




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



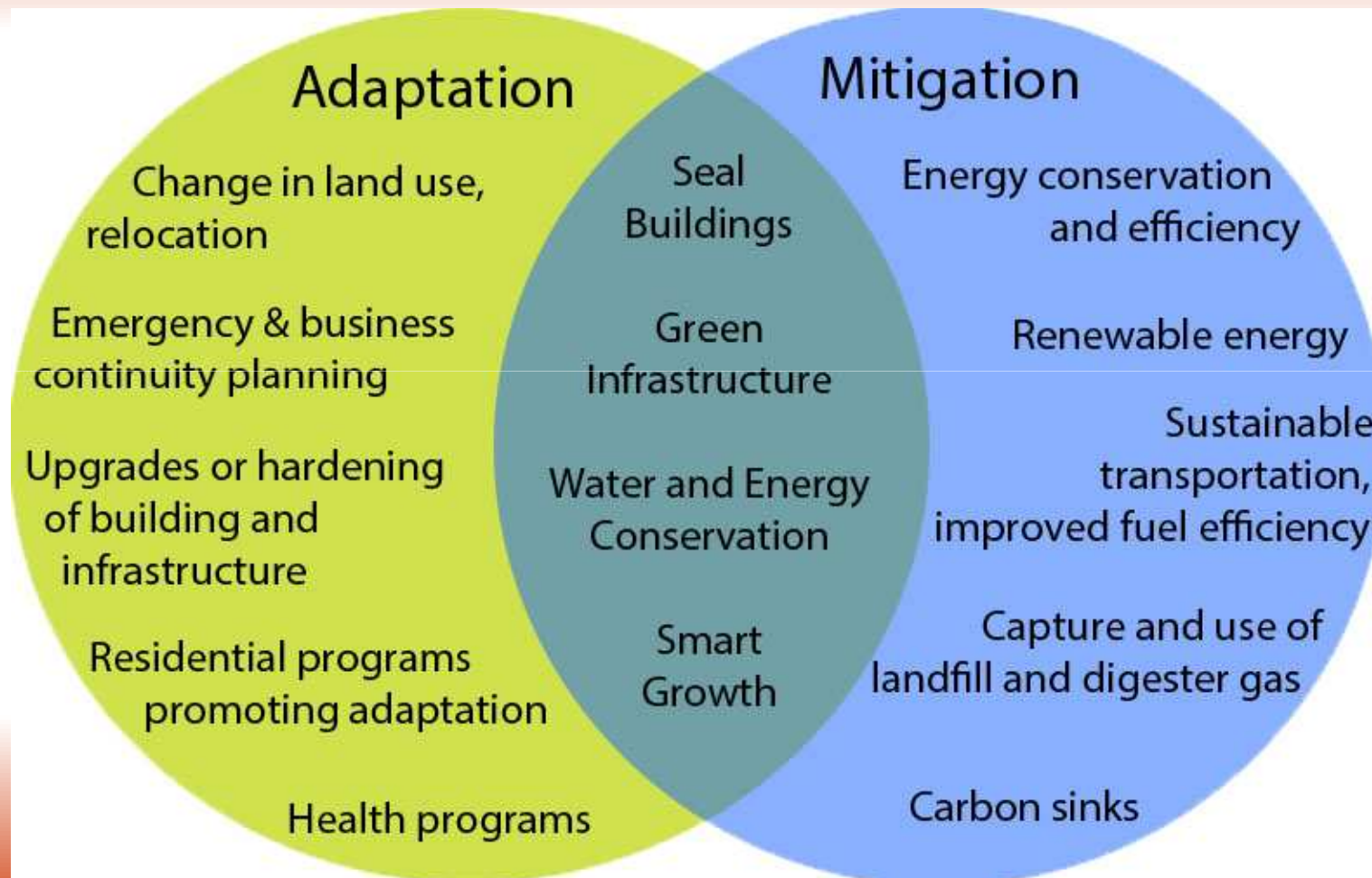
Climate policy currently is acting in two basic directions:

- **Climate change mitigation** (mazināšana)
- **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

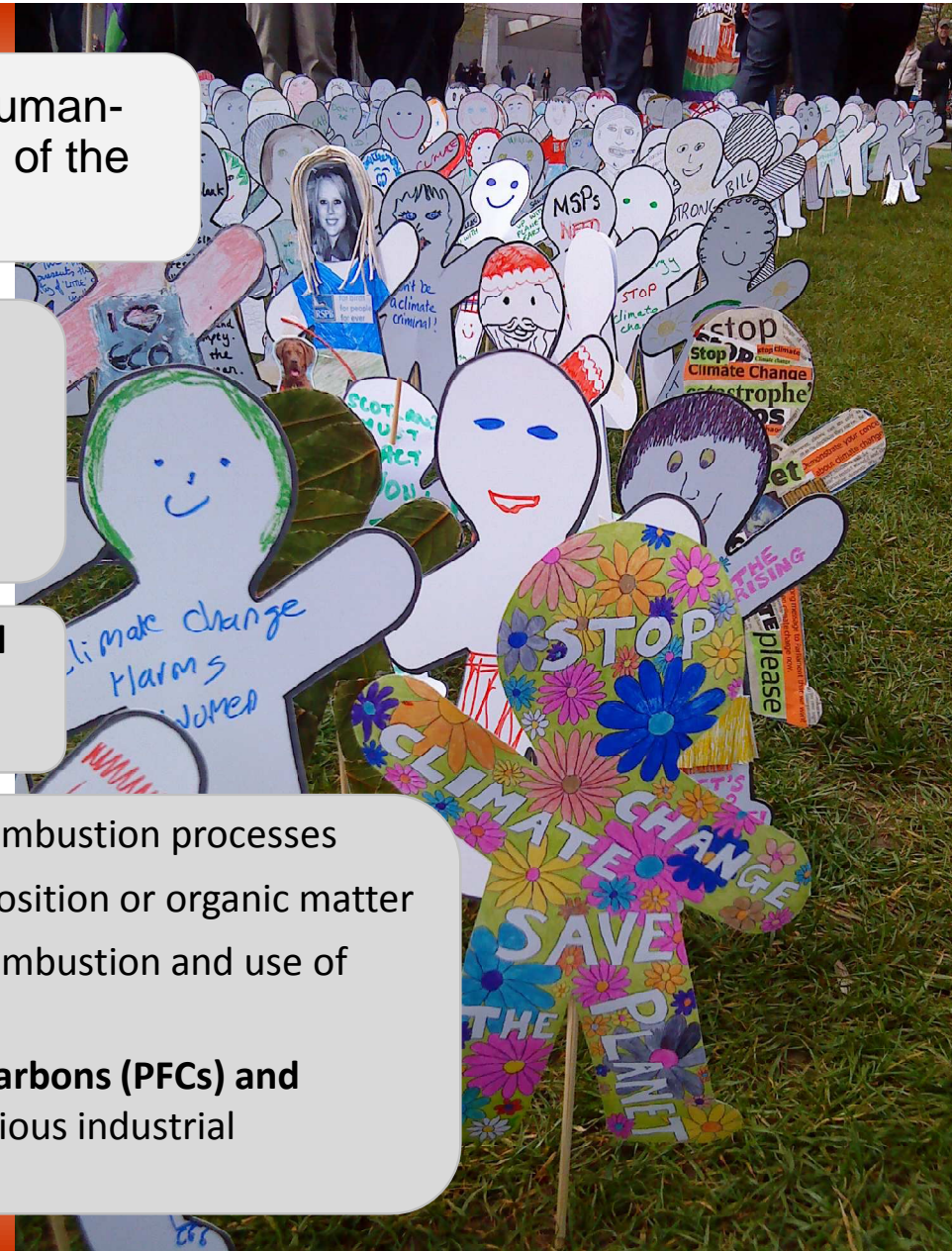
Theoretically, targets of climate change mitigation can be achieved in two ways:

