



# Climate policy



# THE MAIN DIRECTIONS OF CLIMATE POLICY

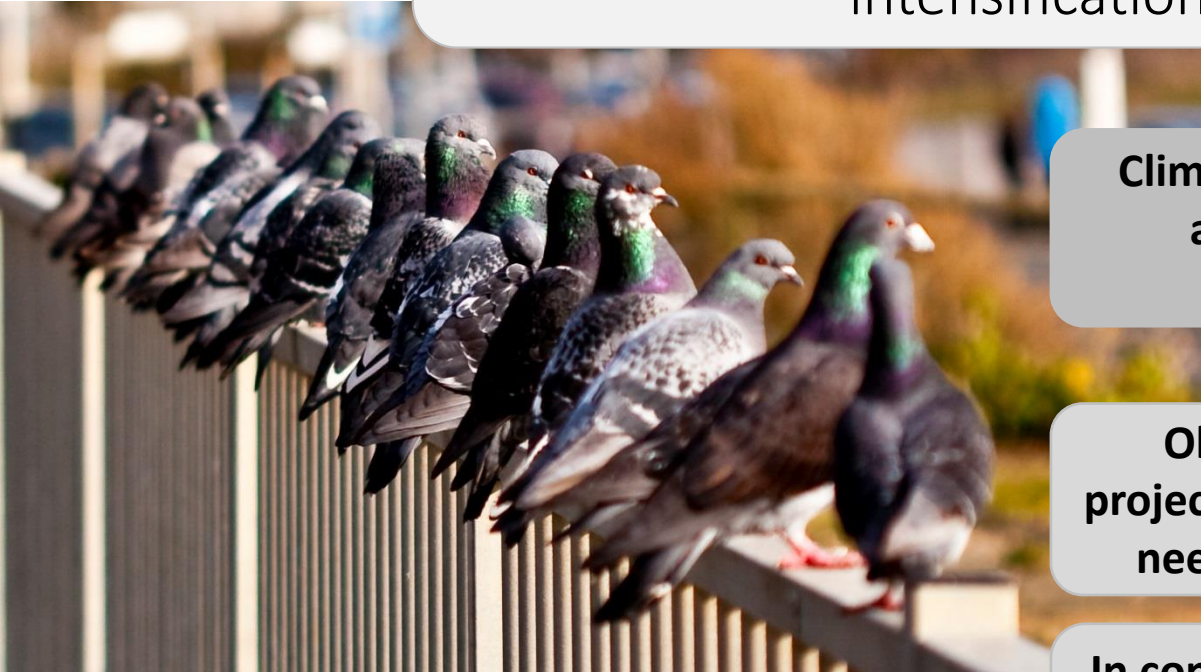
Climate policy formation and development is related to the currently observed climate change, the emergence and intensification of induced impacts

Climate policy currently is acting in two basic directions:

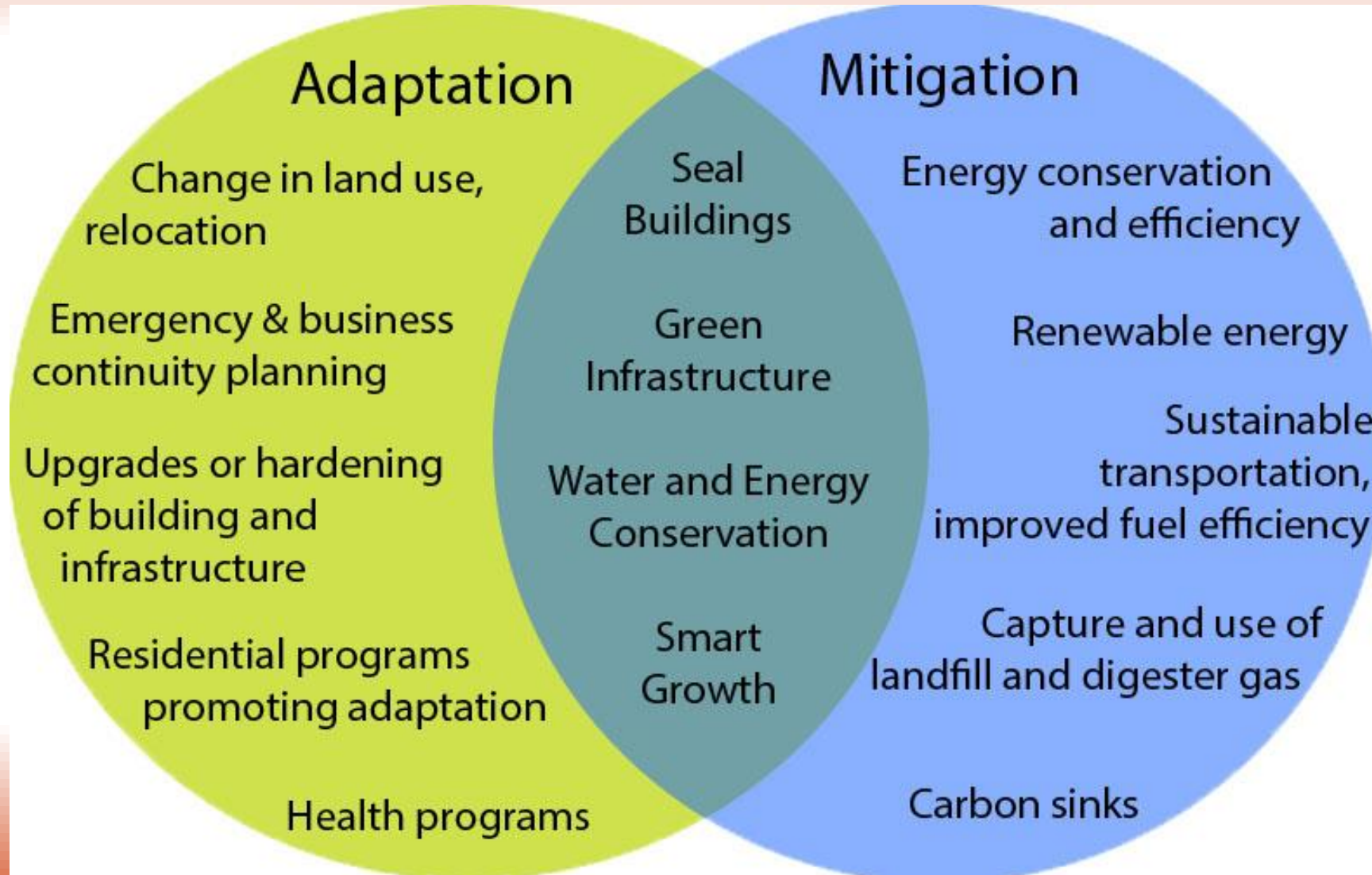
- Climate change mitigation
- Adaptation to climate change

Older action is climate change mitigation which came up with projections of climate change and the emergence of awareness of the need to prevent climate change or at least to reduce the process

In contrast, adaptation to climate change occurred relatively recently – when it was found that absolute prevention of climate change will fail, and that it is necessary to reduce induced risks



## Two basic directions of climate policy



Climate change mitigation policy aims to prevent human-induced climate changes and achieve the stabilization of the climate system

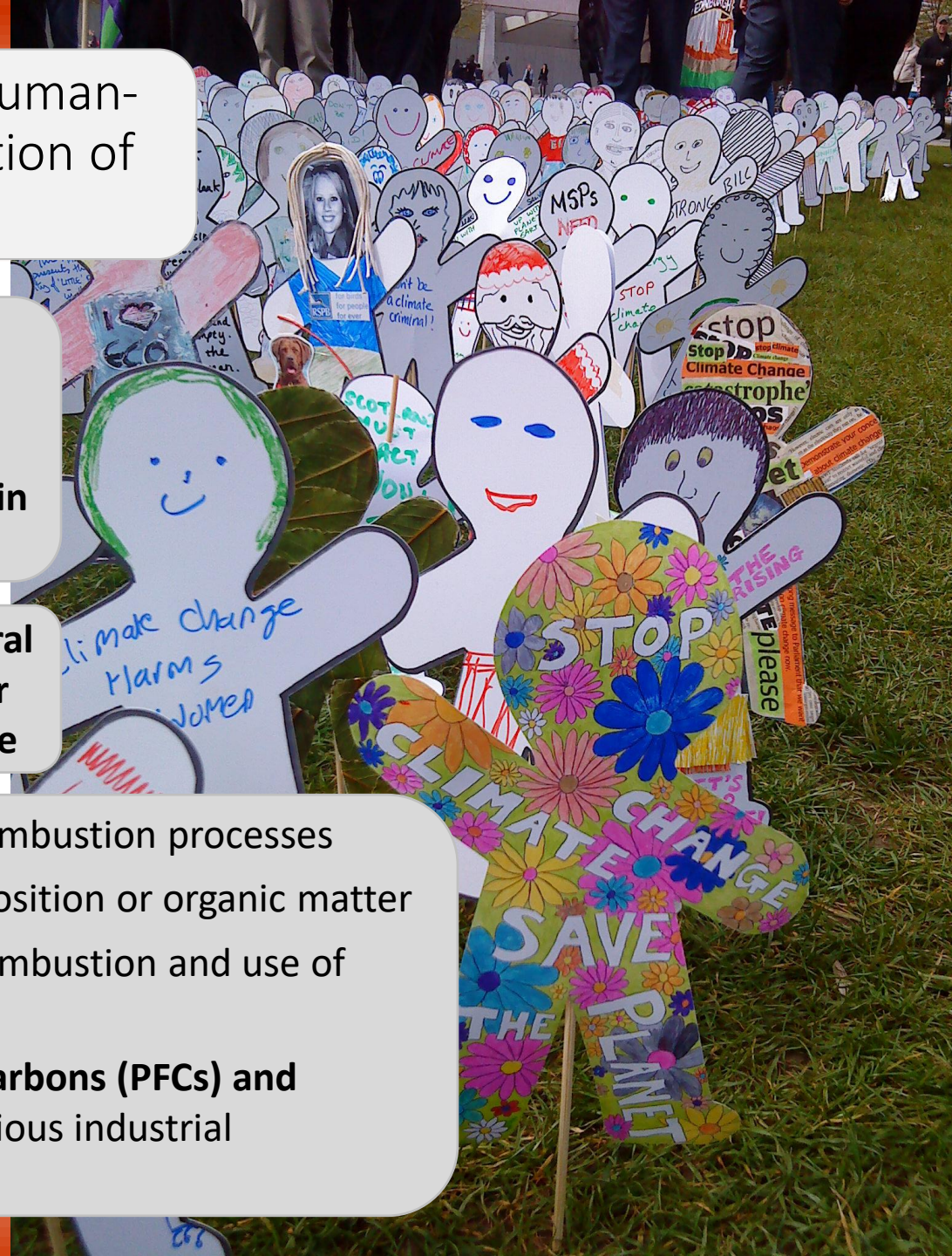
Theoretically, targets of climate change mitigation can be achieved in two ways:

- Developing climate geoengineering
- Limiting emissions of greenhouse gases (GHGs) in the atmosphere

Climate geoengineering provides direct interference in the natural atmospheric processes with the aim to reduce GHG emissions or diminish absorption of solar radiation in the Earth's atmosphere

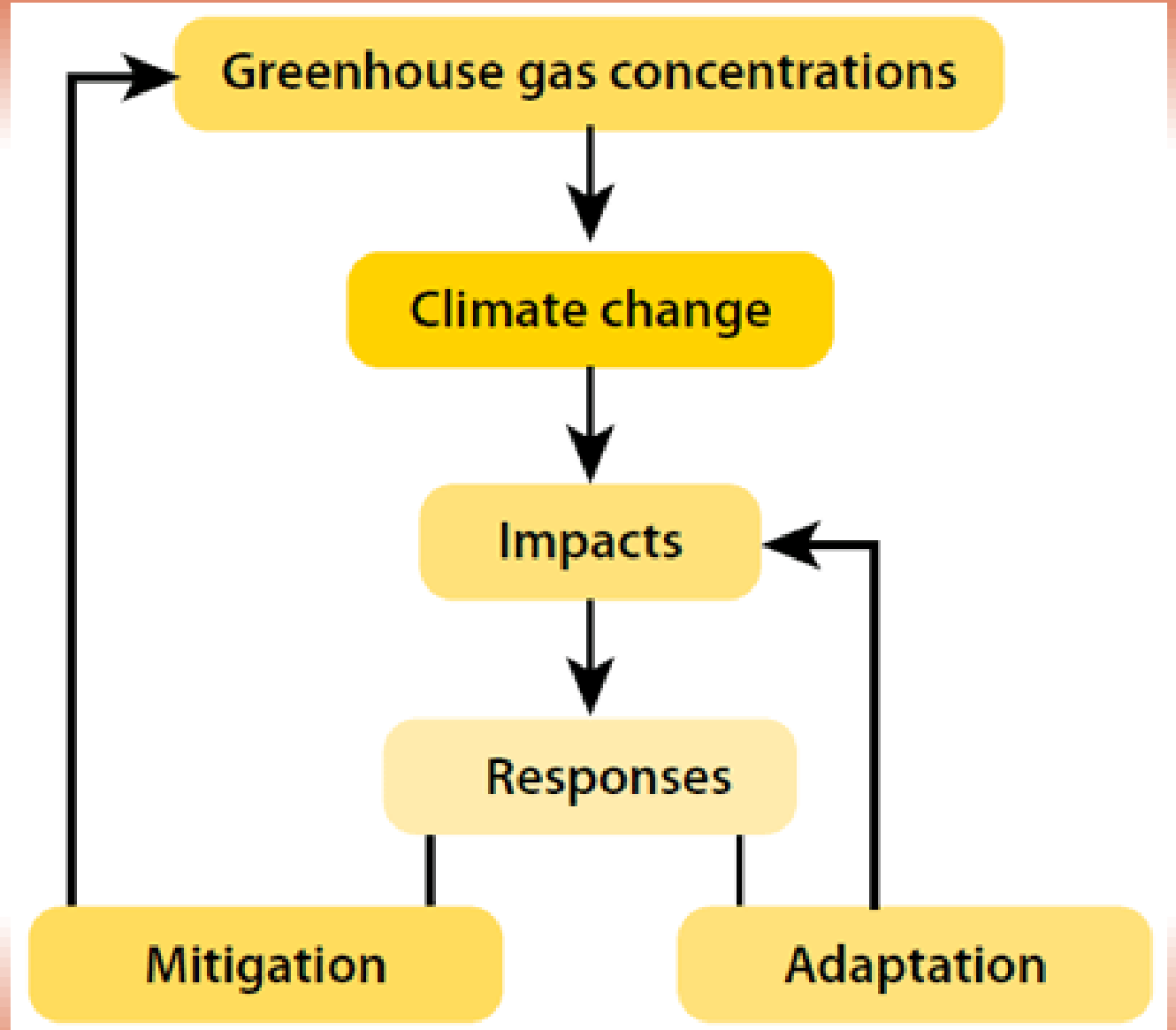
GHG involves 3 substances and 3 groups of substances:

