report on Improvements
- **Free allocation of emission allowances**
- **Cessation of activities that cause emissions**
- **Exclusion of an installation from ETS (equivalent measures)**
- **Union Registry**
- **Accreditation**
- **Report on the application of Directive 2003/87/EC**

# MINISTRY (1)

- **Competent body for ETS implementation in Croatia**
- **Role, obligations and conduct in the ETS:**
  - Greenhouse gas emission permit
    - Approves the monitoring plan
    - issues / amends / repeals the greenhouse gas emission permit
  - Monitoring and reporting on greenhouse gas emissions
    - Informs on the review of the integrity of the greenhouse gas emission report and the verification report
    - Conducts a conservative estimation of emissions
    - Approves the report on improvements of methodology of greenhouse gas emission monitoring



REPUBLIKA HRVATSKA

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## MINISTRY (2)

- **Role, obligations and conduct in the ETS:**
  - Free allocation of emission allowances
    - Brings a decision determining the amount of emission allowances to be allocated for free
  - Cessation of activities that cause emissions
    - Issues a decision on cancellation of a permit
  - Exclusion of an installation from ETS (equivalent measures)
    - Issues a decision on exclusion of an installation operator from ETS

## MINISTRY (3)

- **Role, obligations and conduct in the ETS:**
  - Union Registry
    - Issues a decision on the fee amount for emission allowances not submitted to the Union Registry
  - Accreditation
    - Exchanges information on accreditation of verifiers and on verifiers with the Accreditation Agency
  - Report on the application of Directive 2003/87/EC
    - Drafts the report

## AGENCY (1)

- **Provides expert support to the Ministry in the implementation of ETS**
- **Role, obligations and conduct in the ETS:**
  - Greenhouse gas emission permit
    - Reviews the monitoring plan and gives expert opinion on it
  - Monitoring and reporting on greenhouse gas emissions
    - Reviews the integrity of the verified greenhouse gas emission report and the verification report
    - Reviews the report on improvements of monitoring methodology and gives expert opinion on it



**HAOP**

HRVATSKA AGENCIJA ZA OKOLIŠ I PRIRODU

## AGENCY (2)

- **Role, obligations and conduct in the ETS:**
  - Cessation of activities that cause emissions
    - Reviews the integrity of the verified greenhouse gas emission report and the verification report
  - Exclusion of an installation from ETS (equivalent measures)
    - Reviews the integrity of the verified greenhouse gas emission report and the verification report
  - Union Registry
    - Union Registry national administrator
    - Services accounts opened in the Union Registry
    - Checks whether emissions have been logged and confirmed in the Union Registry
    - Determines shortage of emission allowances submitted to the Union Registry
  - Report on the application of Directive 2003/87/EC
    - Participates in the drafting of the report

# INSTALLATION OPERATOR AND AIRCRAFT OPERATOR (1)

- **ETS mandatory participants – installation operators and aircraft operators who perform activities listed in Annex I**
- **Role, obligations and conduct in the ETS:**
  - Greenhouse gas emission permit
    - Installation operator
      - Carries out permit-obtaining activities
      - Notifies the Ministry on changes at the installation, changes of the person installation operator, changes of the monitoring plan
    - Aircraft operator
      - Carries out activities related to obtaining the approval of the monitoring plan and the greenhouse gas emissions from an aircraft report



# INSTALLATION OPERATOR AND AIRCRAFT OPERATOR (2)

- **Role, obligations and conduct in the ETS:**
  - **Monitoring and reporting on greenhouse gas emissions**
    - Monitors greenhouse gas emissions pursuant to the approved monitoring plan
    - Submits the verified greenhouse gas emission report and the verification report to the Agency
    - Submits the report on improvements to the monitoring methodology to the Ministry for approval
  - **Free allocation of emission allowances**
    - Submits information on planned or implemented changes of capacity, activity level or installation operation to the Ministry



# INSTALLATION OPERATOR AND AIRCRAFT OPERATOR (3)

- **Role, obligations and conduct in the ETS:**
  - Cessation of activities that cause emissions
    - Notifies the Ministry of the date of cessation of activities
    - Monitors greenhouse gas emissions pursuant to the monitoring plan
    - Submits the verified greenhouse gas emission report and the verification report to the Agency
  - Exclusion of an installation from ETS (equivalent measures)
    - Monitors greenhouse gas emissions pursuant to the monitoring plan
    - Submits the verified greenhouse gas emission report and the verification report to the Agency
    - Implements measures for achieving equivalent contribution to reduction of emissions
  - Union Registry
    - Opens an account at the Union Registry
    - Submits emission allowances to the Union Registry

## VERIFIER (1)

- **Competent, independent, authorized body responsible for working on reports in the verification process**
  - **Must be accredited by the Accreditation Agency**
  - **Must be independent from operators**
  - **Role, obligations and conduct in the ETS:**
    - Monitoring and reporting on greenhouse gas emissions
    - Free allocation of emission allowances
    - Cessation of activities that cause emissions
    - Exclusion of an installation from ETS
- Performs verification of the greenhouse gas emission report
  - Issues verification report



## VERIFIER (2)

- **Role, obligations and conduct in the ETS:**
  - Union Registry
    - Opens an account at the Union Registry
    - Confirms the amount of verified emissions
  - Accreditation
    - Carries out activities related to obtaining, maintaining and renewing the accreditation

# ACCREDITATION AGENCY

- **National accreditation authority**
- **Under supervision of the European Accreditation Organization**
- **Role, obligations and conduct in the ETS:**
  - Accreditation
    - Performs activities related to accreditation of verifiers
    - Exchanges information on accreditation of verifiers and on verifiers with the Ministry



HAA

**Hrvatska akreditacijska agencija**  
Croatian Accreditation Agency

# FUND

- **Performs financial and expert oversight over funds, incentives and administrative matters under its jurisdiction**
- **Responsible for execution of emission allowance auctions on behalf of Croatia**
- **Together with the Ministry, responsible for the implementation of the Deployment Plan for funds acquired from sale of emission allowances at auctions in Croatia**
- **Role, obligations and conduct in the ETS:**
  - Exclusion of an installation from ETS (equivalent measures)
    - Collects the special annual fee for greenhouse gas emissions
  - Union Registry
    - Collects the fee for emission allowances not submitted to the Union Registry

# INSPECTION

- **Responsible for control of ETS implementation in Croatia**
  - Persons under inspection:
    - Installation operator
    - Aircraft operator
    - Verifier



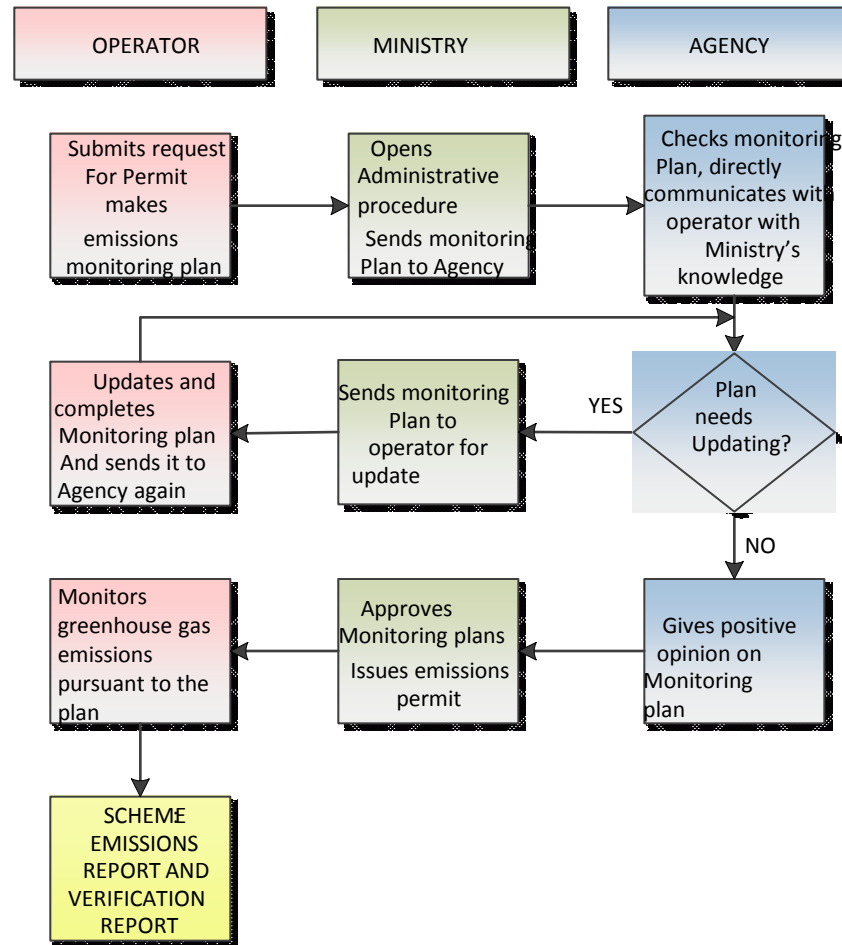
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## ETS ACTIVITIES