- Developing climate geo-engineering
- Limiting emissions of greenhouse gases (GHG's) in the atmosphere

Climate geo-engineering 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

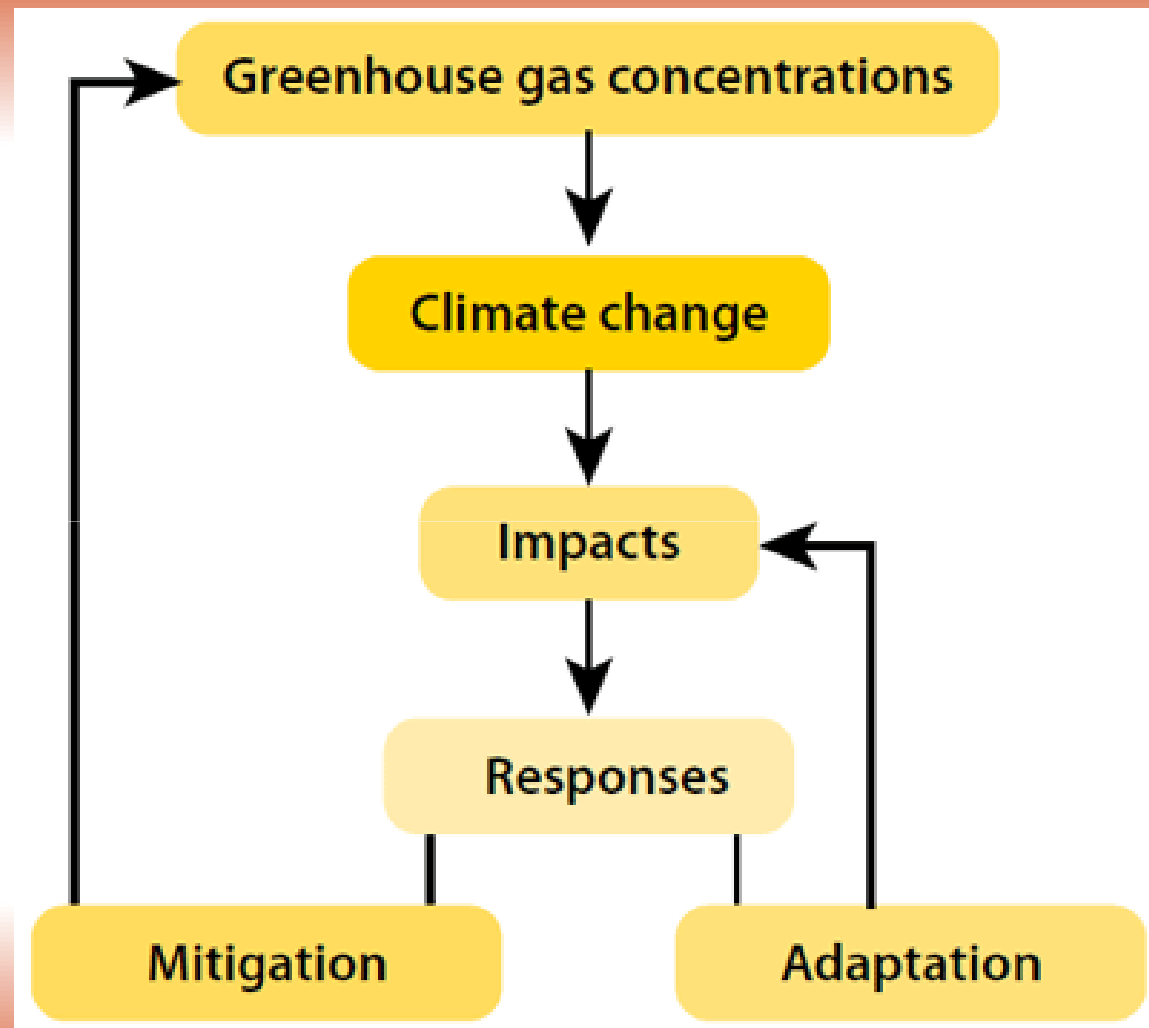
GHG involves
3 substances and
3 groups of substances:

- Carbon dioxide (CO_2) – emitted from combustion processes
- Methane (CH_4) – emitted from decomposition or organic matter
- Nitrogen oxide (N_2O) – emitted from combustion and use of fertilizers
- Hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF_6) – used in various industrial equipment, e.g., in refrigerators



Mitigation is an intervention to reduce the emissions sources or enhance (uzlabot) 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.

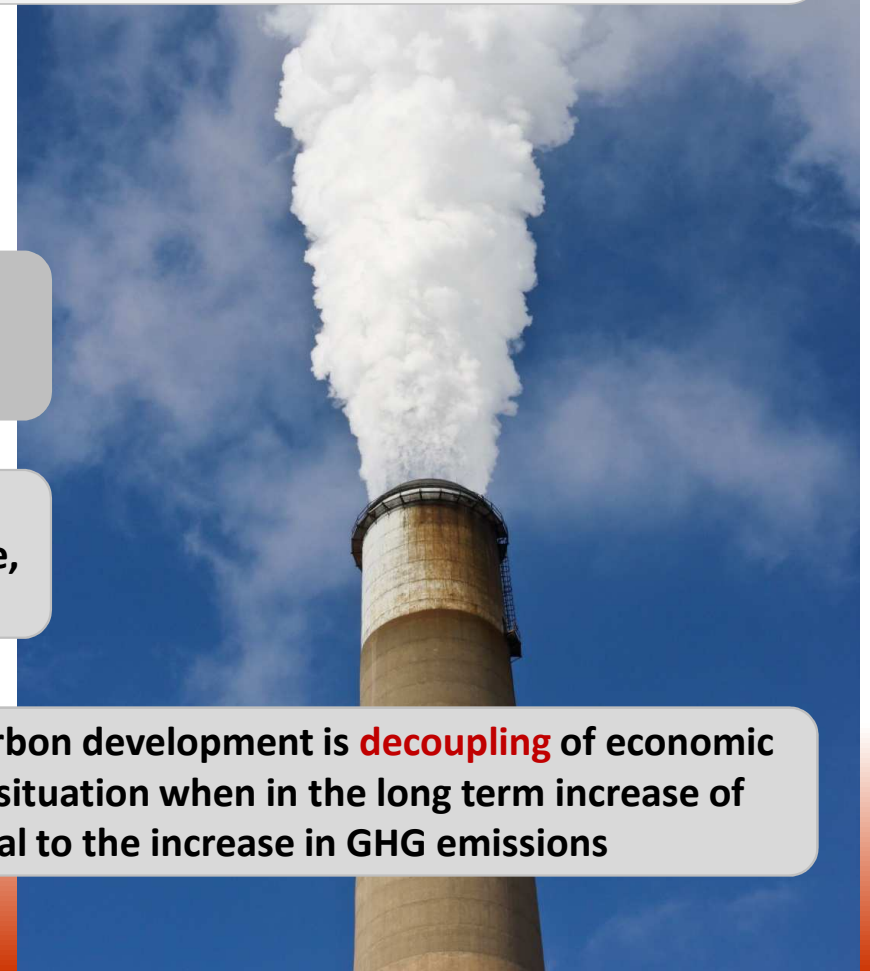
Taking into account the variability of GHG sources, GHG emissions have to be limited in all sectors of the national economics (especially in energy, transport and agriculture), as well as regarding household habits and consumption