- Carbon dioxide (CO<sub>2</sub>) – emitted from combustion processes
- Methane (CH<sub>4</sub>) – emitted from decomposition or organic matter
- Nitrogen oxide (N<sub>2</sub>O) – emitted from combustion and use of fertilizers
- Hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF<sub>6</sub>) – used in various industrial equipment, e.g., in refrigerators



**Mitigation** is an intervention to reduce the emissions sources or enhance the sinks of greenhouse gases

**Adaptation** is an «adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities»



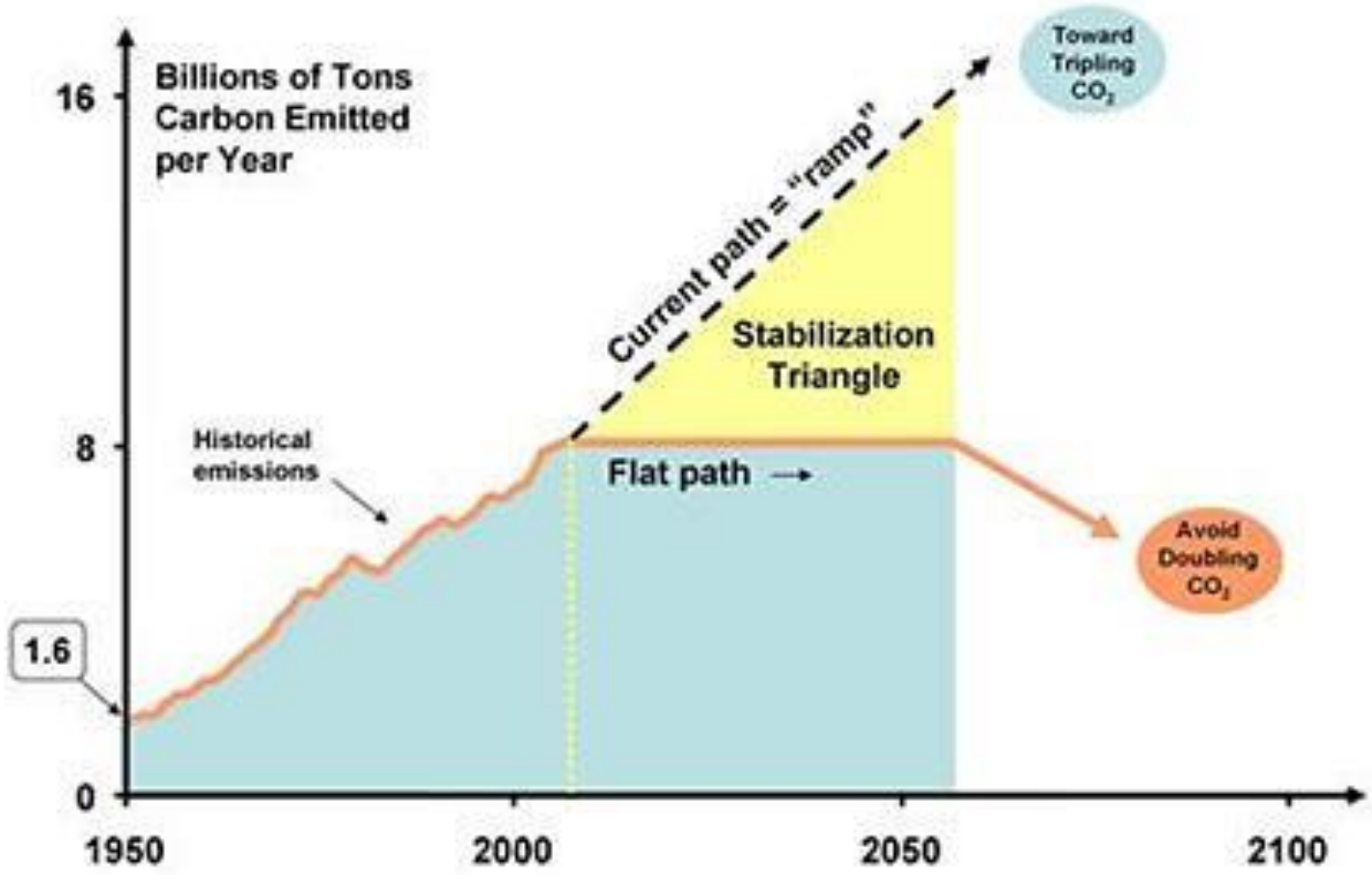


The aim of climate policy is moving towards **the low carbon development (LCD)** and society steady to climate change

**Climate policy-making and implementation is possible both, at national and regional level**

**To a large extent climate policy measures are significant for households and everyone in society**

**LCD provides not only limitation of GHG emissions, but also creation of new jobs, improvement of habitats' security, increase of economic competitiveness etc.**



Socolow's «stabilization wedges» depict how a portfolio of mitigation strategies can together halt climate change and limit the increase in average global temperatures

Taking into account the variability of GHG sources, GHG emissions have to be limited in all sectors of the national economics (especially in energy, transport and agriculture), as well as regarding household habits and consumption

**CO<sub>2</sub> binding of is mainly related to forestry**

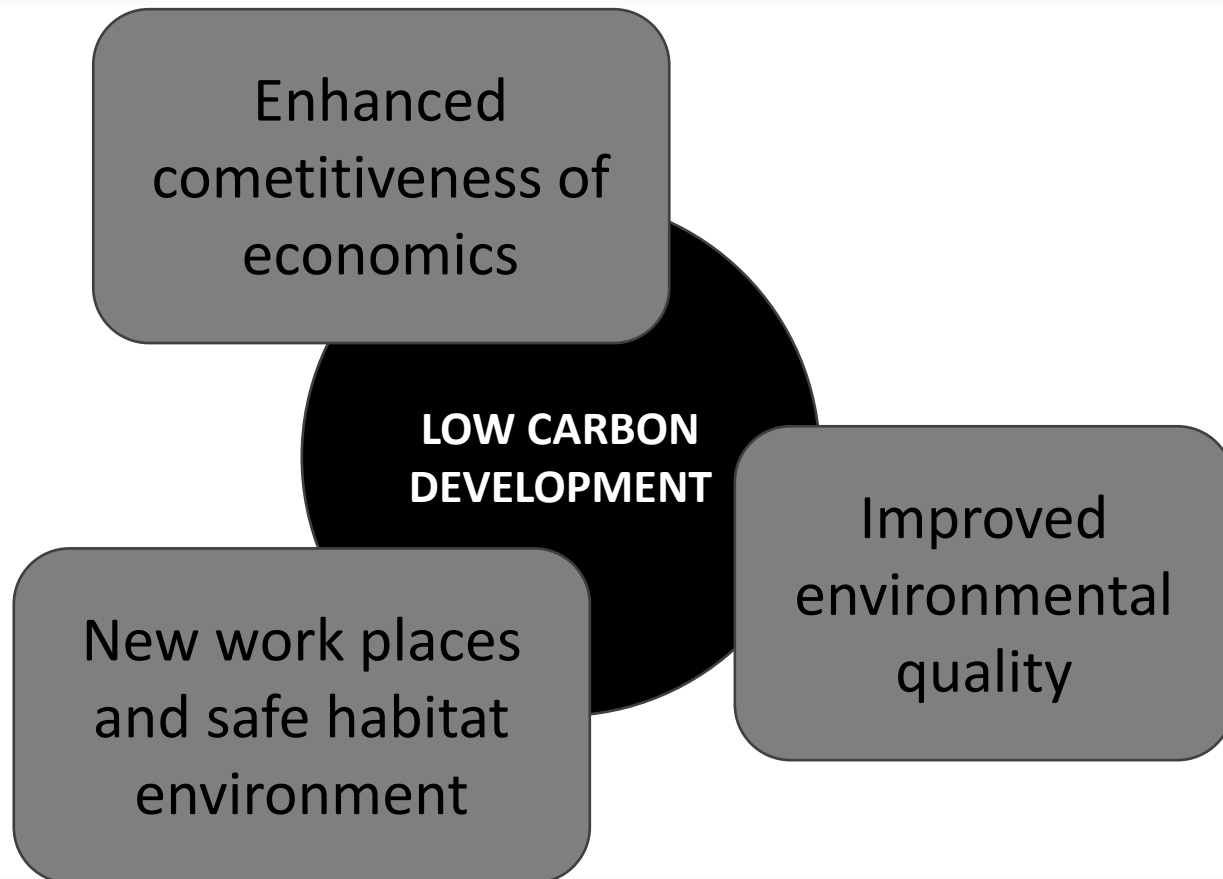
**CO<sub>2</sub> binding is ensured by photosynthesis that occurs in all green parts of plants – after CO<sub>2</sub> binding oxygen (O<sub>2</sub>) is released but carbon (C) remains in plants**

**Underground deposition of GHG means collection and injection of GHG into the underground storage, similarly like natural gas is stored**

**One of the most significant points in implementation of low carbon development is decoupling of economic development from the increased impact on climate, e.g., the situation when in the long term increase of gross domestic product (GDP) is no longer proportional to the increase in GHG emissions**







**LCD combines objectives of climate policy and sustainable development policy**

**Although sustainable development is a broader concept than the LCD which is more specific concept, nowadays more and more frequently LCD is discussed within the sustainable development context**

**LCD concept meets all three dimensions of sustainable development (environment, economy and social aspects)**

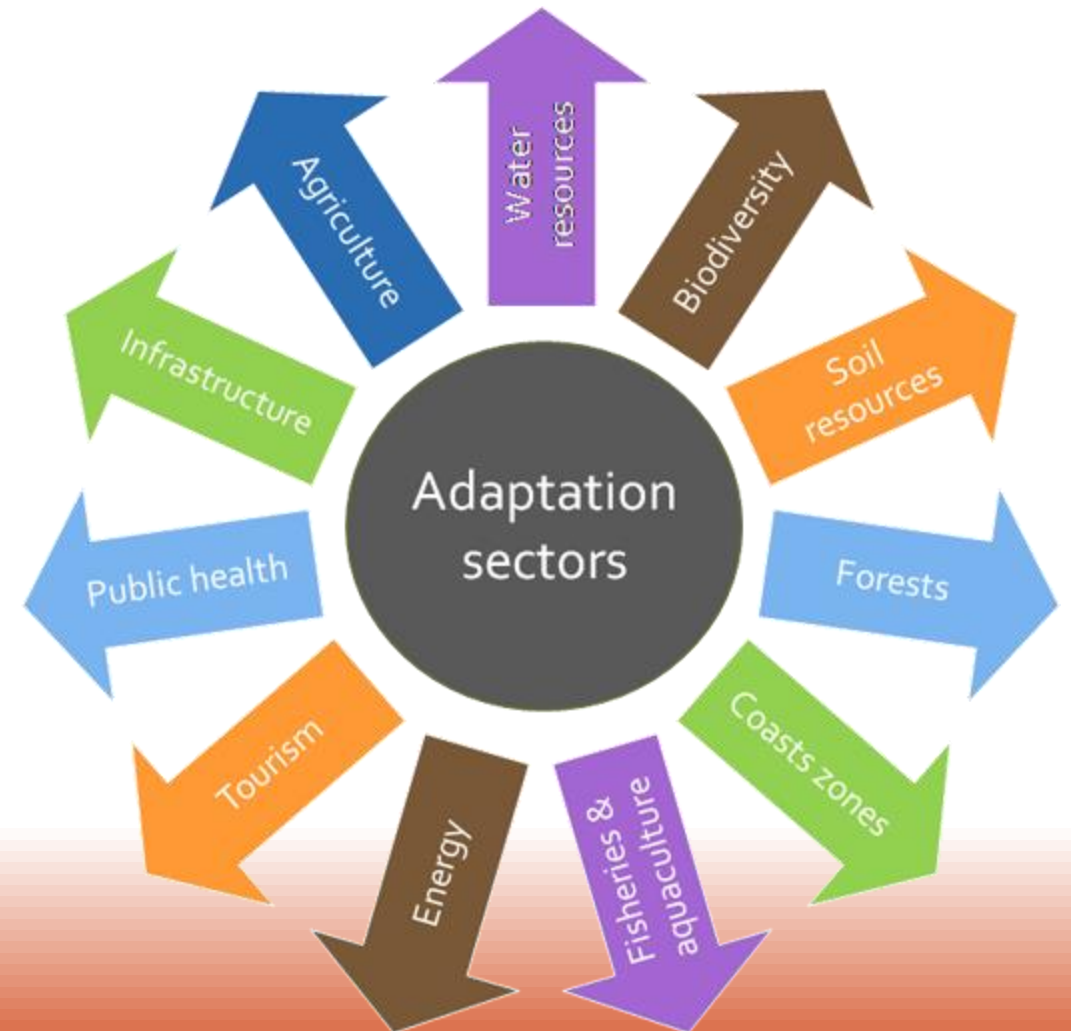
**Policy of adaptation to climate change** aims to reduce the negative impacts of climate change and to exploit the opportunities induced by climate change