- **Greenhouse gas emissions permit**
- Monitoring and reporting on greenhouse gas emissions
- Free allocation of emission allowances
- Cessation of activities that cause emissions
- Exclusion of an installation from ETS (equivalent measures)
- Union Registry
- Accreditation
- Report on the application of Directive 2003/87/EC

# GREENHOUSE GAS EMISSIONS PERMIT





## ETS ACTIVITIES

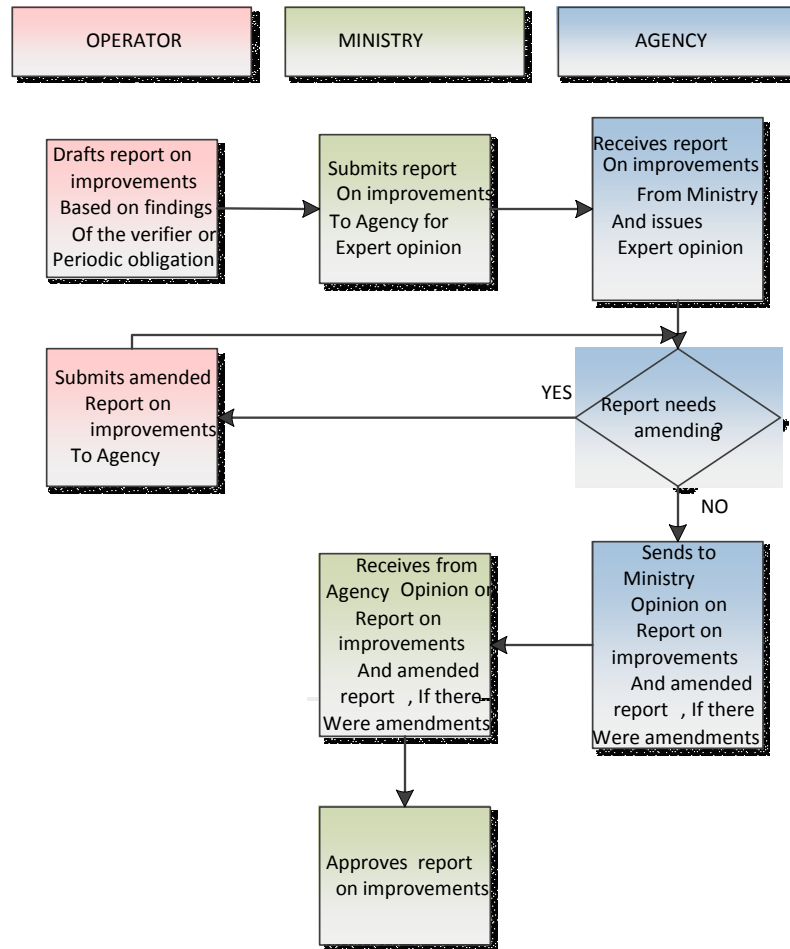
- Greenhouse gas emissions permit
- **Monitoring and reporting on greenhouse gas emissions**
  - Emission report and verification report
  - Report on improvements
- Free allocation of emission allowances
- Cessation of activities that cause emissions
- Exclusion of an installation from ETS (equivalent measures)
- Union Registry
- Accreditation
- Report on the application of Directive 2003/87/EC



## ETS ACTIVITIES

- Greenhouse gas emissions permit
- **Monitoring and reporting on greenhouse gas emissions**
  - Emissions report and verification report
  - Report on improvements
- Free allocation of emission allowances
- Cessation of activities that cause emissions
- Exclusion of an installation from ETS (equivalent measures)
- Union Registry
- Accreditation
- Report on the application of Directive 2003/87/EC

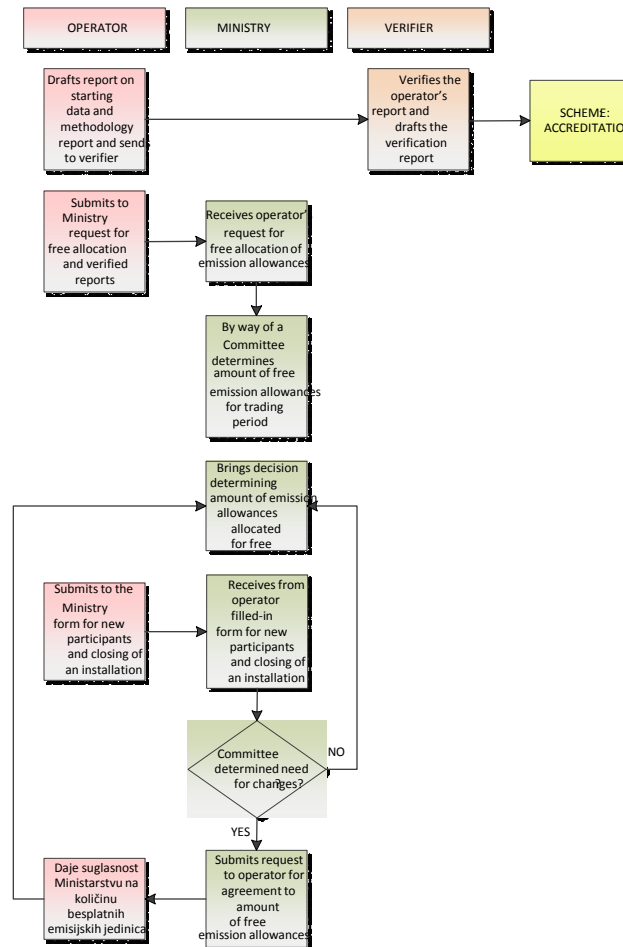
# MONITORING AND REPORTING ON GREENHOUSE GAS EMISSIONS– report on improvements



## ETS ACTIVITIES

- Greenhouse gas emissions permit
- Monitoring and reporting on greenhouse gas emissions
- **Free allocation of emission allowances**
- Cessation of activities that cause emissions
- Exclusion of an installation from ETS (equivalent measures)
- Union Registry
- Accreditation
- Report on the application of Directive 2003/87/EC