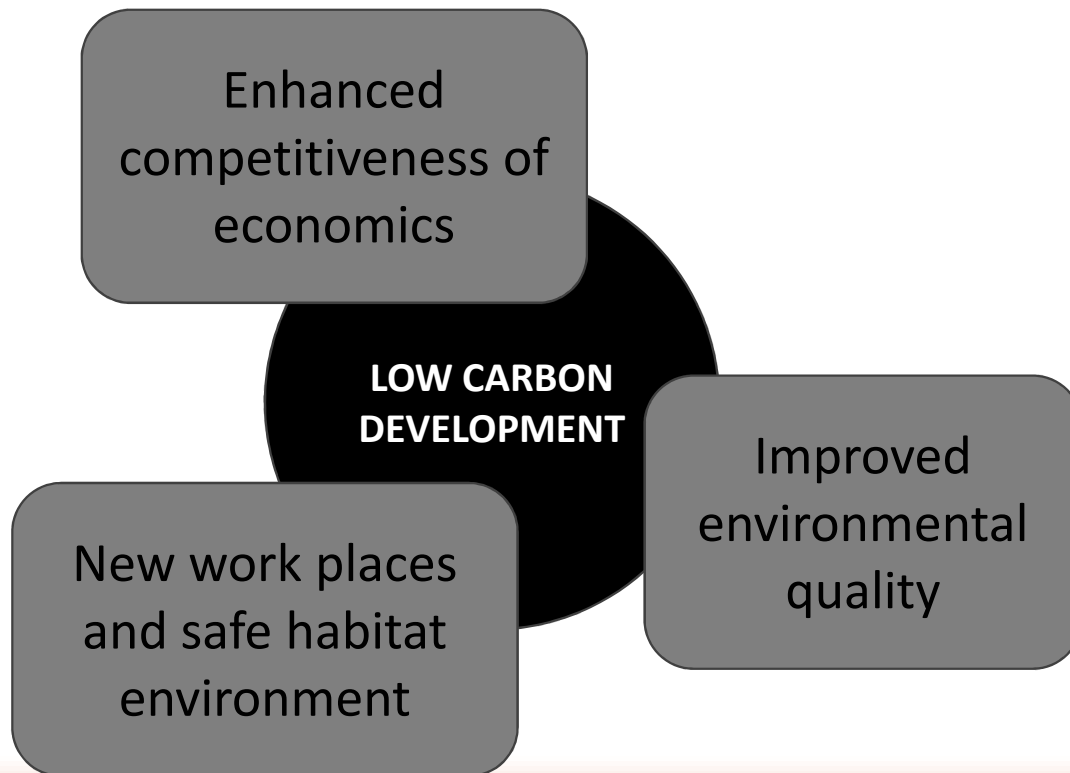
CO₂ binding of (fixing) is mainly related to forestry

CO₂ binding is ensured by photosynthesis that occurs in all green parts of plants – after CO₂ binding oxygen (O₂) 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)

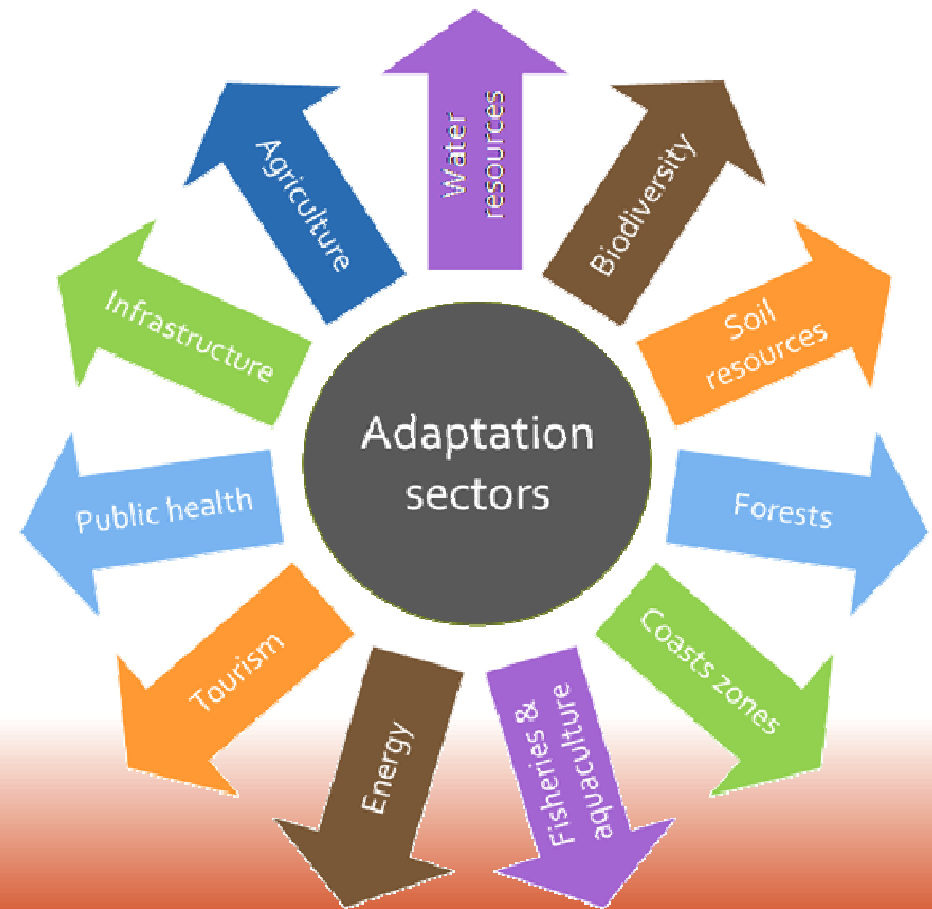
Policy of adaptation to climate change aims to reduce the negative impacts of climate change and to exploit the opportunities induced by climate change