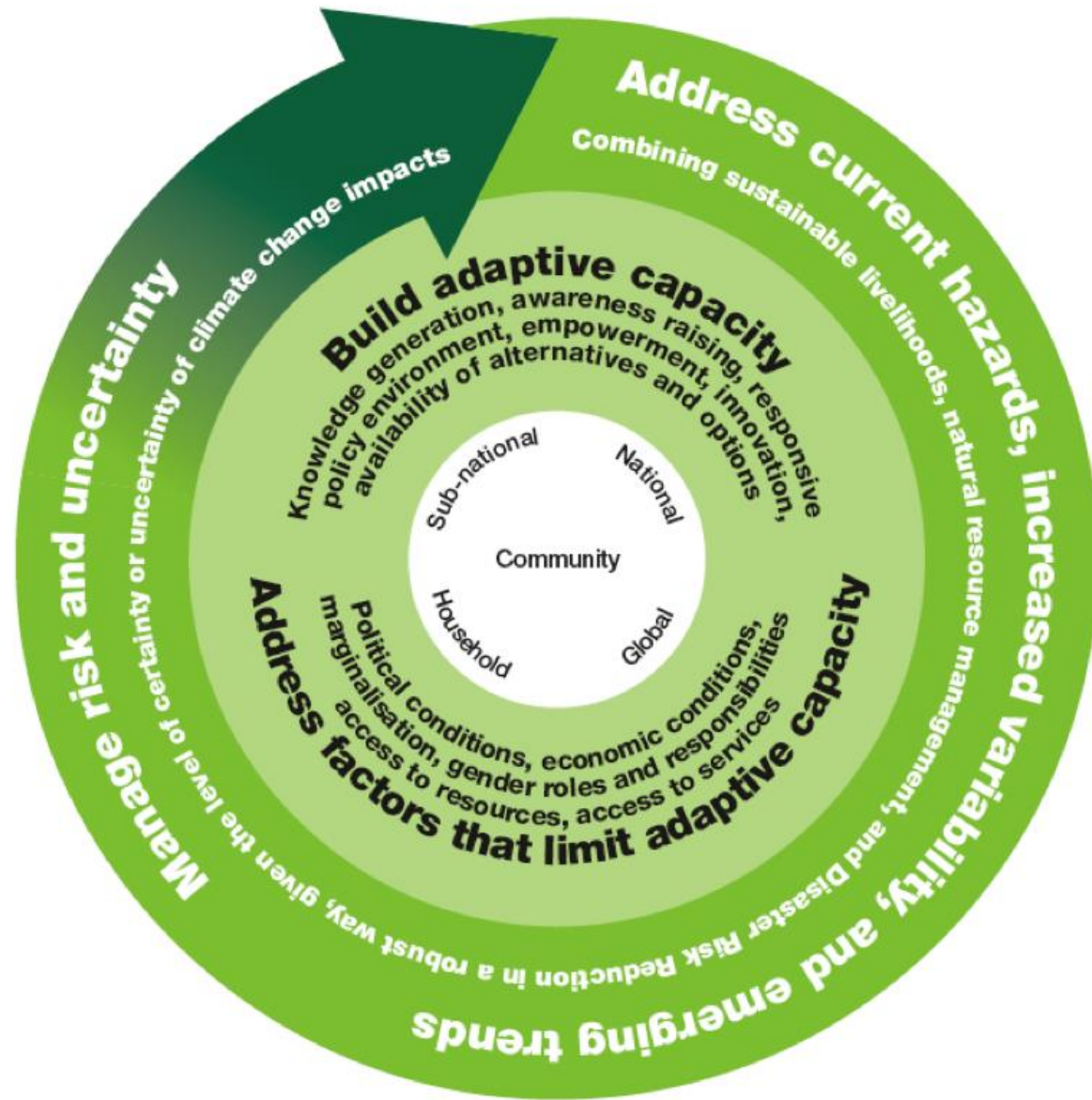
**The need to adapt to climate change is directly linked to climate change intensity – as sooner climate change is tackled, as the need for adaptation to climate change is lower**

**Measures of climate change adaptation are focused on protection of people, buildings, infrastructure, business and ecosystems**

**Adapting to climate change is important within the sectors of economics and infrastructure protection, as well as disaster risk reduction, coastal protection, improvement of public health, biodiversity conservation etc.**

**Adaptation to climate change means risk management of climate change**





The goal of **adaptation to climate change** is to create the conditions whereby people become increasingly able to be informed and to make appropriate decisions about their lives and livelihoods in a changing climate – in short, the ability to thrive in spite of a changing climate

# INSTRUMENTS OF CLIMATE POLICY

Climate policy goals mainly are achieved by the same instruments that are used to gain the objectives of environmental protection:

- **Economic instruments**
- **Fiscal instruments**
- **Financial instruments**



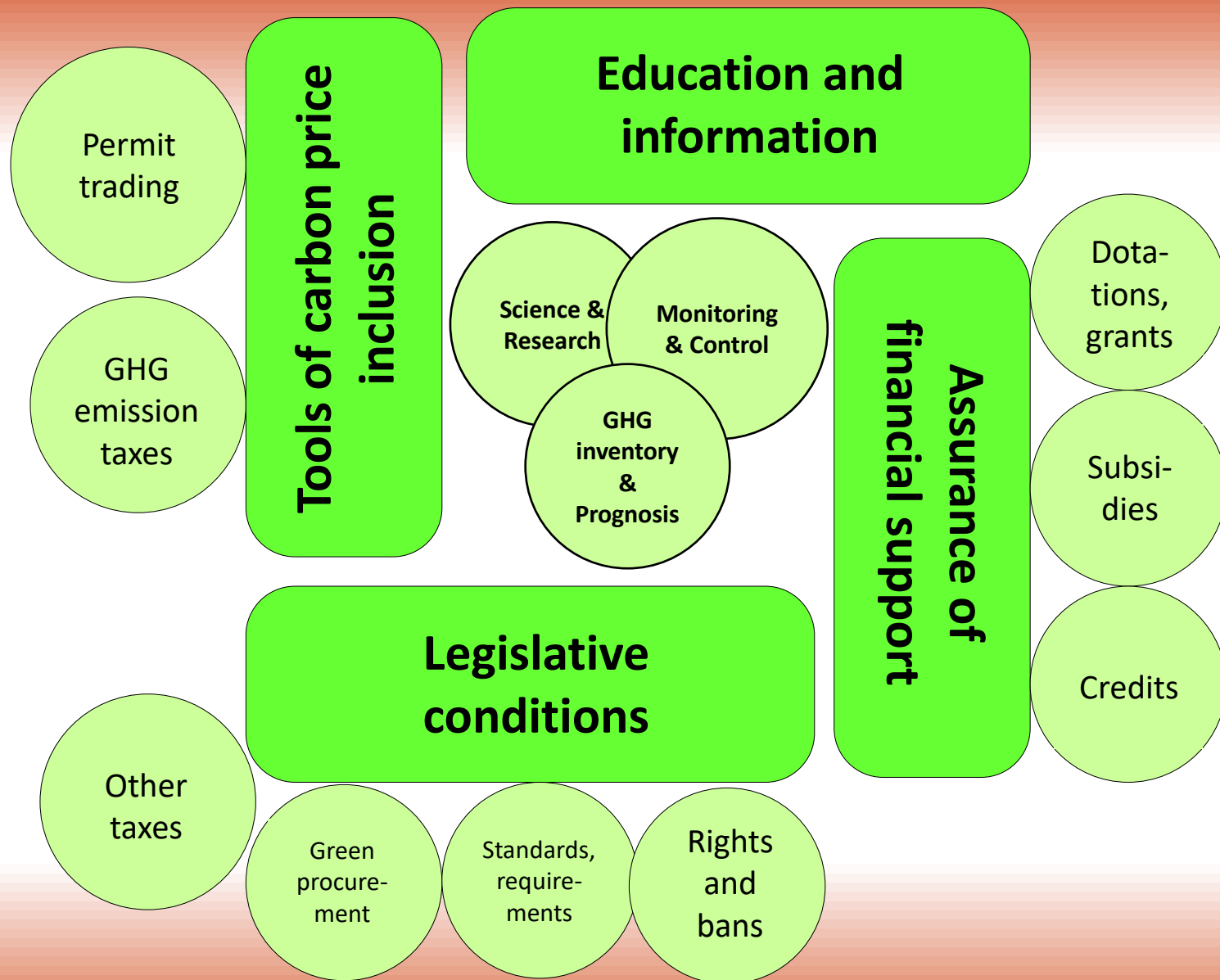
**Climate policy is characterized by the fact that most of the instruments are the responsibility of other sectors and they are not being created anew to gain climate policy objectives, but are adapted to the requirements of climate policy**

**Therefore, for successful implementation of climate policy the coordination among various sectoral policies is very important**

**Climate policy implementation is based on science and research, inventory and forecasting of GHG emissions, as well as various activities of climate policies in monitoring and control**

Key climate policy measures can be divided into four groups:

- **Information and education**
- **Legislative conditions**
- **Tools of carbon price inclusion**
- **Assurance of financial support**



Taking into account the fact that consummation of climate policy objectives is associated with the behavioral changes of society, it is necessary to educate and regularly inform individual target audience and the society as a whole



**It is essential for the interests of climate policy to exploit the opportunities to apply a legislative tools to provide specific conditions such as certain standards, rights or prohibitions, specific taxes and dues**

**Positive effects also are caused by the green public procurement, the introduction of environmental management systems and other activities**

**An integral part of climate policy is also provided by financial support to promote the adoption of measures including grants, subsidies, credits**

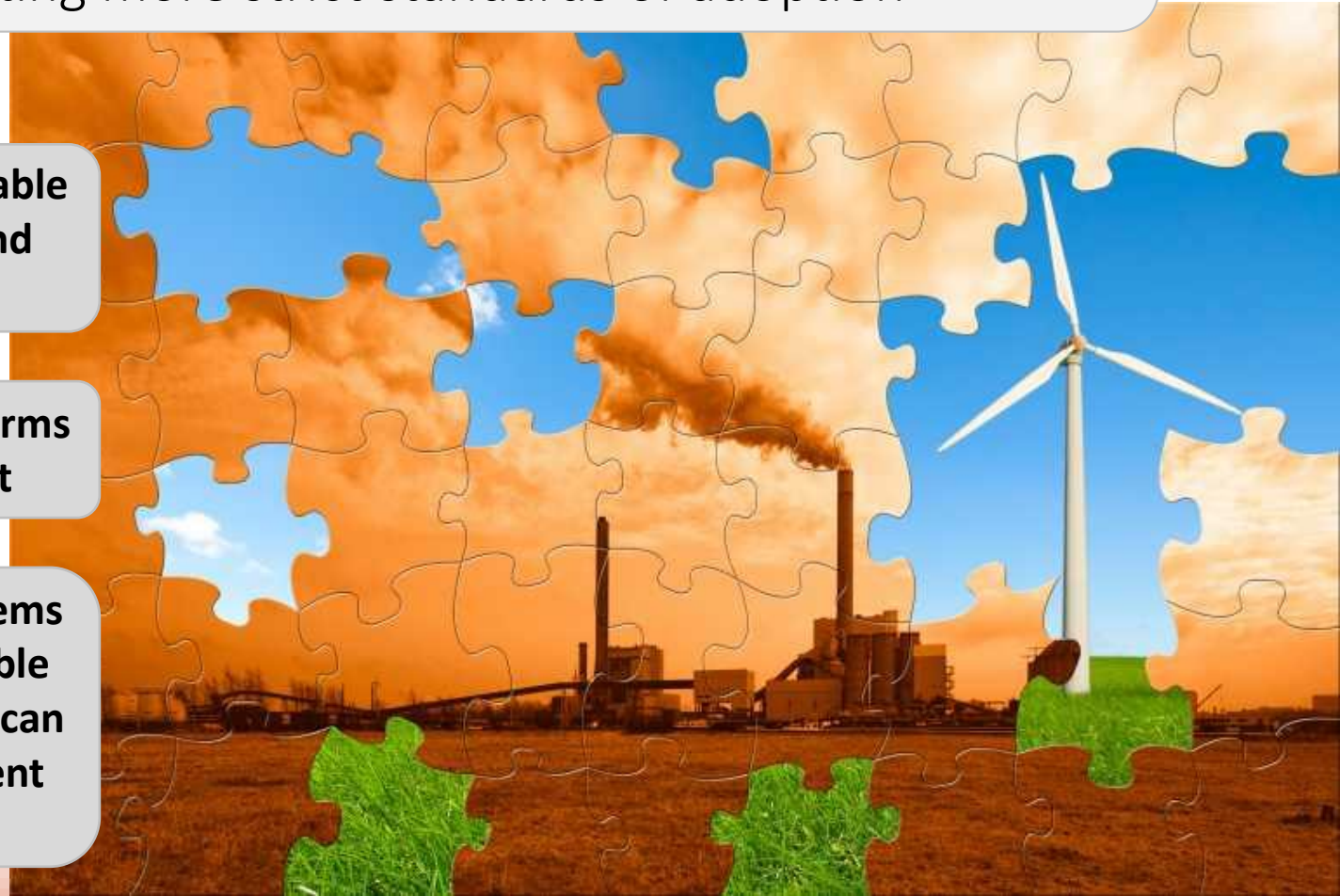
**However, the most popular instruments used for consummation of climate policy objectives are the ones that provide taking into account the costs of GHG emissions, including cost of carbon in the price of products and services, that is implemented by emission trading systems, as well as taxes, depending on the amount of GHG emissions**

**The goal of permission trade for emissions** is to achieve the compliance with strict environmental standards, at the same time ensuring conformity of achieving cost reduction and promoting more strict standards of adoption