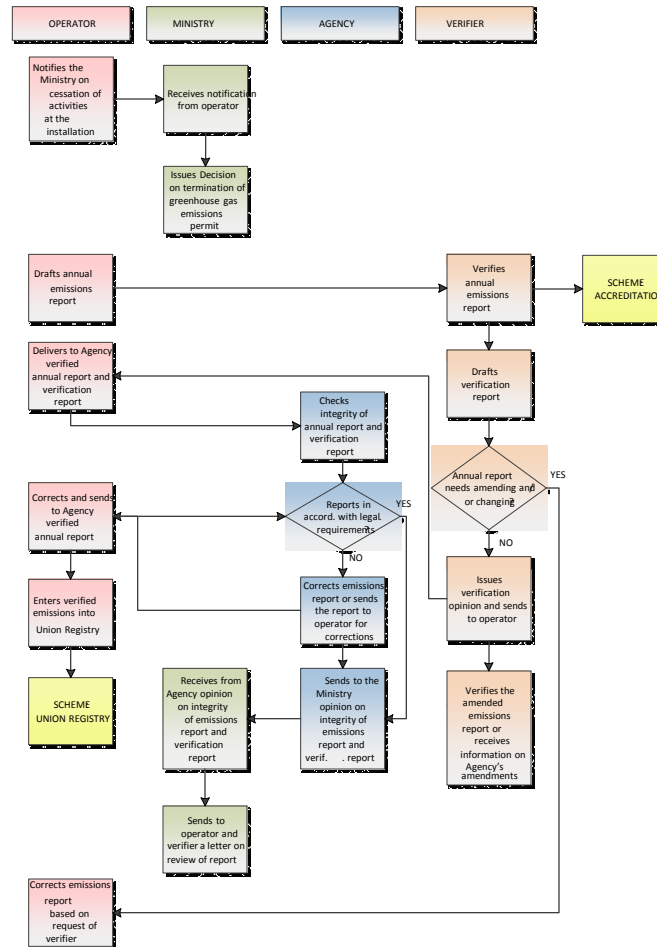
# FREE ALLOCATION OF EMISSION ALLOWANCES



## ETS ACTIVITIES

- Greenhouse gas emissions permit
- Monitoring and reporting on greenhouse gas emissions
- Free allocation of emission allowances
- **Cessation of activities that cause emissions**
- Exclusion of an installation from ETS (equivalent measures)
- Union Registry
- Accreditation
- Report on the application of Directive 2003/87/EC

# CESSATION OF ACTIVITIES THAT CAUSE EMISSIONS

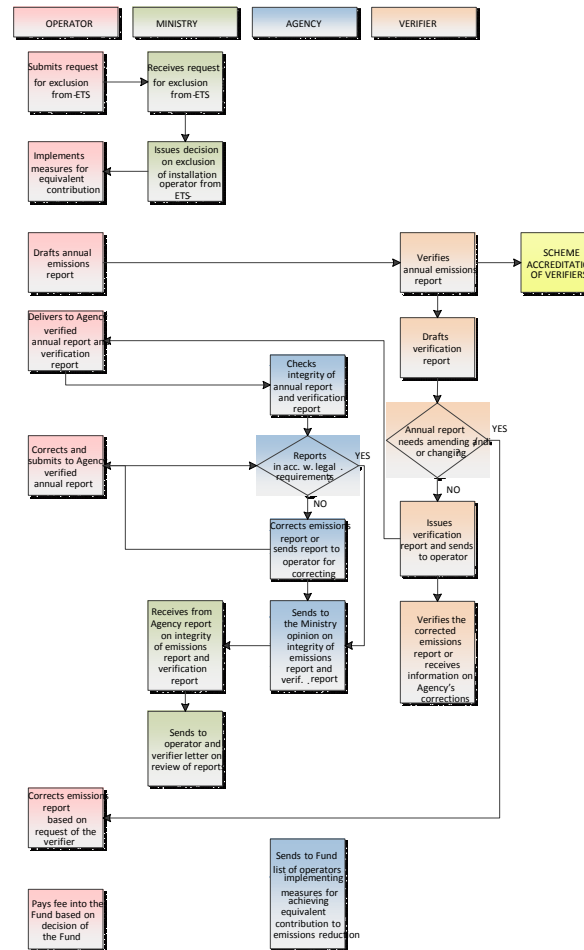




## ETS ACTIVITIES

- Greenhouse gas emissions permit
- Monitoring and reporting on greenhouse gas emissions
- Free allocation of emission allowances
- Cessation of activities that cause emissions
- **Exclusion of an installation from ETS (equivalent measures)**
- Union Registry
- Accreditation
- Report on the application of Directive 2003/87/EC

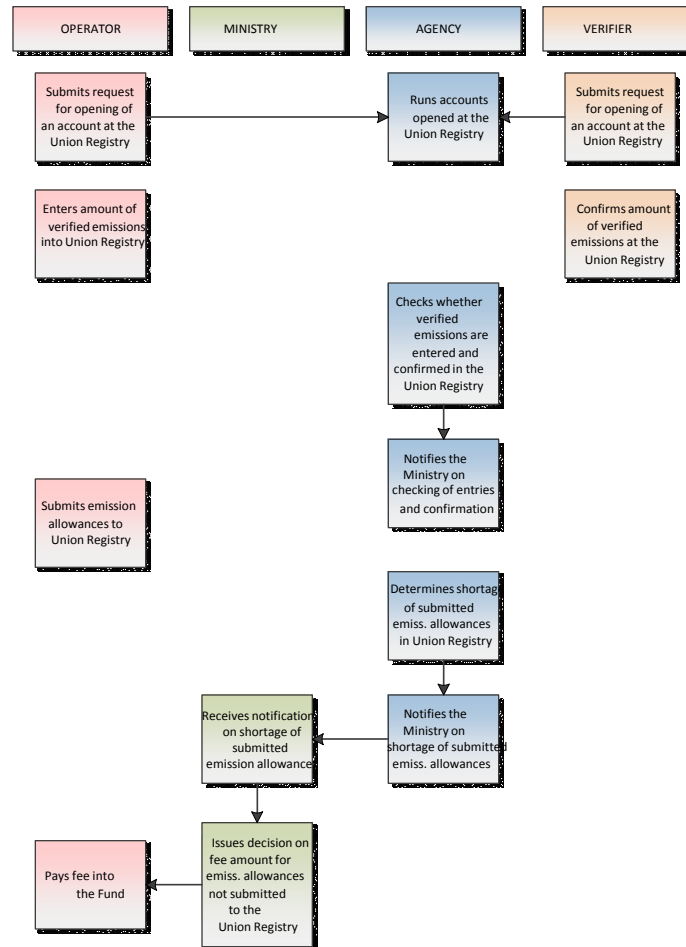
# EXCLUSION OF AN INSTALLATION FROM ETS (EQUIVALENT MEASURES)



## ETS ACTIVITIES

- Greenhouse gas emissions permit
- Monitoring and reporting on greenhouse gas emissions
- Free allocation of emission allowances
- Cessation of activities that cause emissions
- Exclusion of an installation from ETS (equivalent measures)
- **Union Registry**
- Accreditation
- Report on the application of Directive 2003/87/EC