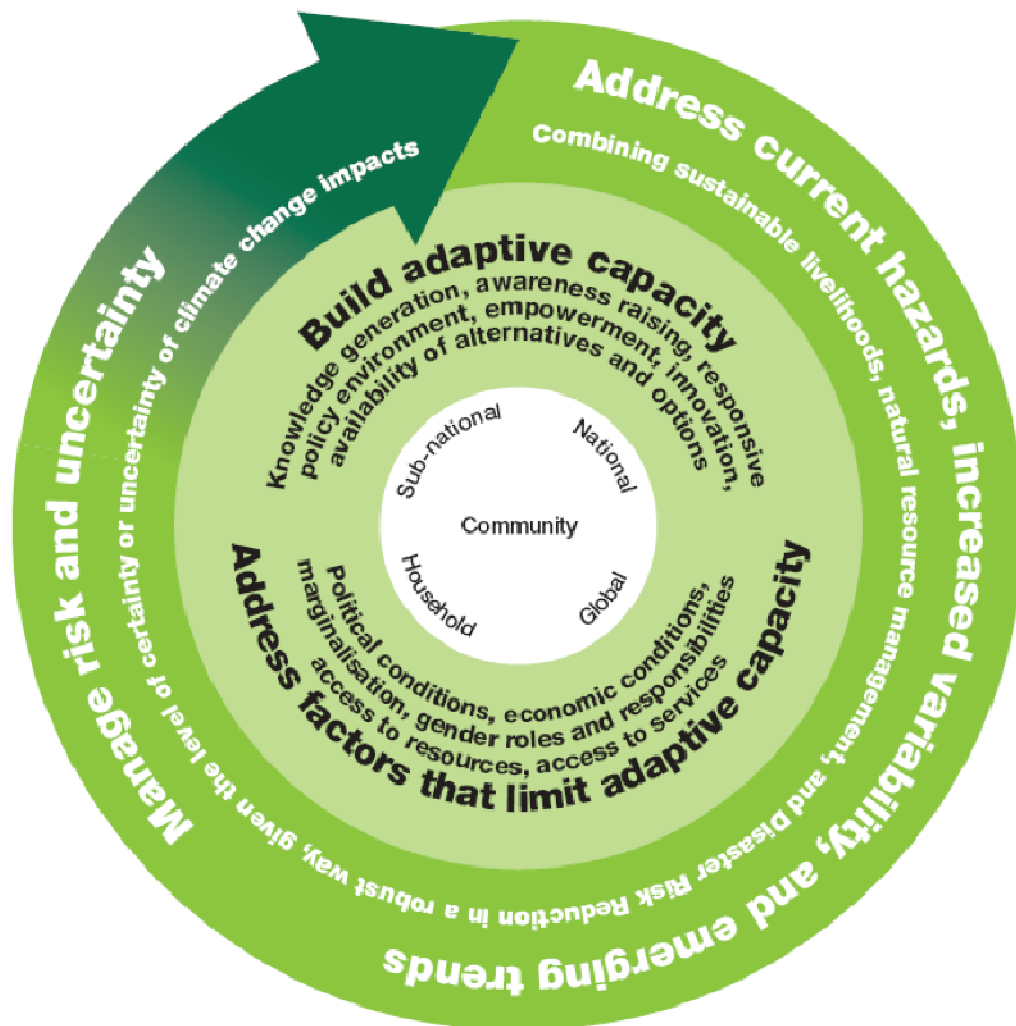
The need to adapt to climate change is directly linked to climate change intensity – as **sooner** climate change is tackled, as the need for adaptation to climate change is **lower**

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** (budžeta) **instruments**
- **Financial instruments**



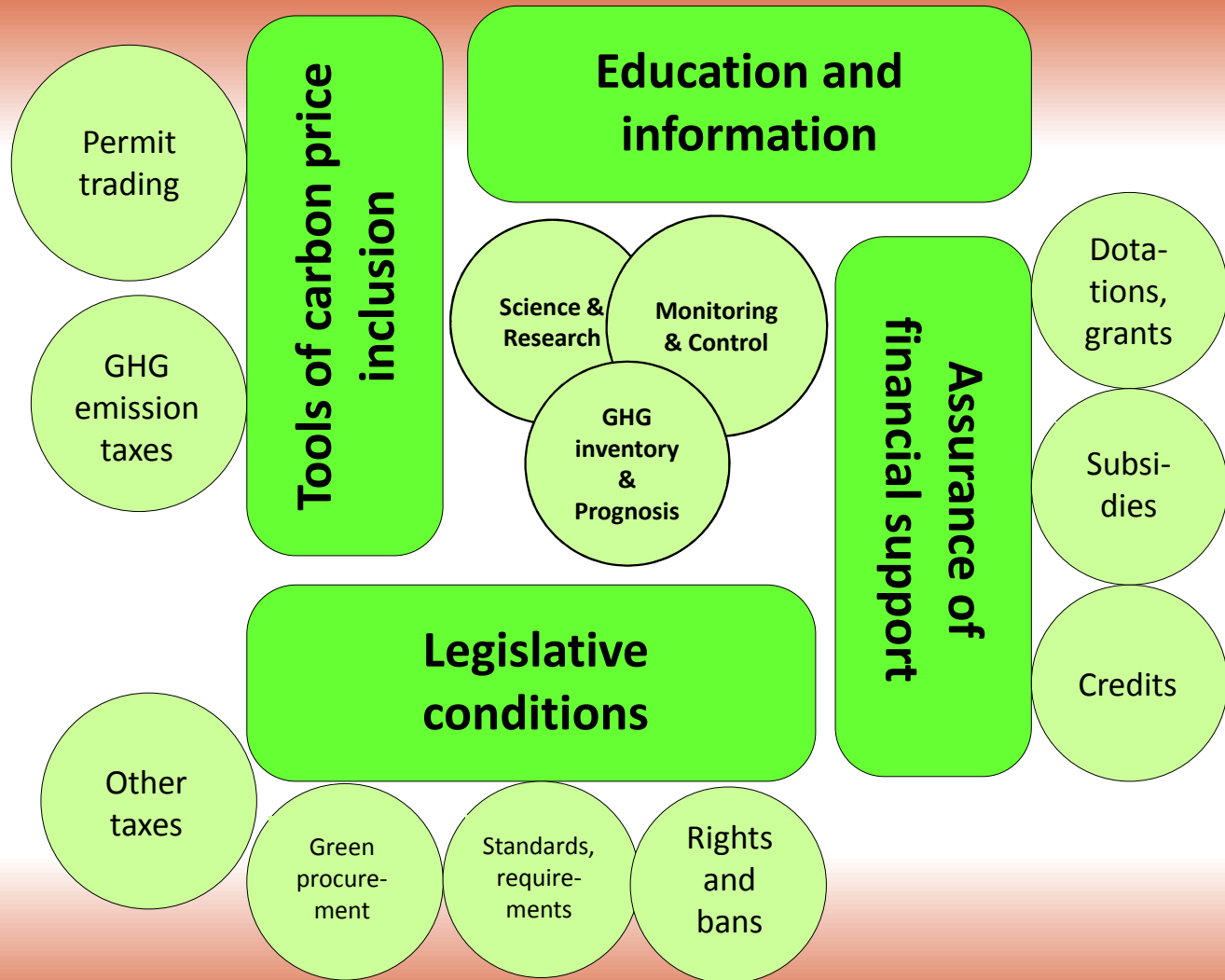
Climate policy is characterized by the fact that most of the instruments are the responsibility of other sectors and they are not being created anew to gain climate policy objectives, but are adapted to the requirements of climate policy