**Essential elements of permission marketing** are tradable permits, participants of the permissions' market and registers of permissions

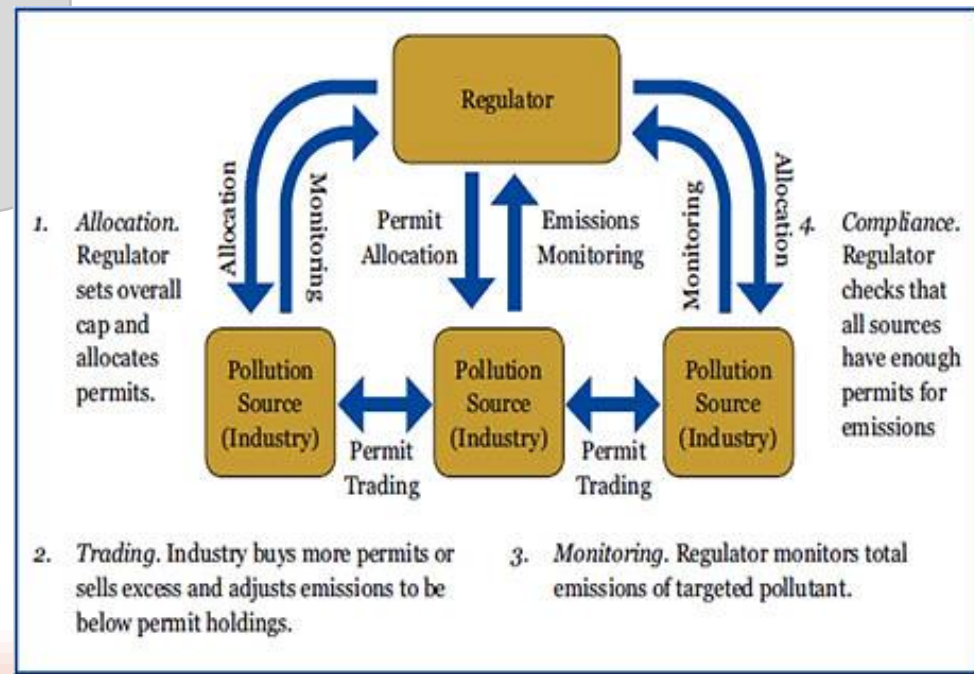
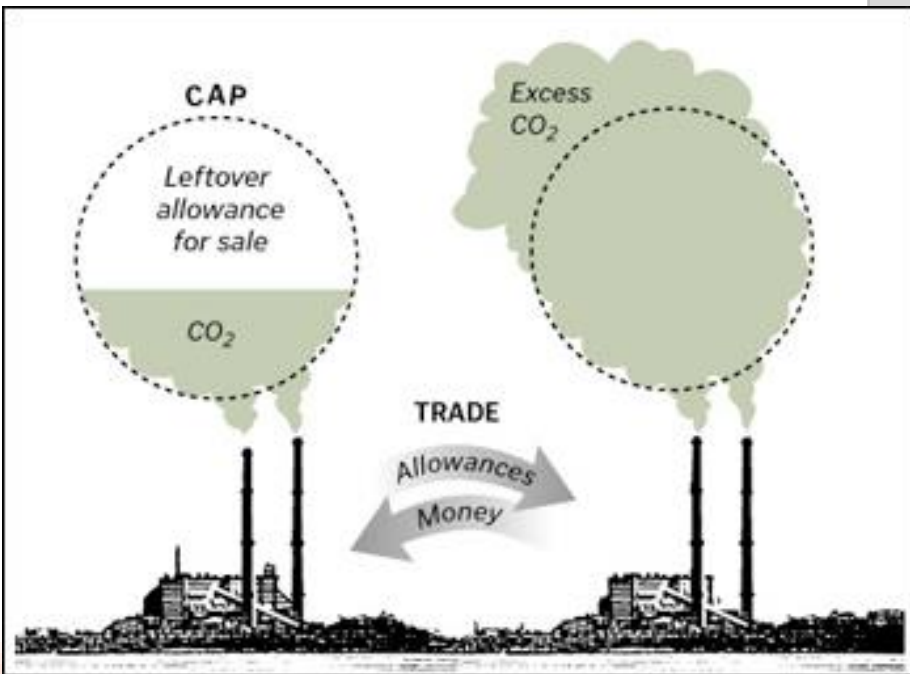
**In its turn, the interaction of these three elements forms the tradable permit instrument basis – the market**

**By grouping the participants of tradable permit systems according to their degree of involvement, it is possible to identify direct and indirect participants; grouping can be more detailed taking into account the involvement target and the legal basis of the target**



## Three main types of permit trading systems:

- Trade of credits
- Intermediary trade
- «Market of restrictions» (quota) system – the most widely known and the most used trading system of permits





The main difference from traditional quantitative streamlining instruments such as taxes, is that the «market of restrictions» system requires not only the imperative restrictions, but also inclusion of instruments that create opportunities to gain additional benefits

**The main stages of permit trading systems:**

- 1) Selection and approval of permit market conditions**
- 2) Initial distribution of permits among the direct participants of the market**
- 3) Permit trading activities**
- 4) Periodical overview of permit trading**

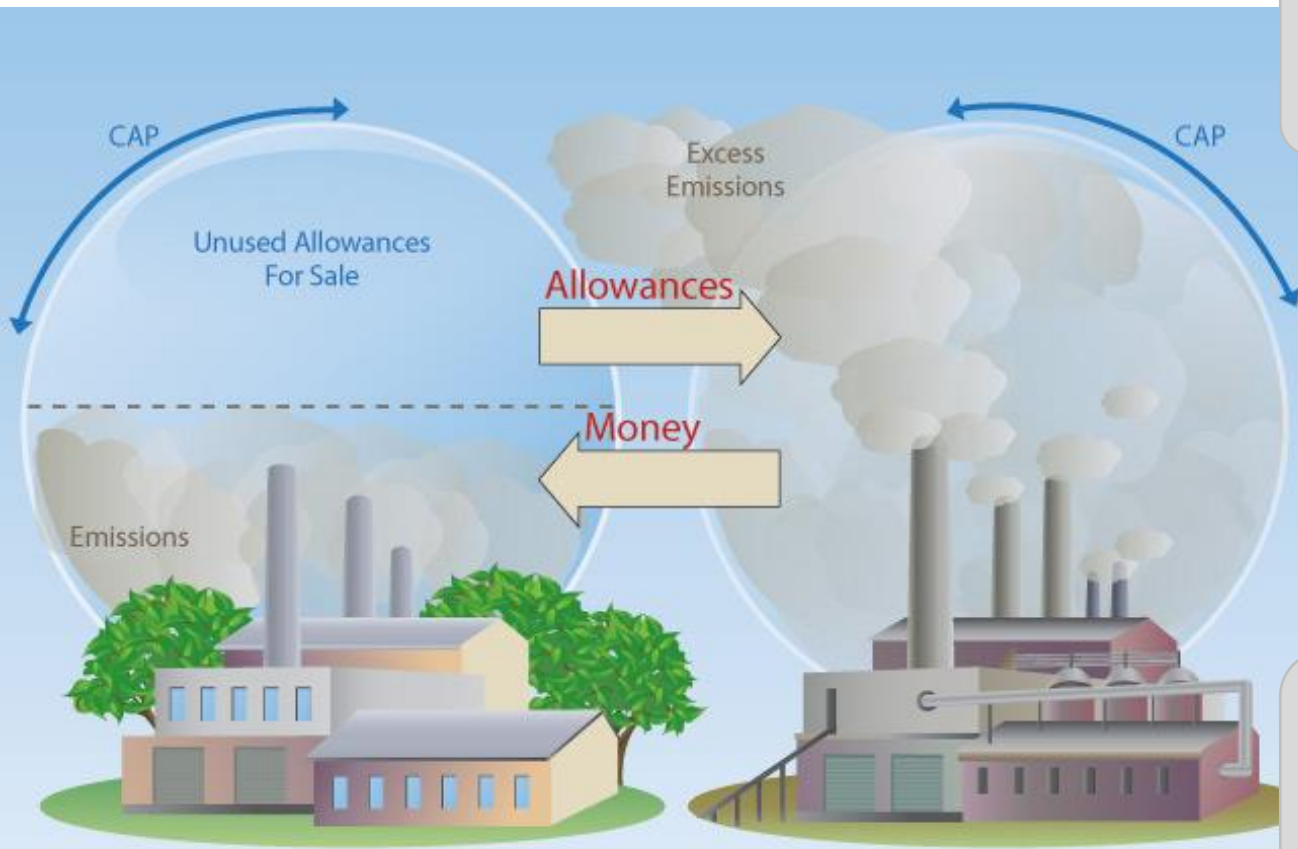
**Initial distribution of permits among the direct participants of the market can be implemented in two ways:**

- Permits for free**
- Sale of permits at auctions**

**Key components to ensure the effectiveness of permit trading system:**

- Optimal total quantity of permits**
- Appropriate to the market and a fair mechanism for initial sharing of permits**
- As low as possible transfer costs of permits**
- Optimal expire time of permits**
- Remain of revenue from the sale of permits for the market participants**
- Competence of permit market participants and correct motivation**
- Comprehensive and advanced monitoring and control of permit trading**

Development of **GHG emission permit trading** started in the end of the 20<sup>th</sup> century taking into account successful experiences in permit trading applied in other areas - particularly in limitation of air polluting emissions



The first GHG emission permit trading system started its operation in 2000 – it was the CO<sub>2</sub> emissions trading system of Denmark which finished its activities in 2004

Currently the most active are:

- European Union quote trading system
- Regional Greenhouse Gas Initiative (RGGI)
- International Emissions Trading (IET)

The main common feature of GHG emission permit trading systems is that one permit represents one ton of GHG emissions expressed in carbon dioxide equivalents (CO<sub>2</sub>e)

# INTERNATIONAL CLIMATE POLICY

Climate change as a problem gained attention by the establishing of the **World Meteorological Organization (WMO)** and the **United Nations Environment Program (UNEP)**

**In 1972, at the first UNEP meeting, climate change was barely mentioned, but already in 1979 the WMO organized the first world climate conference and concluded that the increasing concentration of carbon dioxide in the atmosphere might contribute to global warming**

**In 1988, the WMO with the UNEP support established the Intergovernmental Panel on Climate Change (IPCC)**

**In 1990, the first IPCC report concluded that during the 20<sup>th</sup> century global mean atmospheric temperature has risen by 0.3-0.6 °C and that human activities has intensified the natural greenhouse effect**



In 1992, at the UN conference «Environment and Development» in Rio de Janeiro the agreement on the **United Nations Framework Convention on Climate Change (UNFCCC)** was achieved



**The Convention adopted in Rio de Janeiro is the first international treaty combatting of climate change**

**The Convention entered into force in March 21 of 1994; so far it has been ratified by 196 countries, including the European Union, the USA, Canada**

**The aim of the Convention is stabilization of GHG concentration in the atmosphere at level that prevents dangerous anthropogenic interference in the climate system**

**The Convention defines that developed countries (Annex I) have to control GHG reduction process, including not only reduction of emissions, but also the need to provide funding and technology transfer to developing countries**

The Convention sets out the basic requirements of GHG accounting; it determines **the principles of international climate policy**:

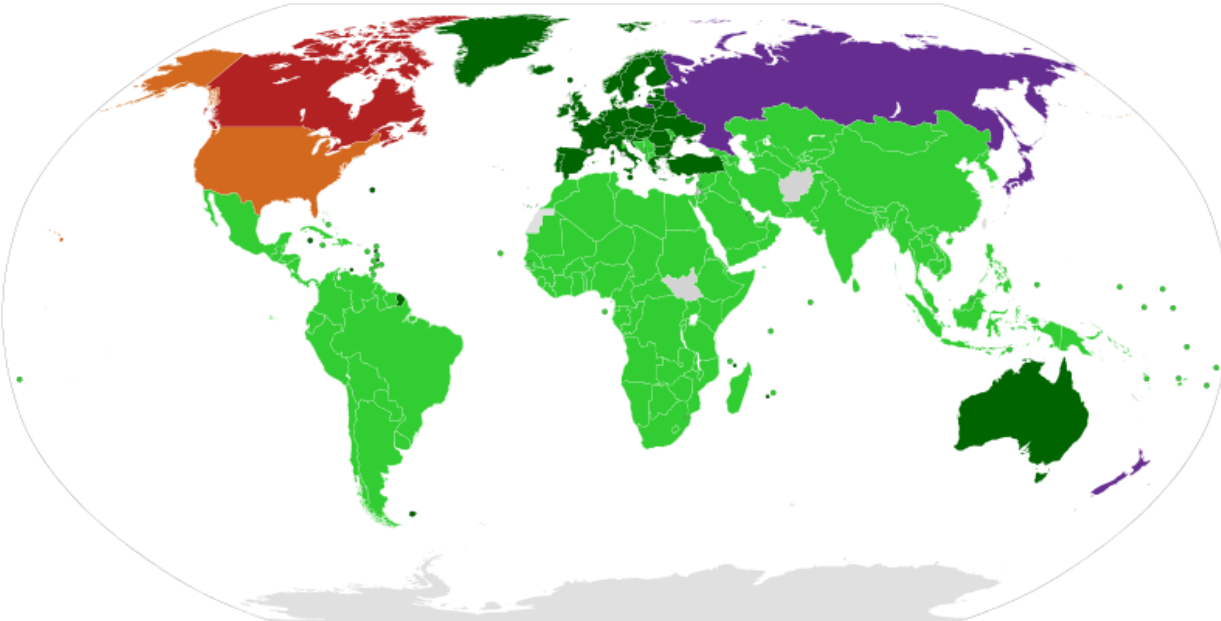
- **Principle of equity and common but differentiated responsibilities** – reflects distribution between the GHG emissions and resources among different countries in the past and present
- **Principle of precaution** – similarly as defined in international and national legislation on environmental protection, also in climate policy, if there is a serious and irreversible threat of injury, absence of evidence is not an excuse for threats
- **Principle of cost-effectiveness** – objectives of the Convention should not impose unnecessary burdens to the economics; one way to reduce costs is the implementation of joint actions