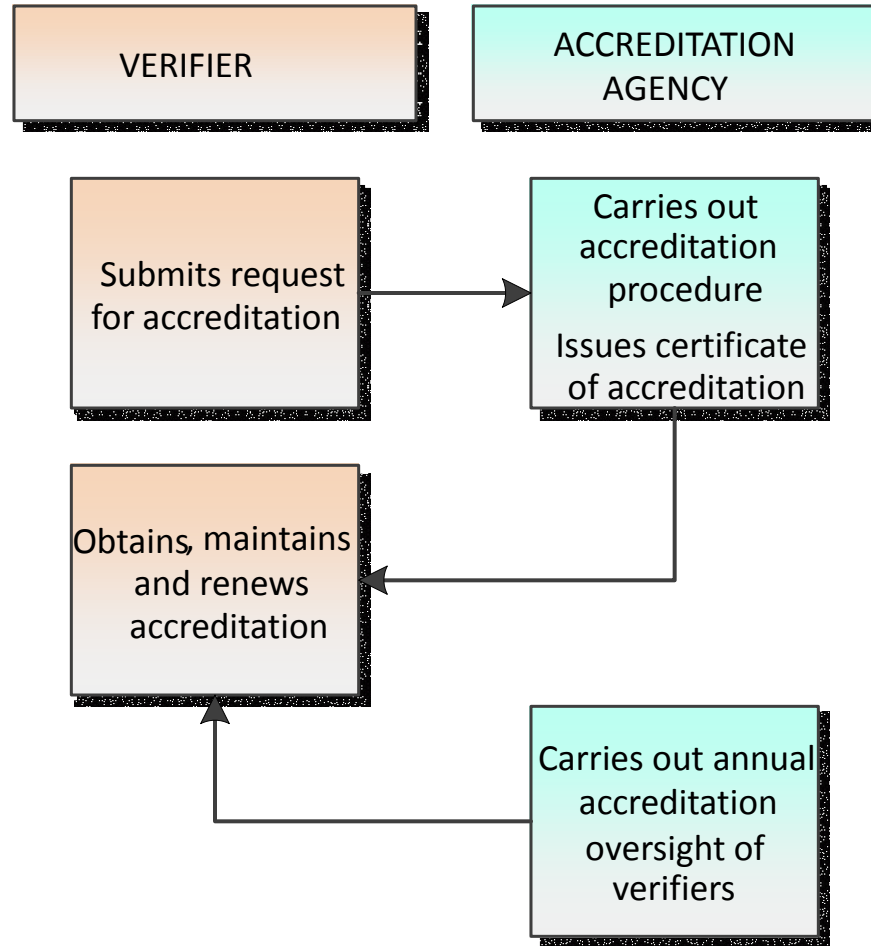
# UNION REGISTRY



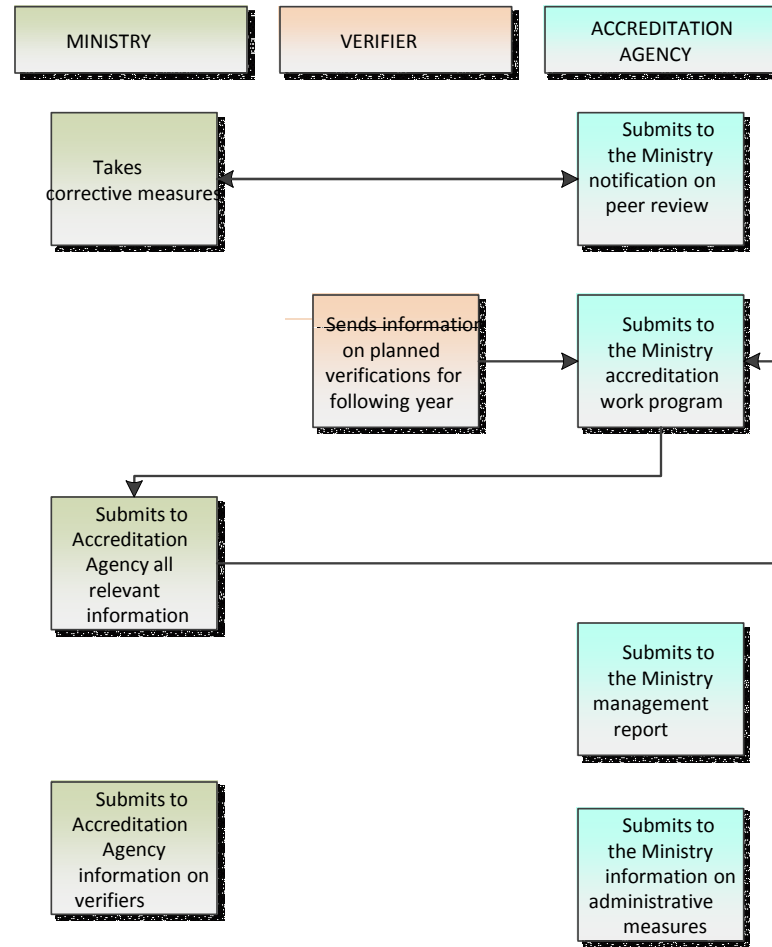
## ETS ACTIVITIES

- Greenhouse gas emissions permit
- Monitoring and reporting on greenhouse gas emissions
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- Cessation of activities that cause emissions
- Exclusion of an installation from ETS (equivalent measures)
- Union Registry
- **Accreditation**
- Report on the application of Directive 2003/87/EC

# ACCREDITATION OF VERIFIERS



# ACCREDITATION – EXCHANGE OF INFORMATION

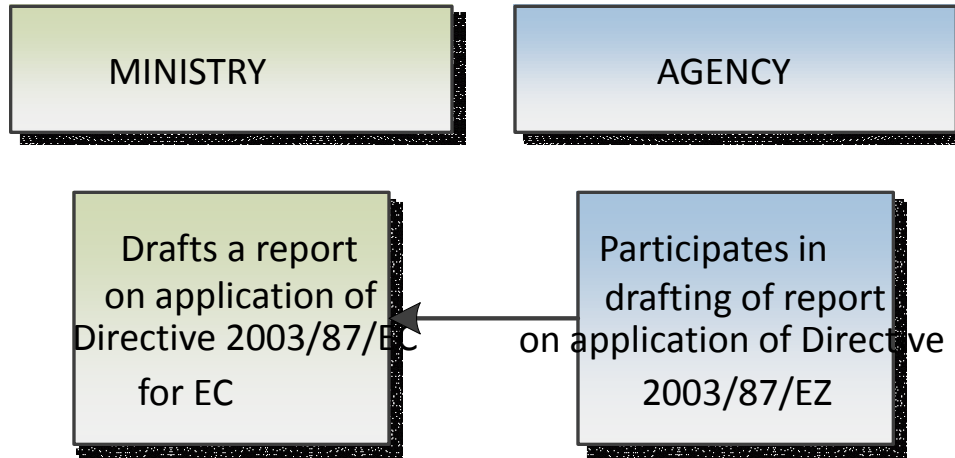


## ETS ACTIVITIES

- Greenhouse gas emissions permit
- Monitoring and reporting on greenhouse gas emissions
- Free allocation of emission allowances
- Cessation of activities that cause emissions
- Exclusion of an installation from ETS (equivalent measures)
- Union Registry
- Accreditation
- **Report on the application of Directive 2003/87/EC**