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

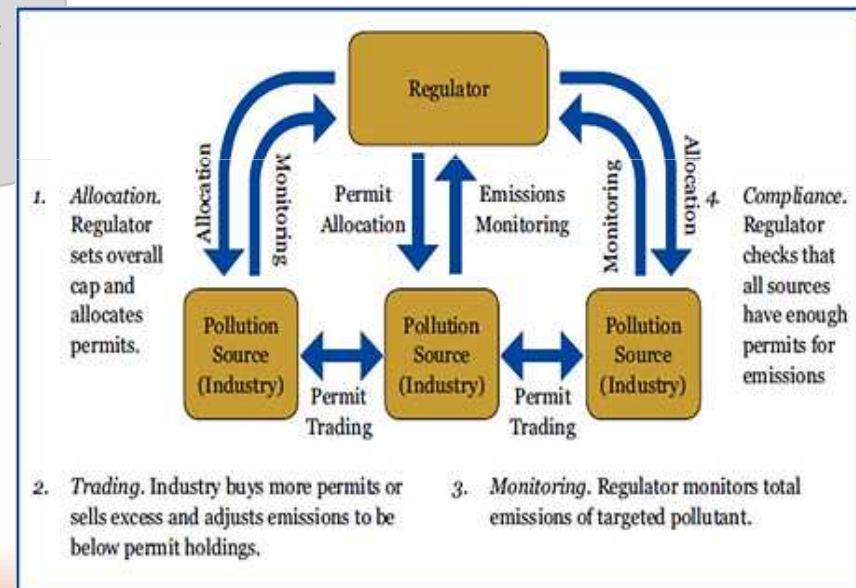
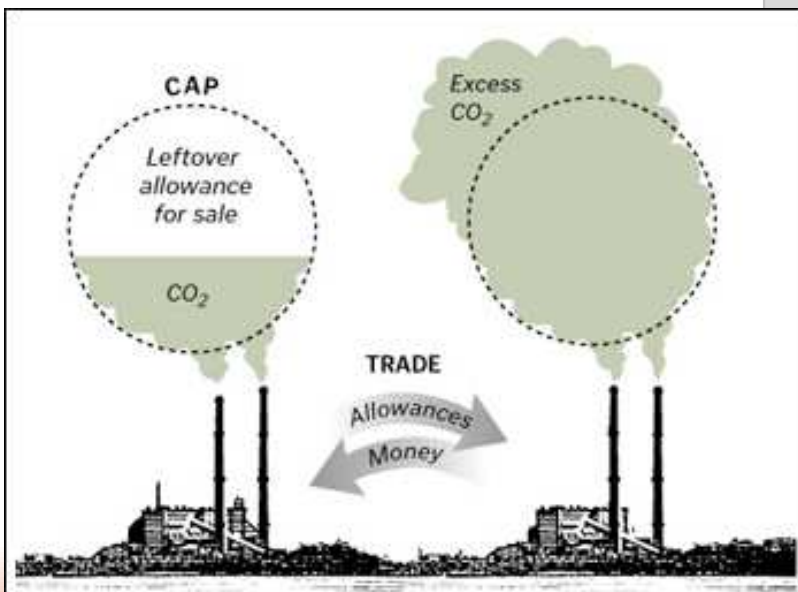
In its turn, the interaction of these three elements forms the tradable permit instrument basis – the market

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

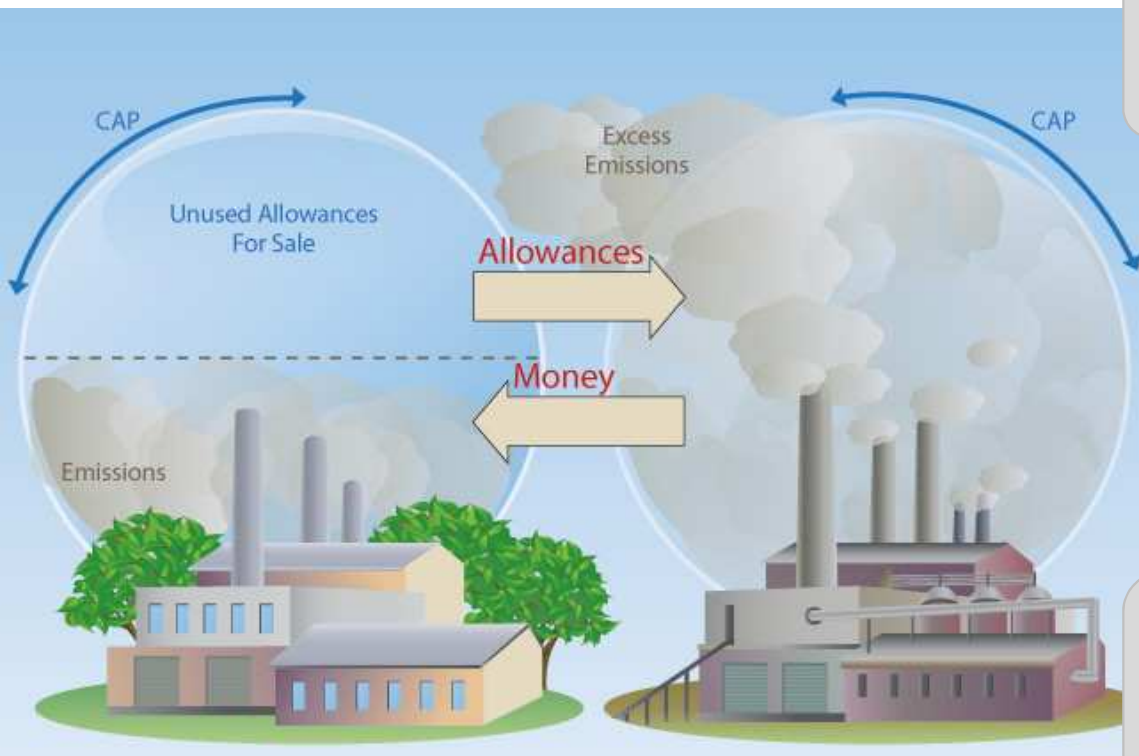
Initial distribution of permits among the direct participants of the market can be implemented in two ways:

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



The first GHG emission's permit trading system started its operation in 2000 – it was the CO₂ 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 system is that one permit represents one ton of GHG emissions expressed in carbon dioxide equivalents (CO₂e)

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 20th 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**:

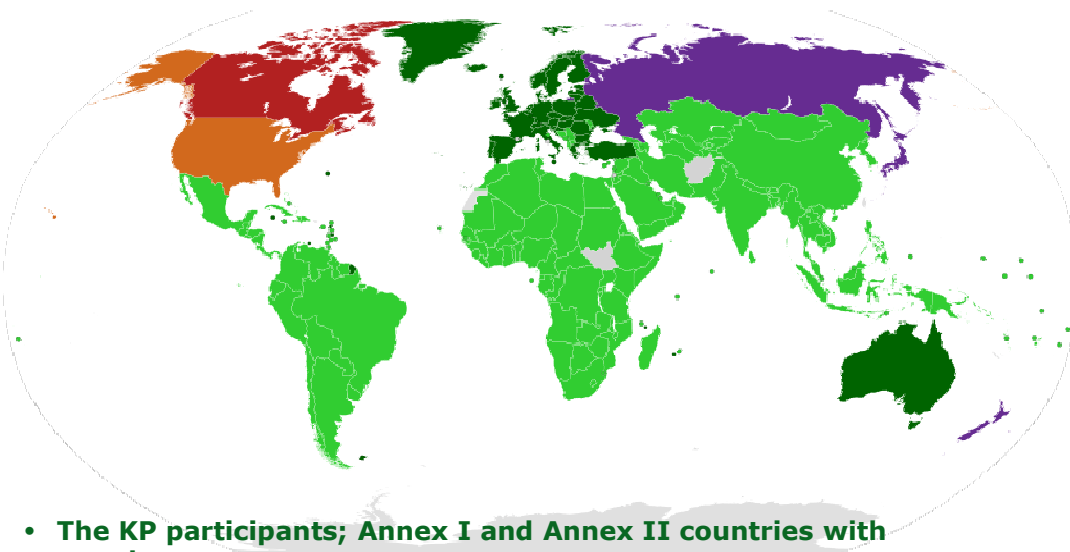
- **Principle of equity and common but differentiated responsibilities** – reflects distribution between the GHG emissions and resources among different countries in the past and present
- **Principle of precaution** – similarly as defined in international and national legislation on environmental protection, 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 2nd period of the KP do not have mandatory targets, although in the 1st 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 2nd 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 bound 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 1st period and 20 % reduction in the 2nd period in comparison to 1990