In 1997, the Convention was supplemented by **the Kyoto Protocol** which came into force in 2005 and established international obligations for 39 countries (so-called Annex B countries) to reduce GHG emissions by a fixed amount during 2008-2012

The Kyoto Protocol has been ratified by 192 participants, but the USA and Canada, which has obligations set by the Kyoto Protocol, however, are not the participants, because the USA have not ratified the Protocol, but Canada is withdrawn from the Protocol

### Review of the Kyoto Protocol (KP) participants



- **The KP participants; Annex I and Annex II countries with mandatory targets**
- **The KP participants; developed countries without mandatory targets**
- **Countries not participating in KP**
- **Countries that have signed the KP, but not planned to ratify it (targets are not mandatory)**
- **Countries that have left the KP (targets are not mandatory)**
- **Countries which in the 2<sup>nd</sup> period of the KP do not have mandatory targets, although in the 1<sup>st</sup> period they have had**

In 2012, during the Copenhagen summit the countries failed to agree on a replacement for the Kyoto Protocol, in 2012 in Doha, the countries agreed on an amendment to the Kyoto Protocol (so-called Doha Amendment) and extended the Kyoto Protocol by the 2<sup>nd</sup> period (2013-2020)

Doha Amendment to November 18, 2015, was ratified only by 50 countries, but as long as it will not be ratified by at least 144 countries, it will not come into force

Taking into account the fact that the Kyoto Protocol is not able to ensure the objectives of the Convention (due to insufficient number of participants and an insufficient amount of liabilities), in 2015, the countries under the Convention agreed on a replacement (Paris Agreement) of the Kyoto Protocol in period after 2020

# CLIMATE POLICY OF THE EUROPEAN UNION

The EU is a world leader in climate policy development and implementation

Increase of the EU emissions is not bond to increase of the EU GDP growth - during 1990-2014 GDP increased by 46% while GHG emissions decreased by 23%

Due to the EU climate policy, the EU in 2012 emitted only 9% of the world's total GHG emissions, and the EU emissions at global scale continue to decrease

Taking into account the fact that the EU has ratified the Kyoto Protocol as a regional organization, the EU has set the targets for the reduction of GHG emissions – 8% reduction in the 1<sup>st</sup> period and 20% reduction in the 2<sup>nd</sup> period in comparison to 1990

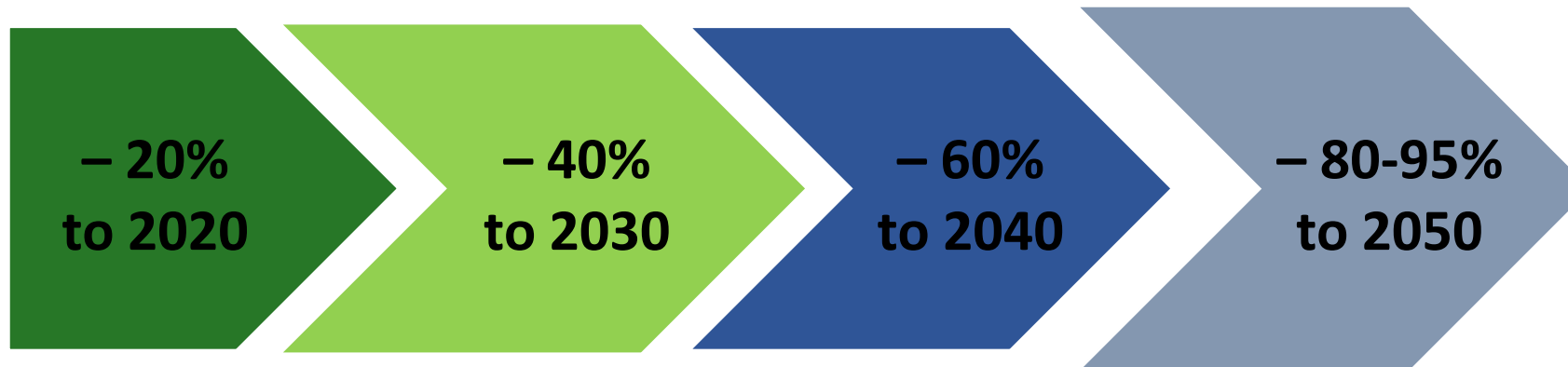
The EU has fulfilled its goal of the 1<sup>st</sup> period and it is likely to meet the goal of the 2<sup>nd</sup> period - the most recent projections suggest that to 2020 the EU will have reached the 24% emission reduction



The EU climate policy is currently based on the **European Climate and Energy Package 2020 (KEPS2020)**, approved in 2008 and the **European Climate and Energy Policy Framework 2030 (KEPS2030)**, approved in 2014

In turn, the EU long-term vision (non-mandatory) is determined in 2011 adopting «**Guidebook for Moving to a Competitive Low-carbon Dioxide Emissions in 2050**» (hereinafter – the **Guidebook**)

The **Guidebook** is complemented by the **White Paper (2011) «Guidebook to a Single European Transport Area – Towards a Competitive and Resource Efficient Transport System»**



Direction of the EU towards the low-tech carbon development – the annual targets and their distribution taking into account the long-term vision

The **Guidebook** identifies indicative milestones, namely, 20% reduction to 2020 and 40% reduction to 2030 have already been transposed into the EU legislation and have become legally mandatory, but the 60% reduction to 2040 is only indicative




According to the European Commission (EC) assessment, **the largest emission reduction potential** in the EU is possible in energy and power industry and households

**The main low carbon development (LCD) elements:**

- **As wide as possible use of electricity**
- **As wide as possible use of renewable energy resources**
- **Increase of energy efficiency for energy resources**
- **Increase of energy efficiency in energy consumption**
- **Increase of efficiency in thermal energy**
- **Sustainable land management**



It has been estimated that **the transition to the low carbon development (LCD)** during 2010-2050 will be the extra 270 billions EUR (on average, 1.5% of the EU GDP) investments in the EU, but the goals of GHG emission reduction will provide much more than just a positive impact on the climate

A hand is shown watering a small green plant that is growing out of a stack of silver coins. The background is a soft-focus green and blue. The image is used as a metaphor for investment in sustainable development.

**The LCD will stimulate the EU economics taking into account the need for cleaner technologies and low carbon energy supply and uses which will create new jobs and boost economical growth**

**The LCD will help to reduce consumption of resources in the EU, including raw materials, land, water and energy as well as will diminish the EU dependence on oil and natural gas imports**

**In addition, the LCD will also create conditions for the improvement of health as with the reduction of GHG emissions it is likely that air pollution is reduced**

**A key instrument to reduce GHG emissions in the EU is EU ETS (Emissions Trading Scheme) which have started its operations in January 1, 2005**

**Thus, GHG emissions reduction was supplemented by two sub-goals – 21% reduction compared to 2005 by EU ETS covered GHG emissions (ETS target) and 10% reduction compared to 2005 by EU ETS not covered GHG emissions (non-ETS target)**

**Consummation of the ETS objectives therefore depends on the EU ETS mechanism of actions, and responsibility for its achievement was imposed by the EU ETS participants**

**By contrast, the non-ETS target was redistributed among all the EU Member States, and each Member State is responsible for its own consummation of the goal**

**To demonstrate the consummation of the objectives, the Member States annually must deliver equivalent emission units**

**In case if actual emissions exceed the annual target amount, then missing emission units may be borrowed from the next year (in a limit of 5%) or bought**

**Conversely, if the actual emissions do not exceed the target size, the rest of emission units may be saved for the following years or sold**



The European Union Emission Trading Scheme (ETS) is the key instrument of the EU climate policy

The EU ETS aims at short and long term to promote the reduction of GHG emissions in a cost effective and economically efficient manner, thereby contributing to the Kyoto GHG reduction targets

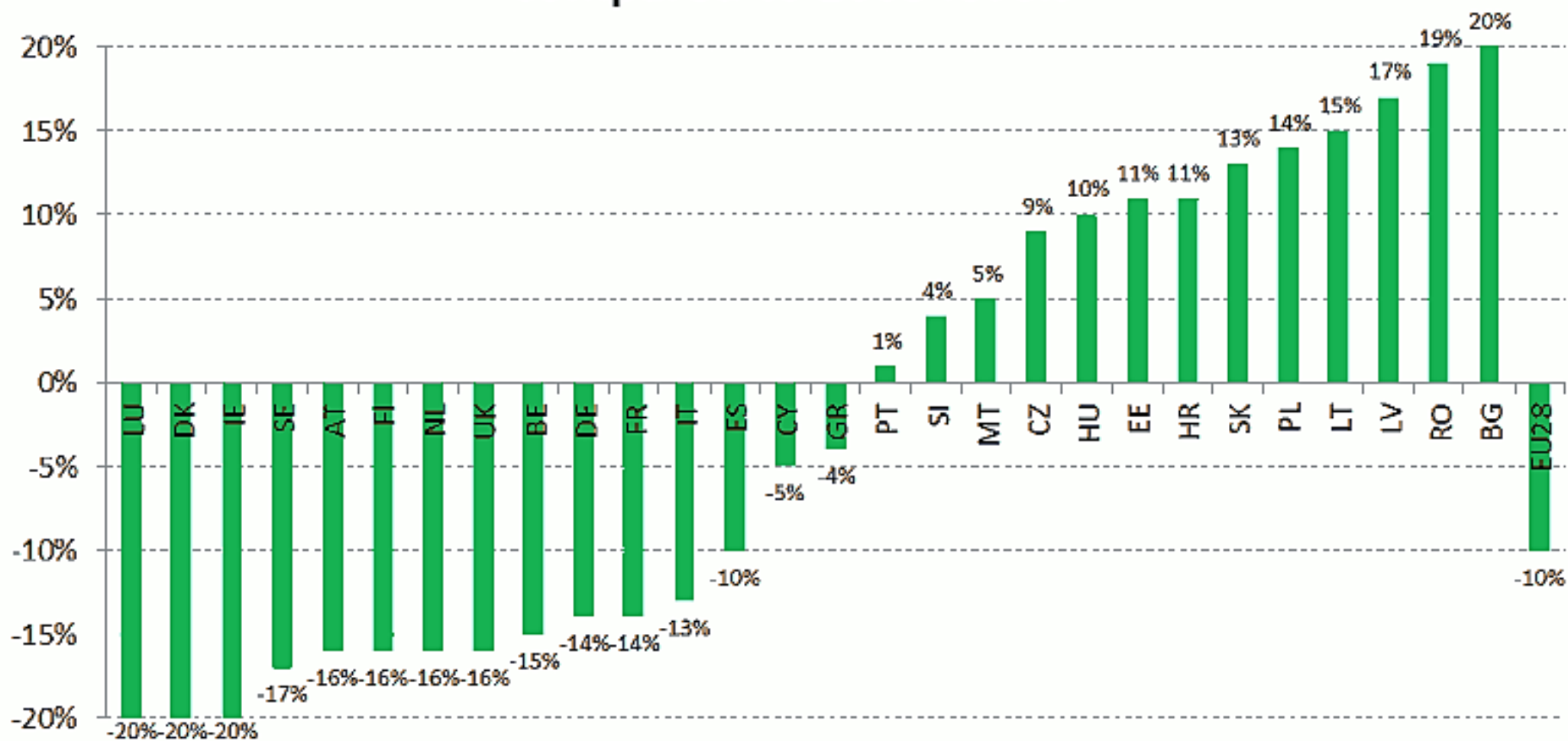
The EU ETS is an internationally regional «restriction market» type of GHG emission permit trading system, established in accordance with the subsidiarity and proportionality

The EU ETS currently covers 31 countries, including 28 EU Member States and since 2012 also Iceland, Norway and Liechtenstein

The EU ETS covers about 45% of all the GHG emissions emitted by the EU Member States



## Member State greenhouse gas emission limits in 2020 compared to 2005 levels



The need to reduce GHG emissions is primarily determined by the need to **reduce and prevent climate change** and the need to adapt to unavoidable climate change

However, in parallel with these goals, the EU ETS seeks to promote greater efficiency (in the broadest sense of this term)

Setting ambitious GHG reduction targets, the EU ETS motivates development and implementation of different innovations contributing to the efficiency improvement opportunities and climate change mitigation and preventing expansion

In addition, the EU ETS not only is targeted to investments, but also promotes attracting of investments

As a result, the EU ETS really contributes to GHG emissions and climate change mitigation, and also by encouraging entrepreneurs to modernize and improve operational efficiency, create new jobs and ensure the EU economic competitiveness and transition to a low carbon economy



The EU ETS is structured by individual trading periods:

- 1<sup>st</sup> period: 2005-2007
- 2<sup>nd</sup> period: 2008-2012
- 3<sup>rd</sup> period: 2013-2020
- 4<sup>th</sup> period and further: every following 8 years

The main tradable permit used by the EU ETS in the European Union Allowance (EUA)

1 EUA means the rights to emit 1 ton of CO<sub>2</sub>e, thus EUA permits to emit 1 ton of GHG

The total amount of EUA for each trading period is calculated on the basis of the Kyoto Protocol taking into account set obligations for the EU and its Member States, as well as the objectives of the EU

For each subsequent period the amount of available EUA is reduced



The EU ETS **direct primary participants** are equipment operators that are obligated the GHG emission reduction commitments (entrepreneurs who are exploiting the equipment)

However, on legislative basis, the EU ETS primary participants the machines or mutual funds of equipment because all the requirements of the EU ETS in GHG reduction are bond to specific equipment

In the EU ETS totally participate about 11,000 equipment installations - for certain equipment a membership in the EU ETS is compulsory, while others can join it (and later can be withdraw) voluntarily