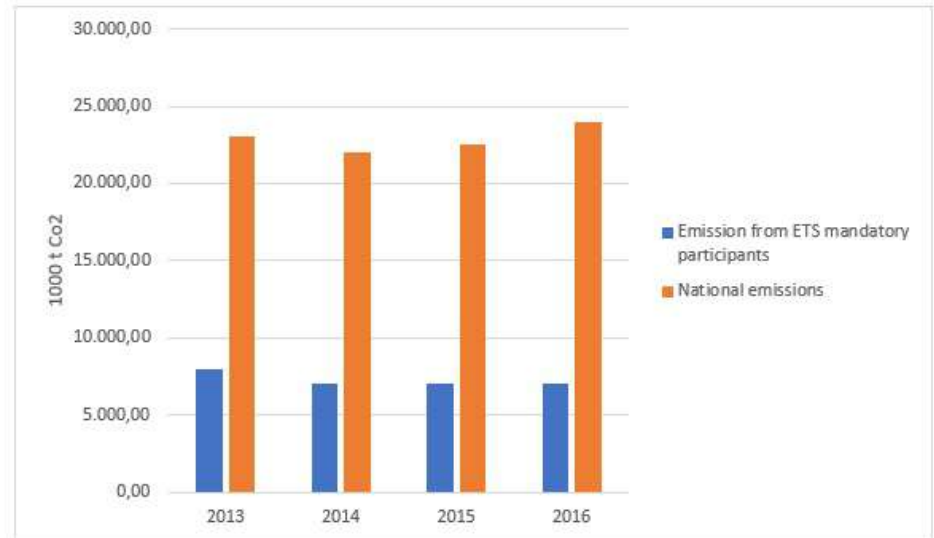
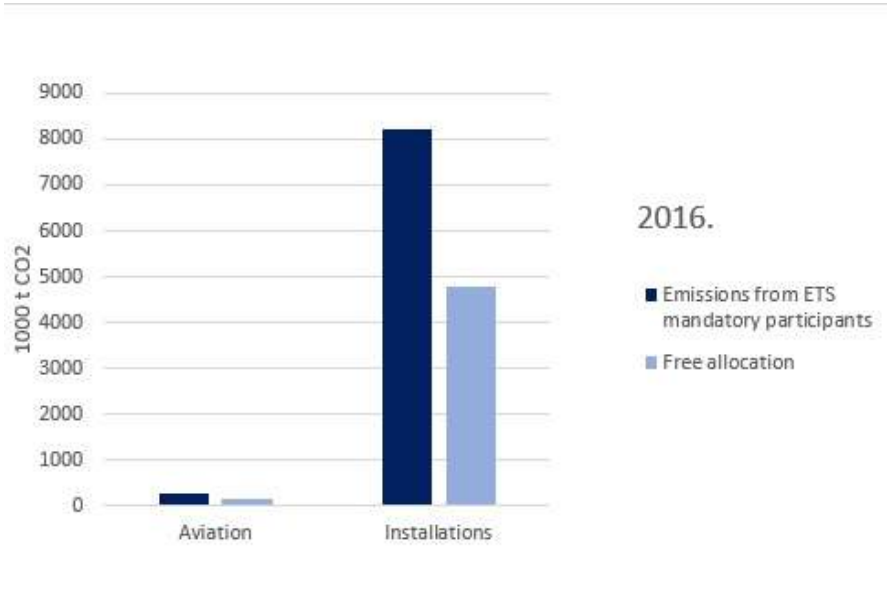
# REPORT ON THE APPLICATION OF DIRECTIVE 2003/87/EZ



## STATE OF ETS IN CROATIA (1)

- **Number of ETS mandatory participants**
  - 53 installation operators
  - 1 aircraft operator
- **Number of installations subject to application of equivalent measures**
  - 5 installations excluded from ETS

# STATE OF ETS IN CROATIA (1)

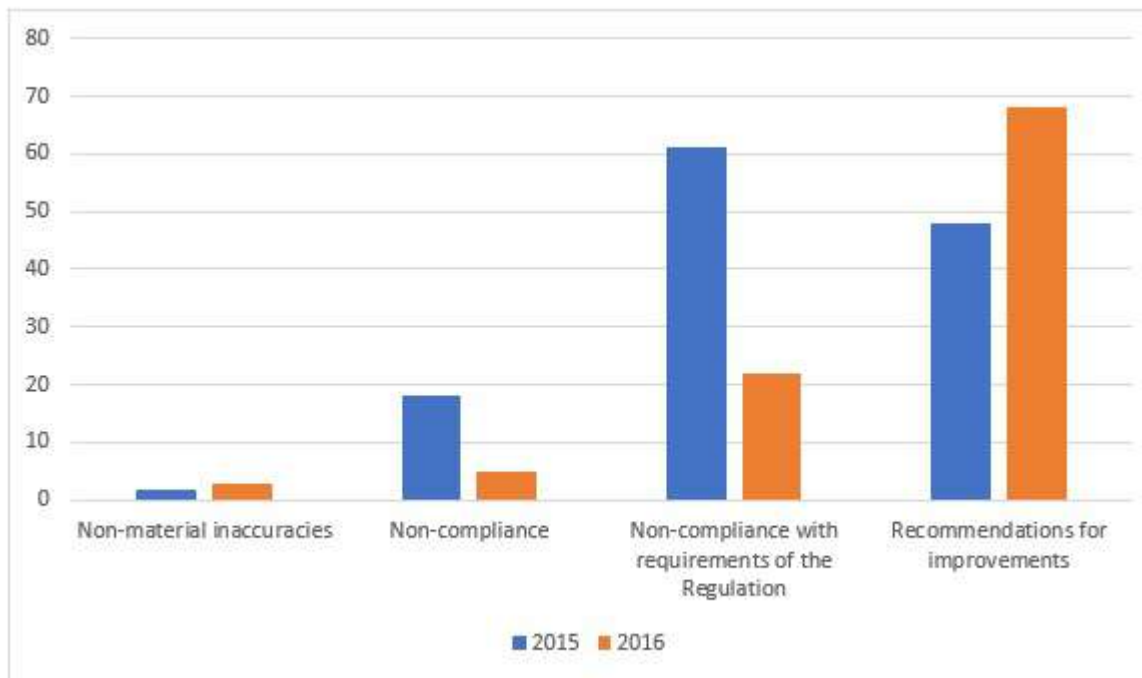


## STATE OF ETS IN CROATIA (3)

- **Number of verifiers**
  - 2 verifiers accredited in Croatia
  - 3 verifiers accredited by accreditation authorities of other countries
- **Number of comments in verification reports**
  - Non-material inaccuracies in emission reports
  - Non-compliance with the greenhouse gas emissions permit or a valid approved version of the emission monitoring plan, which did not lead to a negative verification opinion
  - Non-compliance with the requirements of the Commission Regulation (EU) No 601/2012
  - Recommendations for improvement

## STATE OF ETS IN CROATIA (4)

- Number of comments in verification reports



## COMMENTS

- **On the basis of an analysis conducted as part of the project:**
  - Considering its short lifetime in Croatia, ETS has taken off well in Croatia
  - The system is institutionally fully functional
  - Good communication between ETS participants:
    - Ministry ↔ Agency
    - Ministry ↔ Inspection
    - Installation operators, aircraft operator and verifiers ↔ Ministry and Agency
    - Ministry ↔ Accreditation Agency
  - Recommendation – broadening of existing communication and exchange of information between relevant institutions
  - Ministry ↔ Inspection
    - Direct communication Agency ↔ Inspection



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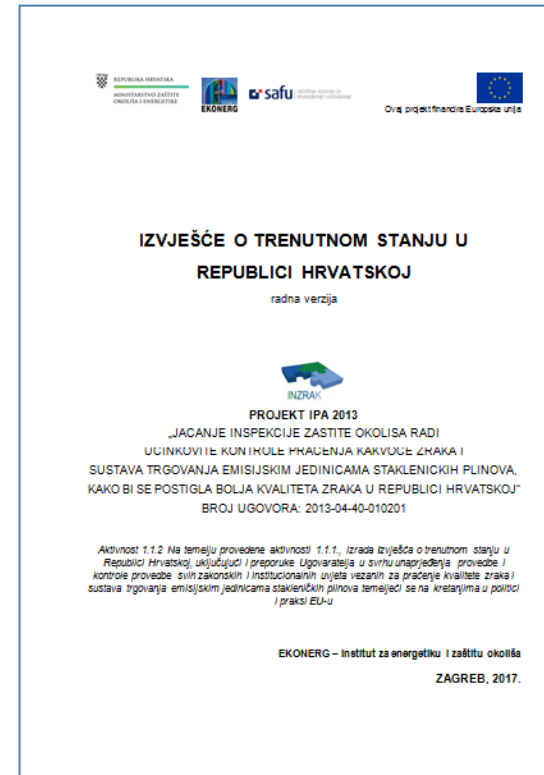
# POSSIBLE LEVELS OF CONTROL IN THE INSPECTION

# CONTENT

- **Possible levels of control**
- **Examples of control of operators**
- **Examples of control of verification bodies**
- **Practice in other countries**
- **Conclusion**