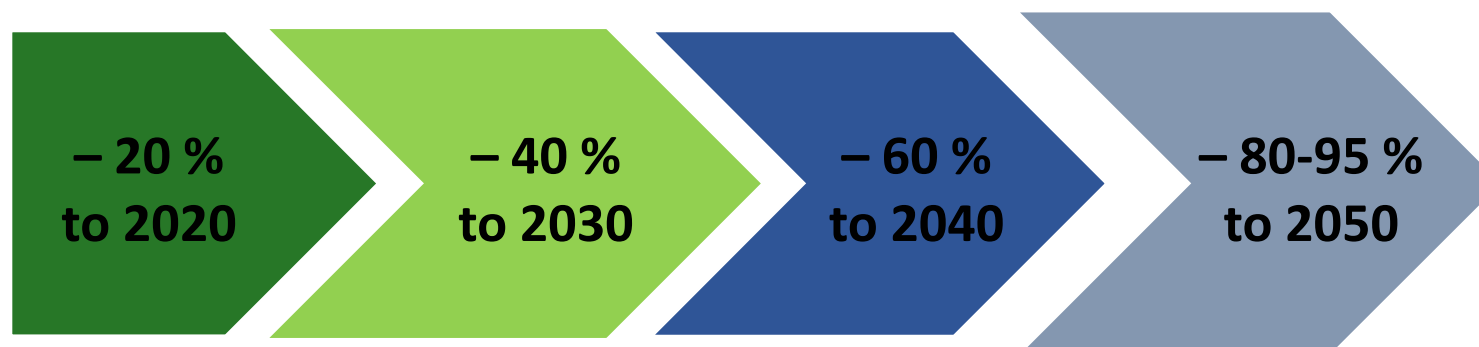
The EU has fulfilled its goal of the 1st period and it is likely to meet the goal of the 2nd period - the most recent projections suggest that to 2020 the EU will have reached the 24 % emission reduction



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

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 **transition to 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



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**



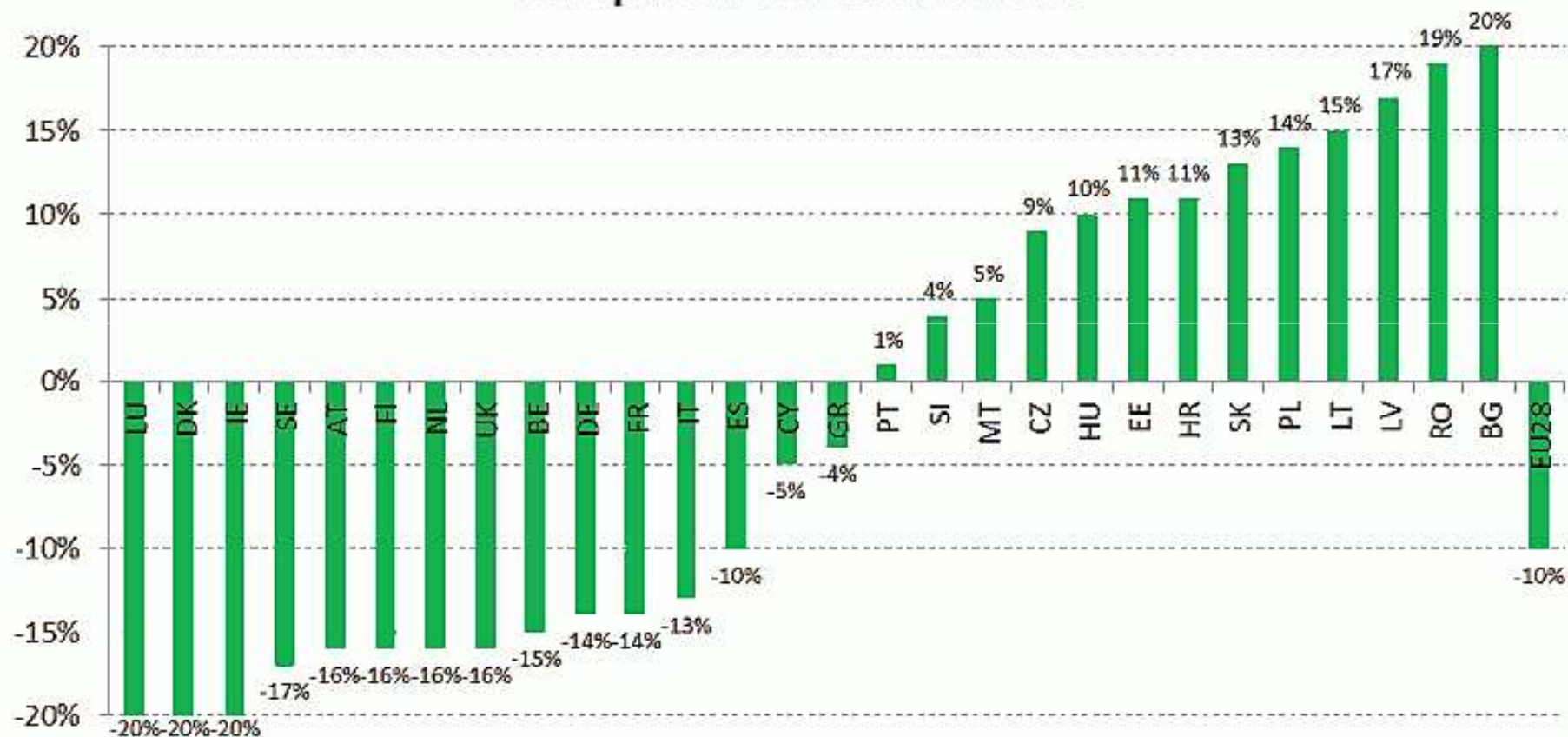
The EU ETS aims at short and long term to promote the reduction of GHG emissions in a cost effective and economically efficient manner, thereby contributing to the Kyoto GHG reduction targets

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



Satoshi Kambayashi

The EU ETS is structured by individual trading periods:

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



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

1 EUA means the rights to emit 1 ton of CO₂e, 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)

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

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



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.