The EU ETS primary direct participants can be divided:

- Mandatory participants
- Voluntary participants





The EU ETS mandatory participants are those who are involved in the following activities:

- **Combustion equipment** with a total rated thermal input exceeding 20 MW (except hazardous or municipal waste combustion equipment)
- **Mineral oil refineries**
- **Coking plants**

- **Firing or sintering of metal ores**
- **Production of cast-iron or steel** (primary or secondary)
- **Production or processing of ferrous metals (including ferro-alloys)**
- **Primary and secondary production of aluminum**
- **Production or processing of non-ferrous metals**

- **Production of cement clinker in rotary kilns** with a production capacity exceeding 500 tons per day or in other furnaces with a production capacity exceeding 50 t per day
- **Production of lime as well as dolomite and magnesite calcination**
- **Production of fired ceramic products**, particularly tiles, bricks, refractory bricks, stoneware or porcelain with a production capacity exceeding 75 t per day
- **Production of mineral wool insulation materials** using glass, rock or slag with a melting capacity exceeding 20 t per day
- **Drying or calcination of gypsum or gypsum plaster boards** and other gypsum products where combustion units with a total rated thermal input exceeding 20 MW are used

- **Production of cellulose from timber or other fibrous materials**
- **Production of paper or cardboard** with a production capacity exceeding 20 t per day

**Equipment which participation in the EU ETS is mandatory may actually be of any economic sector, but taking into account the capacity of plants, most of such facilities are exploited in the energy and industrial sectors**

**In addition, since 2012, the EU ETS requirements also apply to flights which arrive at or depart from an aerodrome situated in the EU ETS member states' territories**

**The EU ETS also provides a number of exceptions for situations in which the facilities have different (more favorable) conditions:**

- **It does not include equipment that:**
  - **Is used for the research purposes**
  - **Exclusively is using biomass**
- **Specific conditions are attributed to:**
  - **Sectors which are exposed to emission transfer**
  - **Facilities where a large-scale modernization is planned**
  - **Small equipment is excluded of the possible participation in the system**
  - **New (just installed) equipment**
- **Periodic exception is set for flights to member states of the EU ETS from the third countries' airports**



The EU ETS **direct additional members** are legal entities or physical persons who are involved in the EU ETS for speculative purposes (and not with the aim of reducing GHG emissions)

The EU ETS operation is maintained by its **indirect participants** – some of them operate at the national level, while others at international level

These participants are not obligated by GHG emission reduction commitments, but they are entitled to participate in the ETS market operations, buying and selling EUA

Key tasks of EC competence:

- **Maintenance of the EU ETS legislative base**
- **Proposal preparation and examination of the equipment placed on the market and granted free EUA quantification**
- **General supervision of permission trade**
- **Improvement of the EU ETS**
- **Development of cooperation between the EU ETS with other ETS**
- **Other related competences**



Major tasks under the responsibility of the **Member States' competent authorities:**

- **Implementation of national legislation to ensure the EU ETS activities, including transposition of directives' requirements**
- **Estimation of free EUA redistribution and allocation to merchants**
- **Distribution of EUA for free**
- **Monitoring of the EU ETS operators' Activities**
- **Imposition of sanctions on law offenses related to the EU ETS activities**
- **Participation in the functioning of the EU ETS etc.**



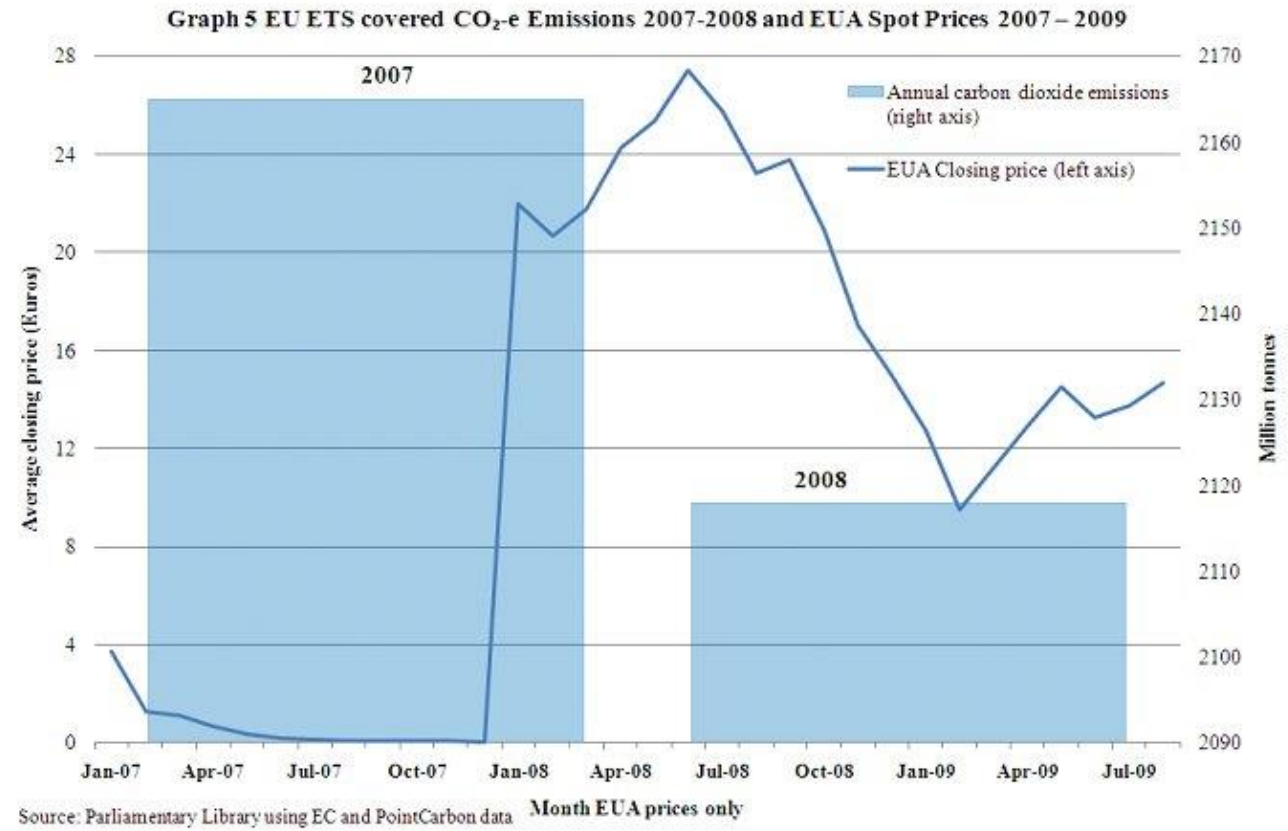
**Closely related to the EU ETS activities are emission' management consultants, emission auditors, trading consulting companies of emission units, commercial brokers, bourses etc., but the legislation does not set out specific rights and responsibilities for them in relation to the EU ETS**

**In addition, in order to ensure proper accounting of EUA, each country must have the means of verification - merchants who verify reports on equipment regarding annual GHG emissions**

Since 2012, among the EU ETS a uniform **Community Emissions Register (CER)** has been founded, but in any member state of the EU ETS continues to operate national Community CER administrators who are obliged to handle requests for account opening etc.

**Each direct participant of the EU ETS in order to participate in the EU ETS (in respect to fulfil the obligations of membership of the EU ETS), its own account of EUA has to be opened at the CER**

**Performance of the permit market is dependent on a number of conditions set out for the handling with EUA**



In order to ensure equal distribution of EUA, starting from the EU ETS 3<sup>rd</sup> period, the most part of EUA available at the market are sold at auctions

Depending on the industry, in 2013, 20% of EUA have been auctioned, but in 2020 - 70% of EUA; while in 2027 - 100% of EUA will be auctioned

Distribution of EUA for free is done using the benchmark method and taking into account the carbon emission transfer risk in certain sectors

In economic sectors which are not exposed to a significant risk of carbon transfer, for equipment that will reach the benchmark, in 2013, 80% of EUA are distributed for free and in 2020, 30% of EUA will be distributed for free, but the rest of EUA will be distributed among the other equipment proportionately



In 2007, the EC published the Green Paper «Adapting to Climate Change in Europe. Options for EU Action», while in 2009, the EC published the White Paper «Adapting to Climate Change – Towards a European Framework for Action»



The White Paper emphasized that adaptation policies and instruments has to be found into the existing range of tools, including:

- Developing the crisis and risk management
- Promoting adaptation measures at all levels (national, regional, local)
- Integrating political tools and their implementation for key sectors of the economics

In 2013, the EC endorsed the EU Strategy for Adaptation to Climate Change

The strategy aims to improve the sustainability of the EU against climate change by reducing active sensitivity of its sectors systems and people

# CLIMATE POLICY OF LATVIA

The beginning of climate policy of Latvia is related to the ratification of the Convention and **the first National Report on GHG emissions in Latvia** prepared in 1995

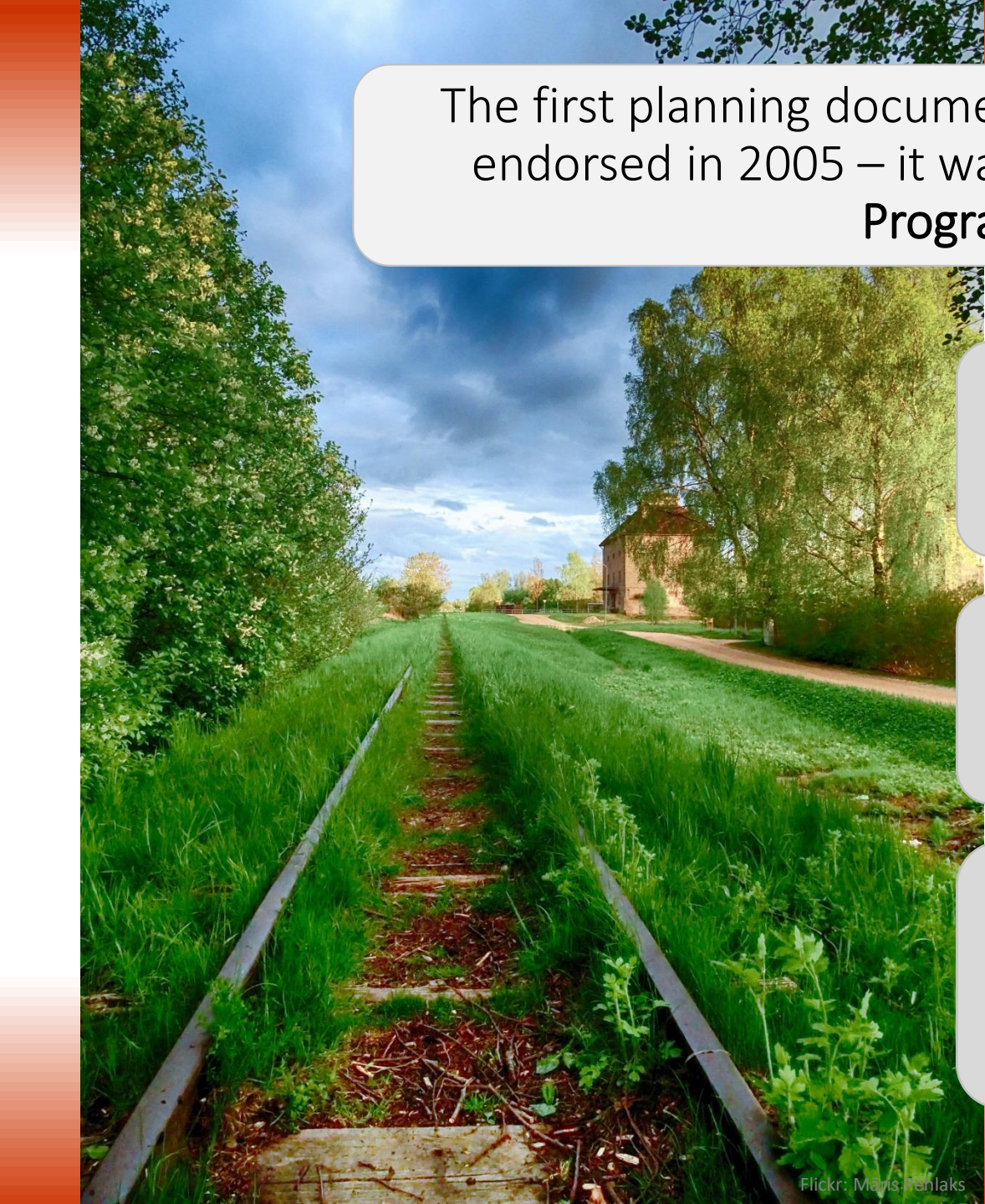
**The 1<sup>st</sup> period's requirements of the Kyoto Protocol set that until 2012 Latvia aims to reduce GHG emissions by 8% compared to 1990**

**Whereas, the 2<sup>nd</sup> period of the Kyoto Protocol required that Latvia takes part in the overall EU targets, but according to the Kyoto Protocol there are no specific goals set for Latvia**

**Climate policy development and implementation is coordinated and ensured by the Environmental Protection and Regional Development Ministry of Latvia in collaboration with other ministries by sectors**







The first planning document on climate policy of Latvia was endorsed in 2005 – it was the **Climate Change Mitigation Program 2005-2010**

**In 2009, climate policy objectives and activities were included in the Environmental Policy Guidelines 2009-2015 and, in 2014, into the Environmental Policy Guidelines 2014-2020 (VPP2020)**

**But it is essential to point out that initially climate policy of Latvia has been focused exclusively on combating climate change, but adaptation to climate change as a separate activity was raised only in 2014**