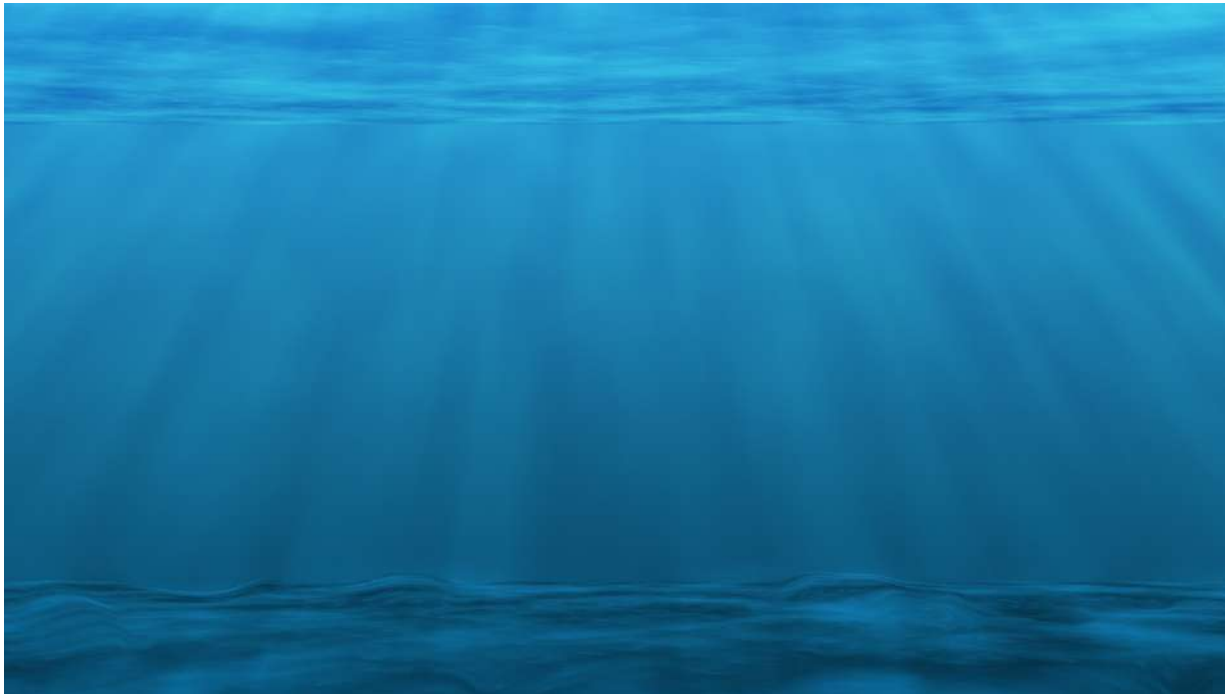
# REPORT ON THE CURRENT STATE IN CROATIA

- One of this project's deliverables
- Gives an analysis of the state and recommendations
- Presentation of the recommendations



# RECOMMENDATION FROM THE REPORT ON THE CURRENT STATE

- **Define the necessary level of control of inspection**
  - Can be shallow or deeper



# POSSIBLE LEVELS OF CONTROL

- **No control**
  - Not an option – Contractor's opinion
- **„shallow”**
  - Control of the existence of necessary documentation
  - Control of performance of underlying obligations
- **„deeper”**
  - Control of data
  - Control of data sources (invoices, lab reports, measuring instruments)



## EXAMPLES OF CONTROL - OPERATORS

- Please rate the level of the following activities of inspectors:
- Checking whether the installation operator has a greenhouse gas emission permit
- Checking for the existence of the notification of planned changes to the installation
- Checking the category of the installation
- Checking the annual fuel consumption data
- Inspection of greenhouse gases emitted from the installation

## EXAMPLES OF CONTROL – VERIFICATION BODIES

- Please rate the level of the following activities of inspectors:
- Checking whether irregularities were included in the verification report
- Checking whether an independent review of internal documentation and the verification report was carried out
- Checking whether inaccuracies and non-conformities were documented in the internal documentation
- Checking the issuing of a verification report to the installation operator or aircraft operator

## PRACTICE IN OTHER COUNTRIES (1)

- **Belgium – Flemish Region**

- The state of the emission monitoring plan is determined



- **The Netherlands**

- Detailed inspection of data



- **Czechia**

- Checking of the permit, notification on changes



- **France**

- Comparing data from the report with data from other sources
- Review of data from verification reports





## PRACTICE IN OTHER COUNTRIES (2)

- **Republic of Ireland**

- Comprehensive preparation for inspection
- Detailed inspection of infrastructure



- **Cyprus**

- Review of documents according to control lists



- **Finland**

- Review of a limited data set from operators' reports



# CONCLUSION

- **Inspection in Croatia pursuant to existing regulation**
  - Rated as „shallow” inspection for operators
  - For verifiers - mixed
- **Should it be deeper?**
  - Political decision– level of ambition
  - Depends on the technical competence level of inspectors
- **Recommendation**
  - Not at this moment – conditions have not been met
  - If yes – conduct personnel training
  - Highly specialized knowledge is needed (like in verification)
  - Realistically – not all inspectors, not all 15 inspectors, but 2-3 inspectors



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# EXCHANGE OF INFORMATION WITH BODIES INCLUDED IN THE ETS

# CONTENT

- **MEPE structure**
- **Exchange of information objective**
- **Use of information**
- **Current state**
- **Potential participants in exchange of information**
- **Expanding cooperation**

# RECOMMENDATION FROM THE REPORT ON CURRENT STATE

- **Improve the existing exchange of information between EP Inspection and bodies included in the ETS**
- **Bodies included in the ETS:**
  - MEPE, HAOP, HAA, (FZOEU)



## STRUCTURE OF THE MINISTRY (MEPE)

- **Regulation on the Internal Structure of the Ministry of Environmental Protection and Energy (OG 40/17)**
- **Directorate for Climate Activities, Sustainable Development and Protection of Air, Soil and Sea**
  - Sector for Climate Activities and Sustainable Development – Service for Climate Activities and Ozone Layer Protection
- **Directorate for Inspection**
  - Sector for Environmental Protection Inspection (four Services for inspection - Zagreb, Osijek, Split, Rijeka regional units)



# EXCHANGE OF INFORMATION OBJECTIVE

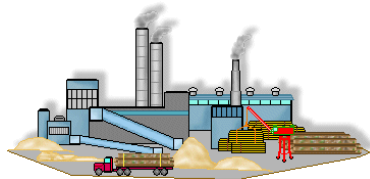
- **Inspection planning and preparation**
  - Access to information not directly available to the inspection
- **Use of information gathered during inspection**
  - Information from the location intended for the competent authority
  - This information is important for ETS implementation (approval of the emission monitoring plan, issuing of permits, issuing of decisions,...)



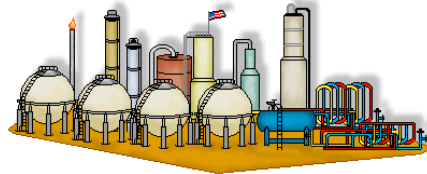
# USE OF INFORMATION

- **Planning an inspection**

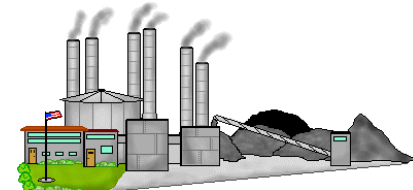
- Risk analysis
- Choosing the installation to be inspected



or



or



- **Preparing an inspection**

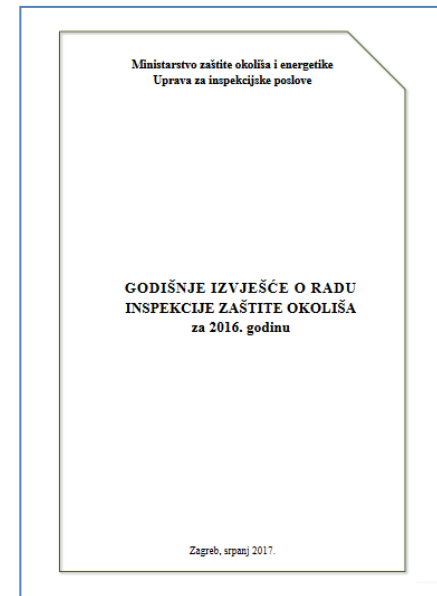
- Better insight into an installation/airline company
- Focus on specific inspection elements
- Enables more detailed findings