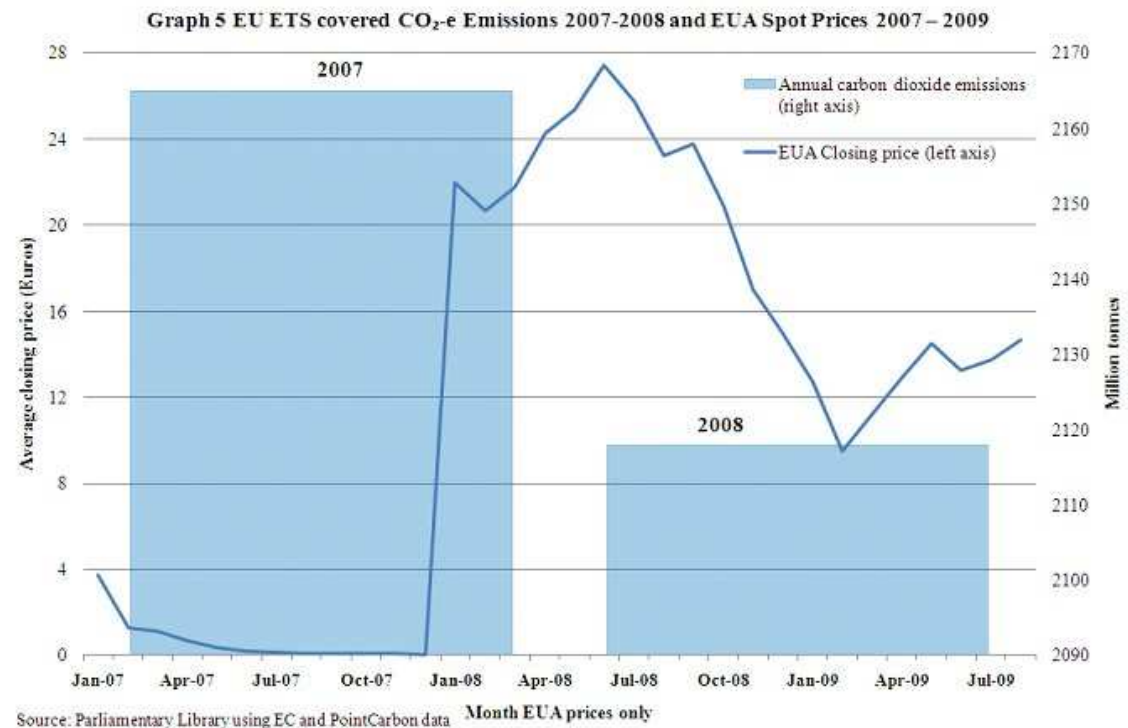
Closely related to the EU ETS activities are emission' management consultants, emission auditors, trading consulting companies of emission units, commercial brokers, bourses etc., but the legislation does not set out specific rights and responsibilities for them in relation to the EU ETS

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 3rd 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

PARIS AGREEMENT

The Paris Agreement builds upon the Convention and – for the first time – brings all nations into a common cause to undertake take ambitious efforts to combat climate change and adapt to its effects, with enhanced support to assist developing countries to do so. As such, it charts a new course in the global climate effort.

The Paris Agreement's central aim is to strengthen the global response to the threat of climate change by keeping a global temperature rise this century well below 2 degrees Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius.

Additionally, the agreement aims to strengthen the ability of countries to deal with the impacts of climate change. To reach these ambitious goals, appropriate financial flows, a new technology framework and an enhanced capacity building framework will be put in place, thus supporting action by developing countries and the most vulnerable countries, in line with their own national objectives.

The Agreement also provides for enhanced transparency of action and support through a more robust transparency framework. Further information on key aspects of the Agreement can be found.

Essential Elements

The Paris Agreement, adopted through Decision [1/CP.21](#), addresses crucial areas necessary to combat climate change. Some of the key aspects of the agreement are set out below:

Long-term temperature goal (Art. 2) – The Paris Agreement, in seeking to strengthen the global response to climate change, reaffirms the goal of limiting global temperature increase to well below 2 degrees Celsius, while pursuing efforts to limit the increase to 1.5 degrees.

Global peaking (Art. 4) – To achieve this temperature goal, Parties aim to reach global peaking of greenhouse gas emissions as soon as possible, recognizing peaking will take longer for developing country Parties, so as to achieve a balance between anthropogenic emissions by sources and removals by sinks of greenhouse gases in the second half of the century.

Mitigation (Art. 4) – The Paris Agreement establishes binding commitments by all Parties to prepare, communicate and maintain a nationally determined contribution (NDC) and to pursue domestic measures to achieve them. It also prescribes that Parties shall communicate their NDCs every 5 years and provide information necessary for clarity and transparency. To set a firm foundation for higher ambition, each successive NDC will represent a progression beyond the previous one and reflect the highest possible ambition. Developed countries should continue to take the lead by undertaking absolute economy-wide reduction targets, while developing countries should continue enhancing their mitigation efforts, and are encouraged to move toward economy-wide targets over time in the light of different national circumstances.

Sinks and reservoirs (Art.5) – The Paris Agreement also encourages Parties to conserve and enhance, as appropriate, sinks and reservoirs of greenhouse gases as referred to in Article 4, paragraph 1(d) of the Convention, including forests.

Market and non-markets (Art. 6) – The Paris Agreement establishes a mechanism to contribute to the mitigation of greenhouse gas emissions and support sustainable development, as well as defining a framework for non-market approaches to sustainable development.

Adaptation (Art. 7) – The Paris Agreement establishes a global goal to significantly strengthen national adaptation efforts – enhancing adaptive capacity, strengthening resilience and reduction of vulnerability to climate change – through support and international cooperation. It also recognizes that adaptation is a global challenge faced by all. All Parties should submit and update periodically an adaptation communication on their priorities, implementation and support needs, plans and actions. Developing country Parties will receive enhanced support for adaptation actions.

Essential Elements

Loss and damage (Art. 8) – The Paris Agreement significantly enhances the Warsaw International Mechanism on Loss and Damage, which will develop approaches to help vulnerable countries cope with the adverse effects of climate change, including extreme weather events and slow-onset events such as sea-level rise. The Agreement now provides a framework for Parties to enhance understanding, action and support with regard to loss and damage.

Support (Art. 9, 10 and 11) – The Paris Agreement reaffirms the obligations of developed countries to support the efforts of developing country Parties to build clean, climate-resilient futures, while for the first time encouraging voluntary contributions by other Parties. Provision of resources should also aim to achieve a balance between adaptation and mitigation. In addition to reporting on finance already provided, developed country Parties commit to submit indicative information on future support every two years, including projected levels of public finance. The agreement also provides that the Financial Mechanism of the Convention, including the Green Climate Fund (GCF), shall serve the Agreement. International cooperation on climate-safe technology development and transfer and building capacity in the developing world are also strengthened: a technology framework is established under the agreement and capacity building activities will be enhanced through, inter alia, enhanced support for capacity building actions in developing country Parties and appropriate institutional arrangements.

Transparency (Art. 13) – The Paris Agreement relies on a robust transparency and accounting system to provide clarity on action and support by Parties, with flexibility for their differing capabilities. In addition to reporting information on mitigation, adaptation and support, the agreement requires that the information submitted by each Party undergoes international review. The Agreement also includes a mechanism that will facilitate implementation and promote compliance in a non-adversarial and non-punitive manner, and will report annually to the COP.

Global Stocktake (Art. 14) – A “global stocktake”, to take place in 2023 and every 5 years thereafter, will assess collective progress toward meeting the purpose of the Agreement in a comprehensive and facilitative manner. Its outcomes will inform Parties in updating and enhancing their actions and support and enhancing international cooperation.

Decision 1/CP.21 also sets out a number of measures to enhance action prior to 2020, including strengthening the technical examination process, enhancement of provision of urgent finance, technology and support and measures to strengthen high-level engagement.

UN climate summit (COP22 in Marrakech) says education primes societies for global change



The role of education in preparing societies for global change and a greener future was the message at a thematic day held during the UN climate conference COP22 in Marrakech, Morocco (8-15 November, 2016).

UNESCO's Director-General Ms Bokova presented UNESCO's Green Citizens project which showcases outstanding ESD projects from around the world in a photo exhibition.

UNESCO launched two new publications:

[“PLANET: Education for environmental sustainability and green growth”](#) by UNESCO's Global Education Monitoring (GEM) Report which analyzes how education enables individuals to better cope with, and reduce their vulnerability to, the dangers associated with climate change;

[“Action for Climate Empowerment: Guidelines for accelerating solutions through education, training and public awareness”](#), a guidance document for policy-makers, developed in collaboration with UNFCCC.