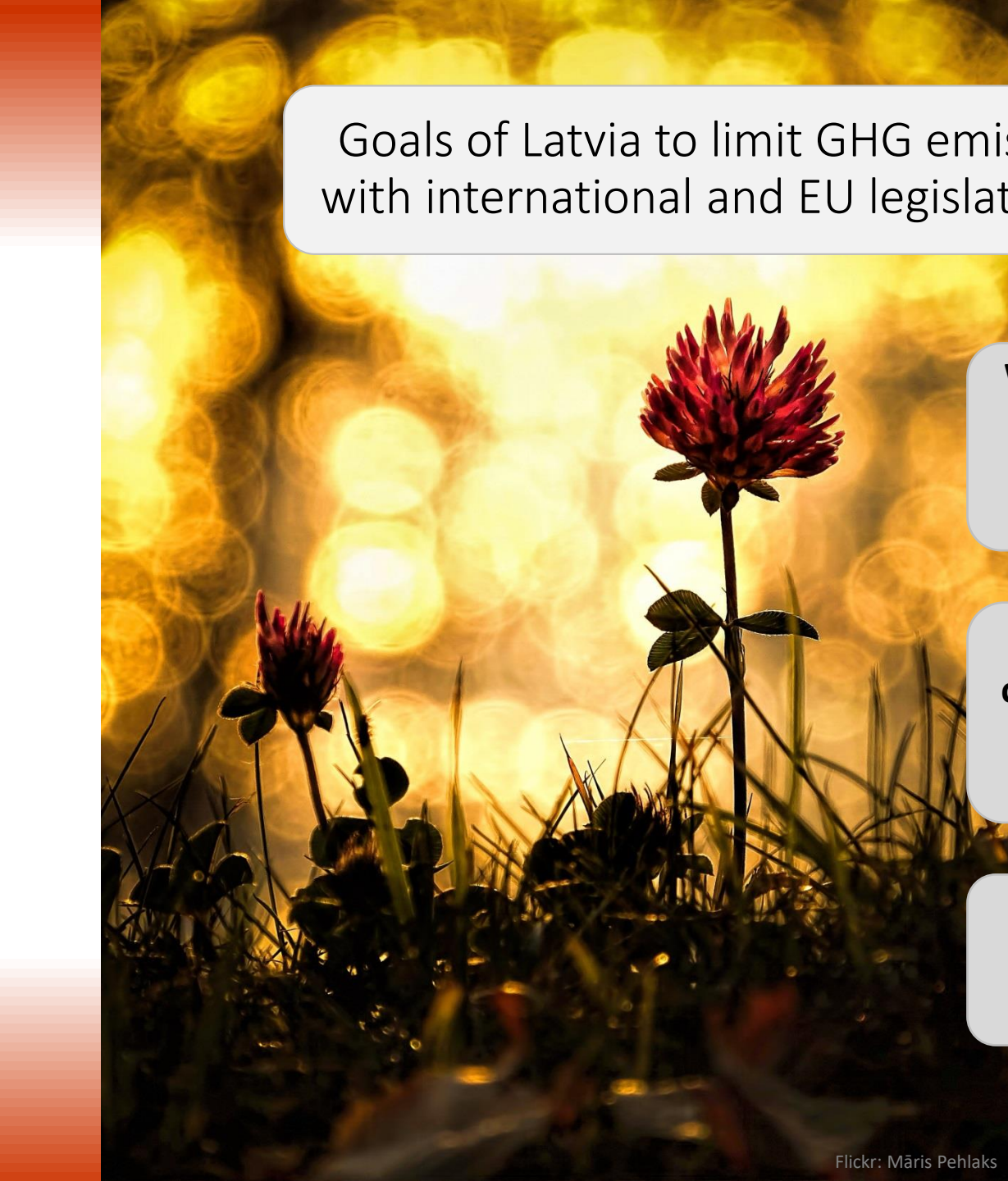
**Latvia has actively exploited established international climate policy trading instruments, for example, in 2002 Latvia launched the Joint Implementation Mechanism (JIM) and was the first world's country which started JIM project implementation**

Starting from 2005, the EU ETS was launched also to Latvia and since 2012 within the EU ETS Latvia also is involved in EUA auctions, shifting revenues to **the Emission Quotas Auctioning Instrument**

**Most significant peculiarities of Latvia in the context of climate policy:**

- **Relatively small economics which still need to grow significantly and therefore demand for energy will increase in future**
- **Relatively small total emissions and significant impact of any economically important development projects on GHG emissions dynamics**
- **Relatively small proportion of emissions covered by the EU ETS and great part of so-called non-ETS emissions, including large contribution from transport and agriculture**
- **Relatively high emissions intensity of energy consumption**
- **Great ability to bind emissions (due forestry)**





Goals of Latvia to limit GHG emissions to 2020 are set in accordance with international and EU legislation and adopted by Latvia legislation

**Within the EU ETS Latvia have to reduce GHG emissions under the EU common goal of a 21% reduction compared to 2005, taking into account distribution of equipment covered by the EU ETS**

**Whereas, the non-ETS emission reduction goal is set to +17% compared to 2005, that means, Latvia has to limit the increase of non-ETS emissions to 2020, compared to 2005, in limits of 17%**

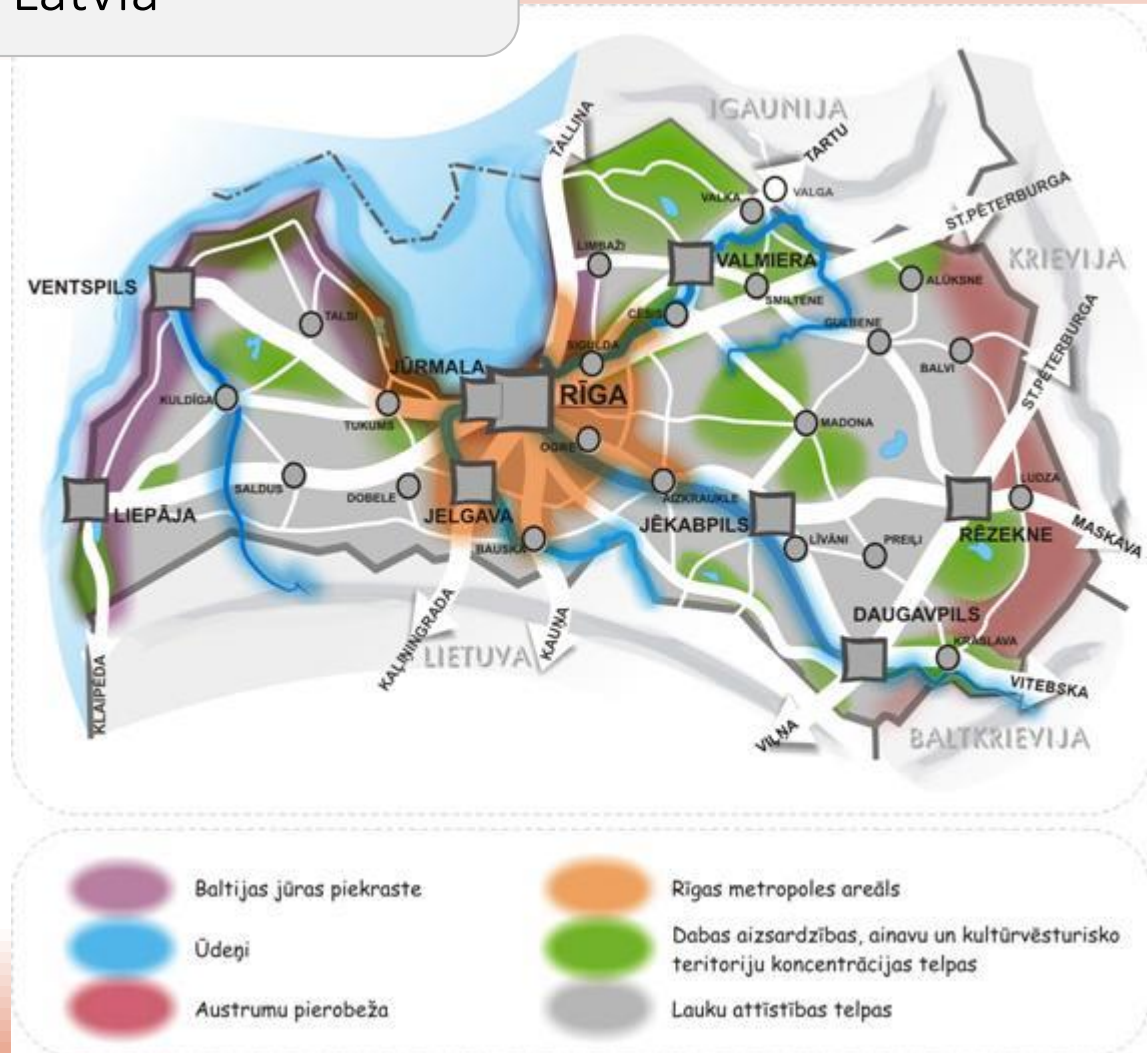
**Non-ETS objective is divided into the annual targets; in addition, Latvia has set the goal of carbon sequestration - achievable annual carbon dioxide binding rate**

Targets of Latvia in GHG emission reduction  
for the period 2015-2020

Result of policy	Resultative indicator	Indicative values by years					
		2015	2016	2017	2018	2019	2020
Limited or stabilized total GHG emissions of the country	Total GHG emissions, Mt CO <sub>2</sub> e	12,02	12,06	12,10	12,13	12,15	12,16
Limited GHG emissions from sectors not included in the EU ETS	Annual GHG emissions, Mt CO <sub>2</sub> e	9,44	9,53	9,62	9,72	9,801	9,90
Reduced GHG emissions in the EU ETS sectors	Total GHG emissions, Mt CO <sub>2</sub> e	-	-	-	-	-	2,26
GHG emission intensity of the national economy	t CO <sub>2</sub> e/1000 LVL from GNP	-	-	1,30	-	-	1,13
Assured CO <sub>2</sub> binding in forestry sector	Mt CO <sub>2</sub> e	16,30					

## The most significant policy planning documents in Latvia

- **Latvia Sustainable Development Strategy to 2030 (2010)**
  - **National Development Plan 2014-2020 (2012)**
  - **Latvia National Reform Program according to EU2020 strategy (2011)**
  - **Transport Development Guidelines for 2014-2020 (2013)**
- 
- **Latvia Rural Development Program 2014-2020 (2015)**
  - **Forest-based Sector Development Guidelines 2015-2020 (2015)**
  - **National Waste Management Plan 2013-2020 (2013)**
  - **Green procurement Promotion Plan 2015-2017 (2015)**



**Latvia Sustainable Development Strategy to 2030**  
(hereinafter– «Latvia 2030») as one of the  
three main objectives aims:



**«Latvia - our home - green and tidy, creative and easily accessible place in the global space, sustainable development of which is responsibility for future generations»**

**Indirectly, climate policy aspects also are referred into the «Latvija 2030» priorities:**

- **Priority 3 is «Innovative and Eco-efficient Economy» and it pursues two directions of development such as «Massive creativity and innovation» and «Renewable and safe energy»**
- **Whereas, Priority 4 is «Nature as a future capital» and its direction of development is named «Sustainable management of natural values and environmental services»**

**In a similar way the objectives, priorities and measures are included in other policy planning documents, but in some of them planned actions inadequately tak into account or even are contrary with the climate policy objectives**

GHG limitation is achieved by **sectoral policy measures**, including measures to improve energy efficiency, transition from fossil to renewable energy provision, electromobility development and so on

**Climate policy actions set by  
VPP2020:**

- **Ensuring of the EU ETS activities**
- **Sustainable use of biomass**
- **Ensuring of CO<sub>2</sub> binding in forest lands and carbon capture in wood products with long lifetime**
- **Improving the energy efficiency of buildings**
- **Energy efficiency of lighting infrastructure**
- **Development of eco-friendly transport infrastructure and use of renewable energy in transport**

- **Introduction of sustainable farming practice in agriculture**
- **Use of renewable energy resources in power production**
- **Promotion of green public procurement**
- **Low carbon technology development and implementation**
- **Integration of GHG reduction and CO<sub>2</sub> binding issues into various sectoral policies and plans of local municipalities, including regional strategies**

Implementation of climate policy is based primarily on the law «On Pollution» (2001) and the law «On the Involvement of Republic of Latvia in the Kyoto Protocol's flexible mechanisms» (2007), and in line with these legislative documents the regulations, orders and instructions are issued by the Cabinet of Ministers

Penalties for non-compliance are set out in the Latvia Administrative Violations Codex (1984), while the law «On Natural Resources Tax" (2005) the basic conditions for the calculation of tax for CO<sub>2</sub> emissions from stationary technological equipment which are involved in certain polluting activities are set

Total GHG emissions in Latvia, in 2013, were by more than 58% lower than in 1990, but only by about 1% lower than in 2005