# CURRENT STATE (1)

- Exchange of information exists
  - Regular communication
  - Inspection findings are submitted to the competent authority
- Inspection activity reports
  - quarterly, annual

br.	Naziv i lokacija nadziranog subjekta	Datum nadzora	Djelovnik	tro	vod	zp	san	pojl	el	opt	zar	vet	rad	sto	ina
51.	GRK KALUN DO	10-14. srpanj	3.1.												
52.	ULJANIK BROSODOMADLIŠTE DO	10-14. srpanj	6.7.												
53.	INA d.d. P1 terminal Solin, Lokacija br. Kapa = 203, Industrijske zone d.d. - Skladiste Solin, Vinskičko Blato	17-21. srpanj	SEVESO VIII razred												
54.	LINDE PLEN d.o.o. Matulovo	4-8. rujna	8.1.a SEVESO III razred												
55.	ŽITO d.o.o. Lokacija vojnogospodarske farme u Slavkoviću	4-8. rujna	6.4.b												
56.	LUKA RUTKA d.d., TERMINAL BAKAR *	4-8. rujna	Luka za raznih teret												

\* Prema Uredbi o skladnosti datiranoj 2017. br. 8/14  
\* Prema Uredbi o specifičnim mjerama zaštite okoliša u skladu s člankom 100. stavak 14. 1117



## CURRENT STATE (2)

- **On competent authority's request, Inspection checks the state on location**
  - Issuing of the emission permit
  - Approval of the new version of the emission monitoring plan
- **Support to inspectors by the competent authority**
  - Information for thematic monitoring, control lists
- **Participation of inspectors at Expert Committee meetings**
  - For ETS technical matters
- **Participation of inspectors at meetings of European authorities**
  - EU ETS Compliance Conference, Brussels
  - Active involvement – presenting Croatian models and experiences

# POTENTIAL PARTICIPANTS IN EXCHANGE OF INFORMATION

- **MEPE**

- Competent ETS authority in Croatia
- Two directorates



- **HAOP (Croatian Environment and Nature Agency)**

- Expert support to the competent authority in ETS implementation



**HAOP**

HRVATSKA AGENCIJA ZA OKOLIŠ I PRIRODU

- **HAA (Croatian Accreditation Agency)**

- Competent for accreditation and monitoring of verification bodies



Hrvatska akreditacijska agencija  
Croatian Accreditation Agency

## EXPANDING COOPERATION – OPERATORS

- **More efficient flow of information that HAOP has**
  - Indirectly through the competent authority
  - HAOP is in direct contact with the installation operator/aircraft operator
- **Introducing the thematic annual meeting**
  - In the forefront – inspection monitoring
  - MEPE, HAOP, HAA
  - Presentation of results, plan for the next period
  - Preferably in May, after the conclusion of the previous year's state

## EXPANDING COOPERATION – VERIFICATION BODIES

- **Delivery of information on verifiers to the Inspection by HAA**
  - If HAA had objections on the work of verifiers
  - Inspection does not get this information directly
  - Pay attention to emission reports verified by that verifier
- **Delivery of information on verifiers by the Inspection**
  - If an inspection establishes irregularities by the verifier
  - In the case of verification bodies accredited outside of Croatia, the competent accreditation body must be notified about the irregularities

# INFORMATION FLOW

- **Operationally:**
  - directly: EP Inspection – MEPE Directorate competent for ETS
  - MEPE Directorate competent for ETS – exchange of information with HAOP and HAA







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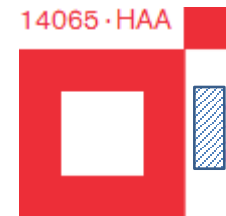
# ENVIRONMENTAL PROTECTION INSPECTION'S ROLE IN THE CONTROL OF VERIFICATION BODIES

# CONTENT

- **Controls in the ETS**
- **Inspection's role in ETS**
- **Comparison of inspection and verification**
- **Statutory provisions**

# RECOMMENDATION FROM THE REPORT ON THE CURRENT STATE


- **Review the need for control of verification bodies**
  - Until now they were not a monitored entity
- **Verification bodies are under HAA's oversight**
  - Due to this, is control even necessary?
- **Position of participants in Croatia on this matter**
  - There is no unified position
- **Existing practice in EU Member States**
  - Some States have control of verification bodies
- **European Commission Guidelines**
  - Despite accreditation, there is a risk of non-conformity with regulations



# CONTROLS IN THE ETS

- **Own control by installation operators/aircraft operators**
  - Quality system in the monitoring and emission reporting role
  - Internal control
- **Verification by an independent body**
  - Emission report is invalid if it has not been verified
  - Verification body – independent from the operator
- **Additional control by competent authorities**
  - EU practice: additional control of data from emission reports and verification reports
  - In Croatia: review of the integrity of emission reports and verification reports

# EXAMPLE OF A NOTIFICATION ON INTEGRITY REVIEW



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MINISTARSTVO ZAŠTITE OKOLIŠA  
I PRIRODE  
10000 Zagreb, Radnička cesta 80  
Tel: 01/ 3717 111 fax: 01/ 3717 149

KLASA: 351-01/15-09/142  
URBROJ: 517-06-1-2-1-15-2  
Zagreb, 8. svibnja 2015.

PREDMET: Postupak provjere Izvješća o emisijama stakleničkih plinova i Izvješća o verifikaciji za 2014. godinu za operatera postrojenja [REDACTED]  
- informacija, daje se

Poštovani,

Ministarstvo zaštite okoliša i prirode zaprimilo je 24. ožujka 2015. godine od Agencije za zaštitu okoliša dopis (KLASA: 351-01/15-09/142; URBROJ: 378-15-1) o provjeri usklađenosti Izvješća o emisijama stakleničkih plinova i Izvješća o verifikaciji za 2014. godinu za postrojenje [REDACTED]. Agencija za zaštitu okoliša je utvrdila da su navedena izvješća u skladu sa zahtjevima Uredbe Komisije (EU) br. 601/2012, te njezinim izmjenama i dopunama (206/2014, 743/2014) i važećim uputama Europske komisije te je utvrđeno da verificirane emisije za 2014. godinu za postrojenje [REDACTED], sukladno verificiranom izvješću iznose 37.676 t CO<sub>2eq</sub> uz napomene da:

# INSPECTION'S ROLE IN ETS

- **Inspection in the ETS is not mandatory**

- Existence of control and how detailed it is depends on the „level of ambition” of the competent authority to be convinced of the proper functioning of the system

- **Balance**

- Additional reduction of risk of errors and irregularities

- Duplication of work of verifiers
- Increase of administrative burden

- Inspection should be a supplement to verification control

- **Inspection's role**

- Mechanism for increasing the reliability of the system



# INSPECTION AND VERIFICATION

- **In case of a positive verification opinion**
  - Competent authority is right to assume compliance with regulations
- **Other cases may be a signal to action**
  - Positive opinion with comments – suspicion of irregularities
  - Negative opinion– clear signal to act
- **Cases of unreliable verifiers**
  - Suspicion of bias
  - Found mistakes in the verification report (superficiality, incompetence, ...)