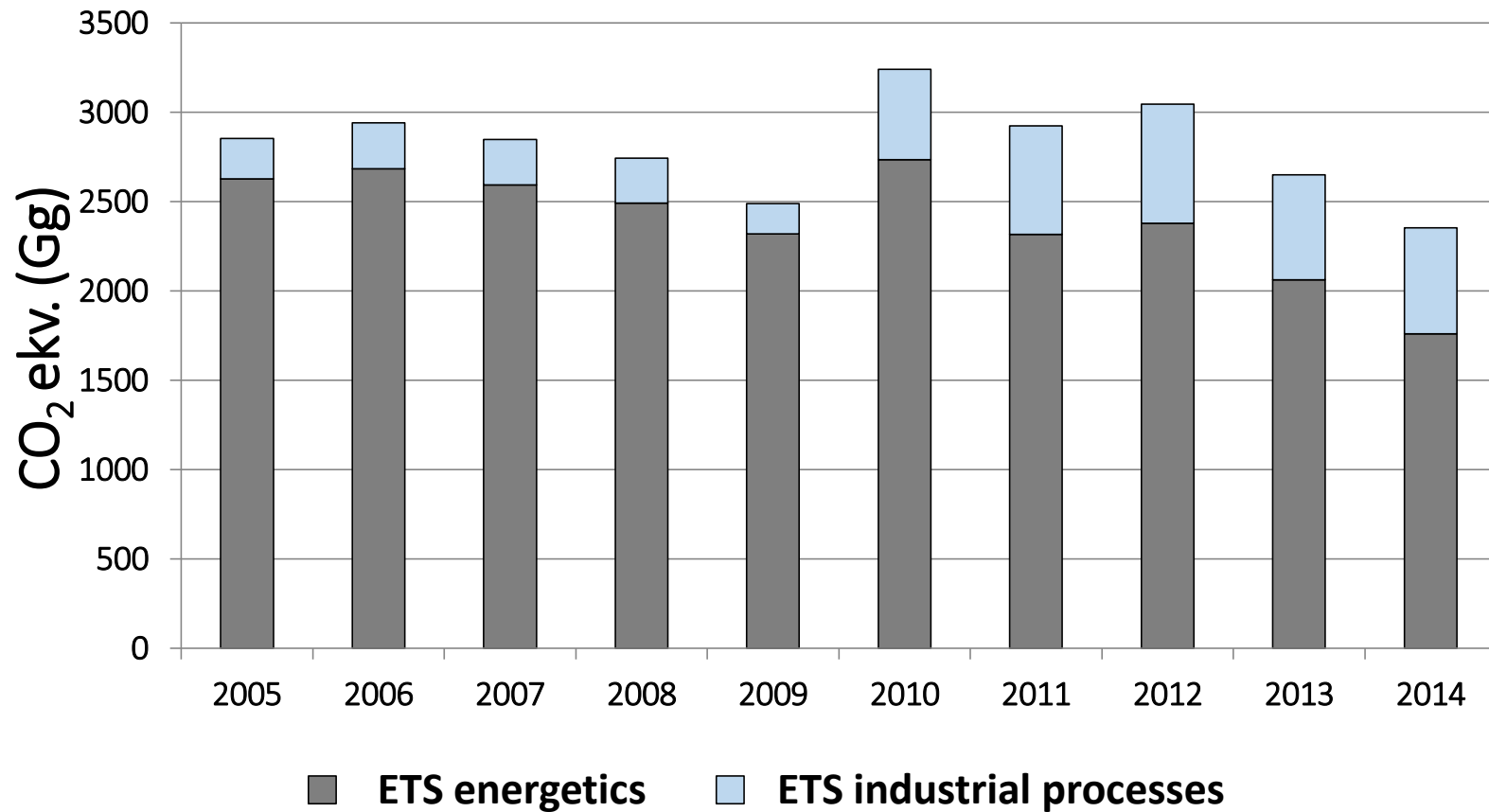
Most of the total GHG emissions in Latvia are resulting from the use of fuel in stationary combustion plants (38%), transport (25%) and agriculture (21%)

Taking into account the weak development of production, in Latvia the EU ETS covered share of total GHG emissions is significantly lower than in the EU on average





## Dynamics of the EU ETS emissions in Latvia during the period 2005-2014



In 2015, in the EU ETS from Latvia there were included 66 facilities owned by 47 major Latvian energetics and industrial enterprises, such as:

- **Heat and power producers (private as well as state and municipal enterprises)**
- **Various types of industrial manufacturers such as wood processing companies, cement manufacturers, metallurgy**

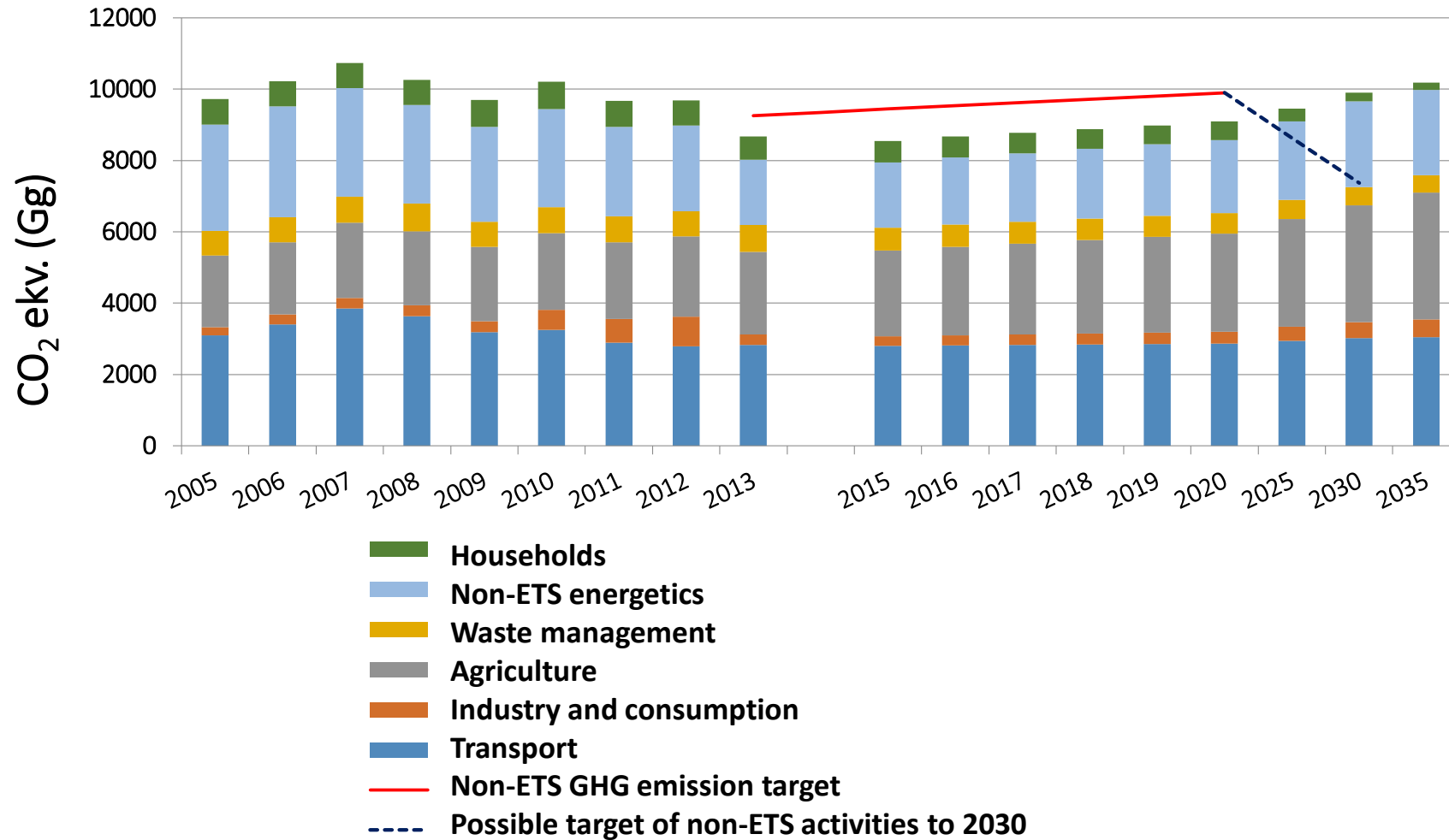
**The EU ETS participants from Latvia are investing in new facilities and modernizing existing equipment, for example, by installing a steam condensers for re-use of heat**

**Sustainable use of biomass within the EU ETS in Latvia has increased from 2,191 TJ in 2005 to 8,655 TJ in 2014**

**The EU ETS participants from Latvia in 2013-2014 have reduced their GHG emissions by more than 11%**



## Dynamics of non-ETS emissions in Latvia during the period 2005-2013 and forecasts for 2015-2035



GHG emission projections prepared in 2015 showed that, taking into account existing and planned policy measures, the overall non-ETS GHG emissions during the period 2005-2020 will grow slightly by about 9% and thus will fulfill the objectives during the period until 2020

**However, the target of non-ETS GHG emissions in Latvia to 2030 will be 0% to -10% reduction compared to 2005, and the projected emissions in Latvia do not provide this target, i.e., additional measures are needed**

**Taxes and fees as a tool to limit GHG emissions in Latvia are being used in relatively small scale**

**GHG component directly is included only in the tax of natural resources which is paid by entrepreneurs for the carbon dioxide emissions from stationary technological equipment, involved in certain polluting activities**

**This tax is applied for each ton of carbon dioxide emitted, except for emissions included in the EU ETS**



GHG limitation can be achieved by financial support of different funds, including the European Economic Area Financial Mechanism and other EU funds



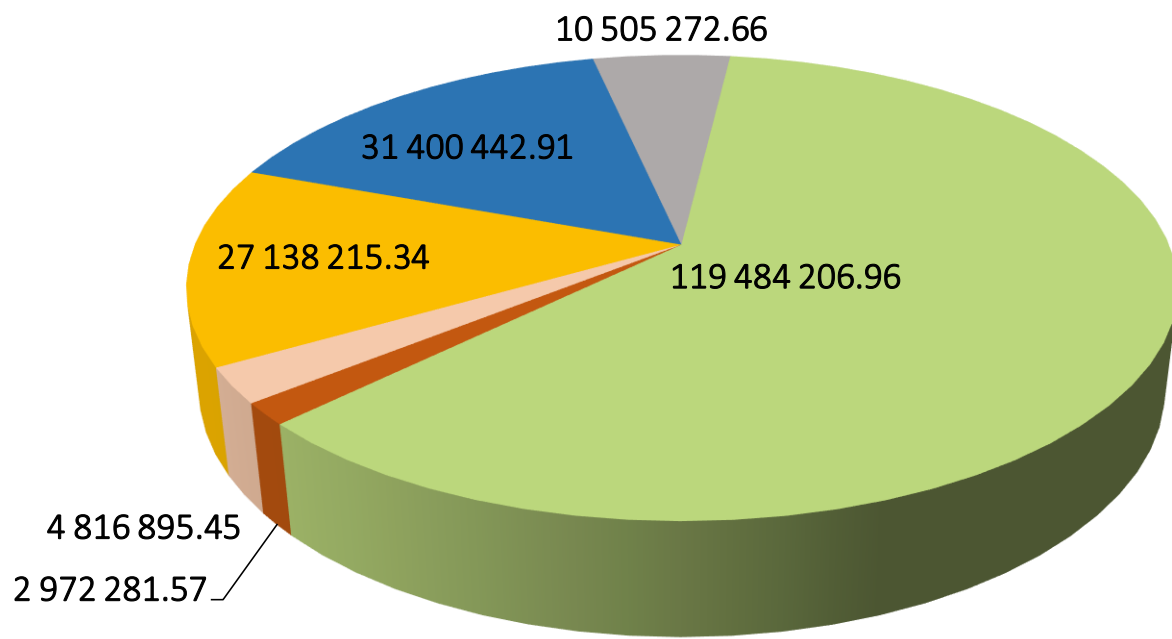
In 2014-2020, EU Member States are encouraged at least 20% of all funds to utilize for climate-related policy measures

However, the only specialized fund for climate action support in Latvia until 2015 was the Climate Change Financial Instrument (CCFI) which in future is likely to be replaced by the Emissions Auctioning Instrument

CCFI is a governmental program that aims to promote adaptation to global climate change and its consequences and to promote the reduction of GHG emissions

Until the end of 2015, within the CCFI successfully were completed 2,614 projects with a total eligible costs of 433 million EUR and from the CCFI projects received more than 196 million EUR (45% of total eligible costs)

Granted support by the Climate Change Financial Instrument (CCFI) in accordance with the structure of competitions supported by types of measures



- Improvement of energy efficiency
- Reduction of GHG emissions in public lighting sector
- Complex solutions for GHG reduction
- GHG reduction in transport sector
- Development of climate technologies, public information
- Implementation of technologies for renewable energy resources

**CCFI framework allowed financing of all kinds of measures to reduce GHG emissions and support was available to the widest possible range of applicants, including enterprises, local governments, public authorities, public organizations and even households**

**Adaptation to climate change has been assessed as important issue of Latvia policy starting by the activities of the Kyoto Protocol**

**In 2008, the Cabinet of Ministers adopted the informative report «On the Adaptation to Climate Change»**

**As well as the Environmental Protection and Regional Development Ministry set up an inter-ministerial expert working group on issues of adaptation to climate change**

**Whereas, in 2012, the climate change risk assessment was carried out, which formed the basis of the objective "to promote the readiness of Latvia to adapt to climate change and related effects» for inclusion in the VPP2020**



In the context of climate change adaptation, there are several actions set by VPP2020

- **Climate change modeling and integrated data system in Latvia**
- **Risk and sensitivity analysis and identification of measures to ensure adaptation to climate change**
- **Development of climate change monitoring system**
- **Improvement of the national system for preparedness and response to the effects of climate change**

- **Provision of infrastructure for climate change flood risk prevention**
- **Coastal erosion risk mitigation measures for socially significant infrastructure protection**
- **Integration of adaptation to climate change issues into various sectoral policies and plans of local municipalities, including regional strategies**



It should be noted that in addition to this specific policy which focuses on **coordinated development of adaptation to climate change**, the aspects of adaptation to climate change are taken into account in many other existing sectoral policy planning documents, including:



- **Latvia Sustainable Development Strategy to 2030 (2010)**
- **National Development Plan 2014-2020 (2012)**
- **Latvian National Reform Programme EU2020 Strategy (2011)**
- **Public Health Guidelines 2014-2020 (2014)**
- **Regional Policy Guidelines 2013-2019 (2013)**
- **Coastal Spatial Development Guidelines 2011-2017 (2011)**
- **Flood Risk Assessment and Management National Program 2008-2015 (2007)**

**In Latvia policies and measures for the protection of civil security are established, which are directly linked to climate change risk mitigation as well as systematic meteorological information collection and storage**

**Environment, Geology and Meteorology Centre of Latvia collects and analyzes information on permanent observations useful to assess climate change intensity in Latvia, as well as to plan adaptation measures of climate change**

Thank you  
for the attention!

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