# INSPECTION VERSUS VERIFICATION

- **Wherever possible, avoid repetition**
  - Control scope and tasks are defined on a case by case basis
- **Review of a verification report**
  - The verifier is under the competent authority's oversight, but there is still residual risk of non-compliance with regulations
  - The competent authority and the accreditation body must exchange information – this can help in identifying the problem
- **Repetition of verifier's work cannot always be avoided**
  - Visit is necessary for approval of the emission monitoring plan
  - Possibility for broadening the scope of work of verifiers
  - If there is no data on verified emissions, for the purposes of conservative estimate

# STATUTORY PROVISIONS

- **Air Protection Act (OG 130/11, 47/14, 61/17)**
- **Article 129, Paragraph 2**
  - Prescribed monitoring subjects (verification is not prescribed)
- **Article 130, Paragraph 1**
  - Prescribed parties in the inspection procedure (verification bodies not prescribed)
- **Article 147, Paragraph 1 (penalty provisions)**
  - „Legal entity shall be fined between HRK 30,000 and 100,000 if ...”
- **Article 147, Paragraph 1, Subparagraph 37-50**
  - Penalty provisions for verification bodies pursuant to Regulation 600/2012



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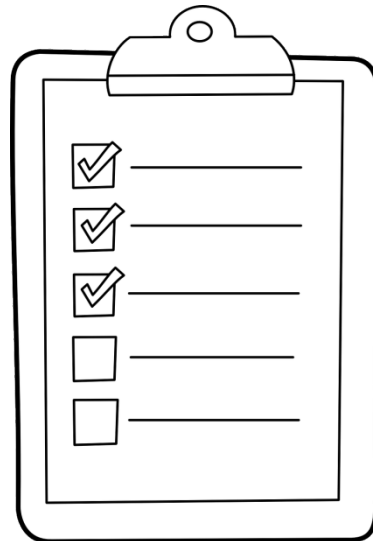
# OBJECTIVES OF INSPECTION IN THE CONTROL OF WORK OF VERIFICATION BODIES ACCREDITED OUTSIDE OF CROATIA

# CONTENT

- **Outline of the state in Croatia**
- **Legal provisions**

# RECOMMENDATION FROM THE REPORT ON CURRENT STATE

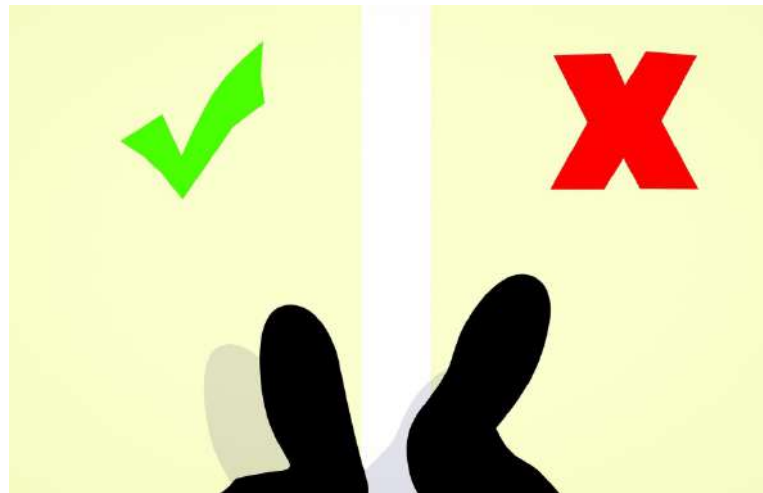
- **Pay attention to the prescribed obligation of notifying the accreditation body in the case of an irregularity of a verification body accredited outside of Croatia**
  - This obligation arises from Article 67 of Regulation 600/2012
  - Inspection has a role in this procedure



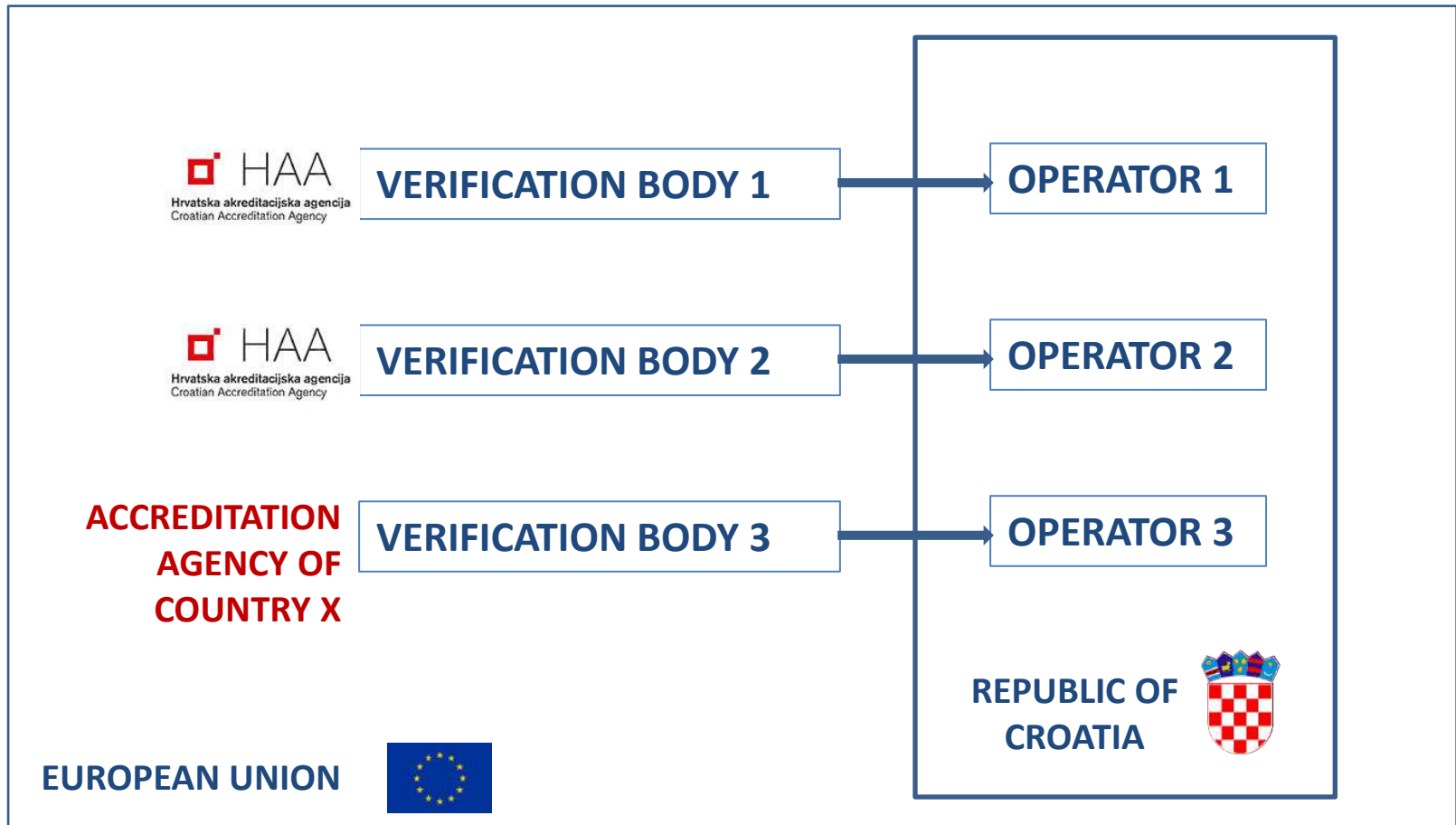


## NOTE

- **This recommendation does not prejudice existence of an irregularity**
  - In the case of verification bodies accredited outside of Croatia
  - Any verification body



# OUTLINE OF THE STATE IN CROATIA



## LEGAL PROVISIONS

- **Commission Regulation (EU) No 600/2012**
- **Article 67**
  - The national accreditation body that accredited the verifier must be notified if it is established, in the course of an inspection, that the verifier is not complying with this Regulation
  - The notification is performed by the competent authority or the national accreditation body of that Member State
  - Further action is in the competence of the accreditation body – it shall treat the notification as a complaint, take action and respond to the sender



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