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

Whereas, the 2nd 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)

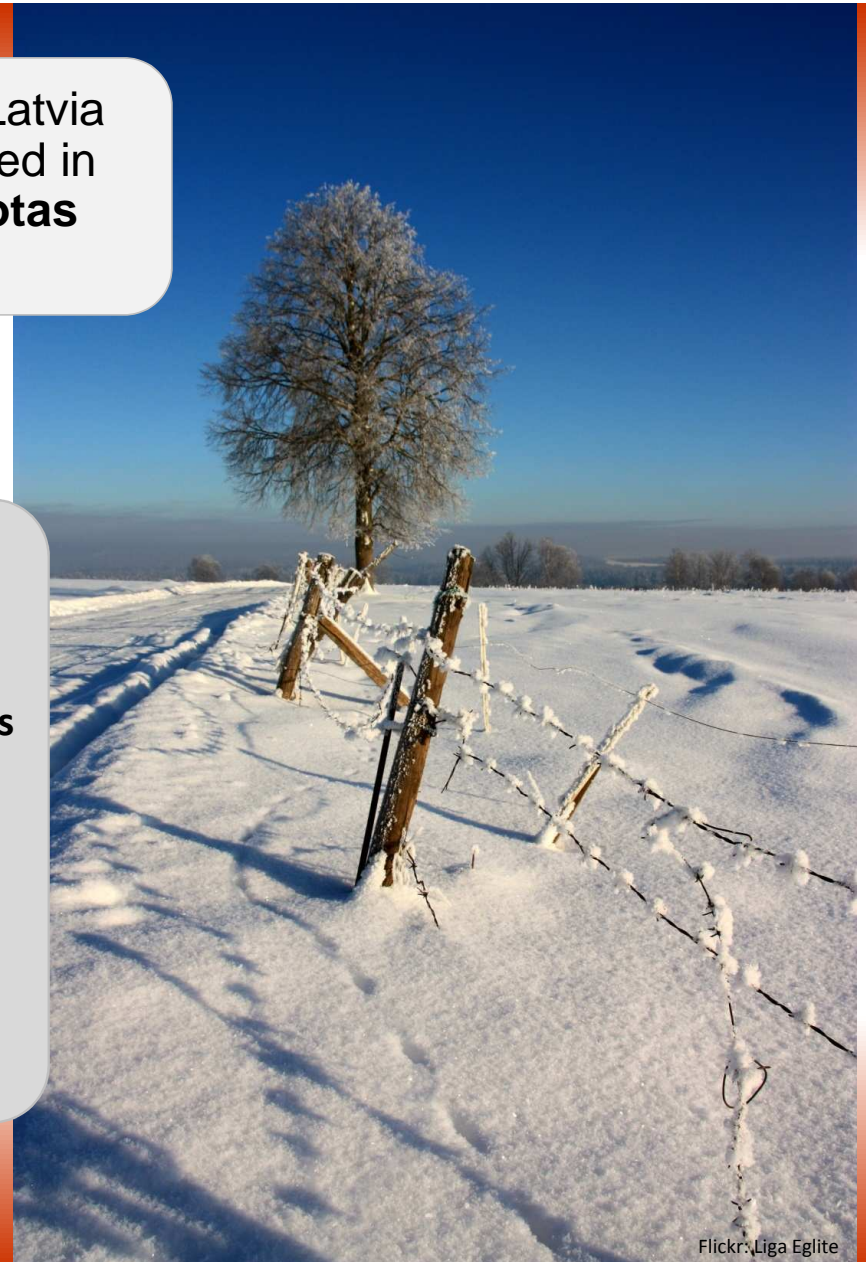
But it is essential to point out that initially climate policy of Latvia has been focused exclusively on combating climate change, but adaptation to climate change as a separate activity was raised only in 2014


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

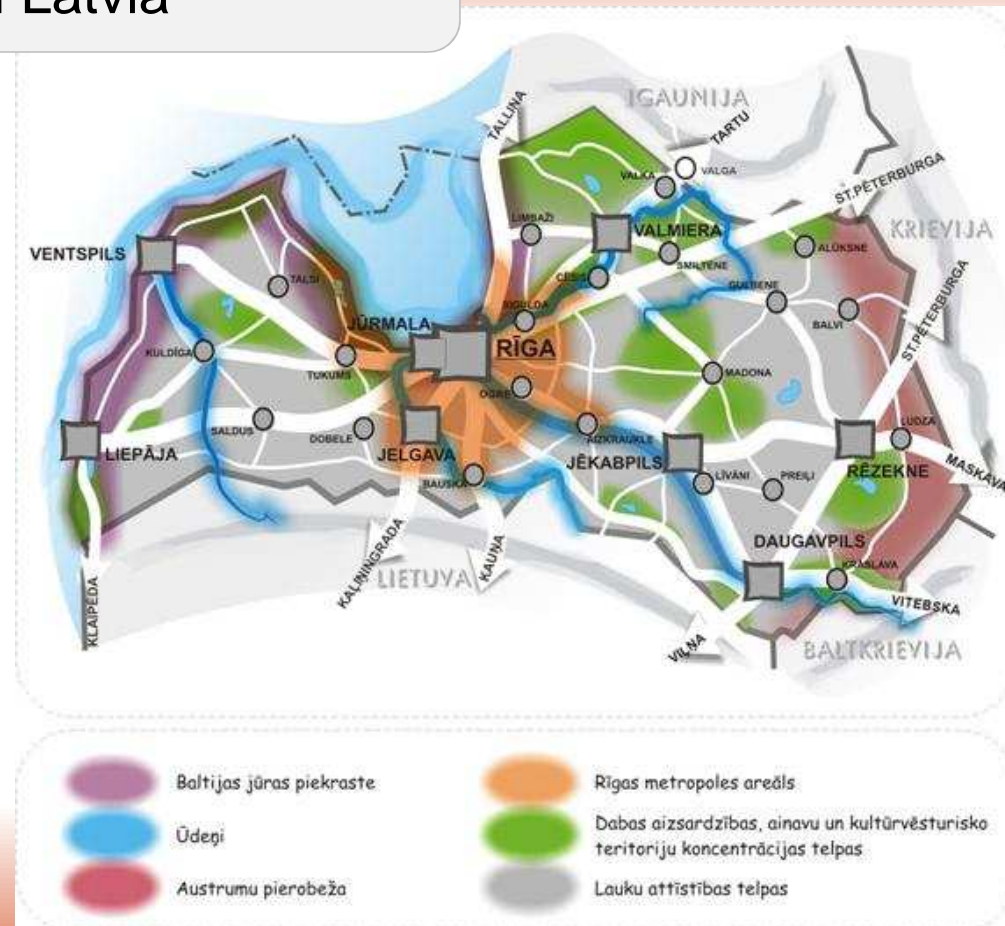
Targets of Latvia in GHG emission reduction for the period 2015-2020

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 ₂ 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 ₂ 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 ₂ e	-	-	-	-	-	2,26
GHG emission intensity of the national economy	t CO ₂ e/1000 LVL from GNP	-	-	1,30	-	-	1,13
Assured CO ₂ binding in forestry sector	Mt CO ₂ 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 take 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, Electro-mobility development and so on

**Climate policy actions set by
VPP2020:**

- Ensuring of the EU ETS activities
- Sustainable use of biomass
- Ensuring of CO₂ 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 CO₂ 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 CO₂ emissions from stationary technological equipment which are involved in certain polluting activities are set

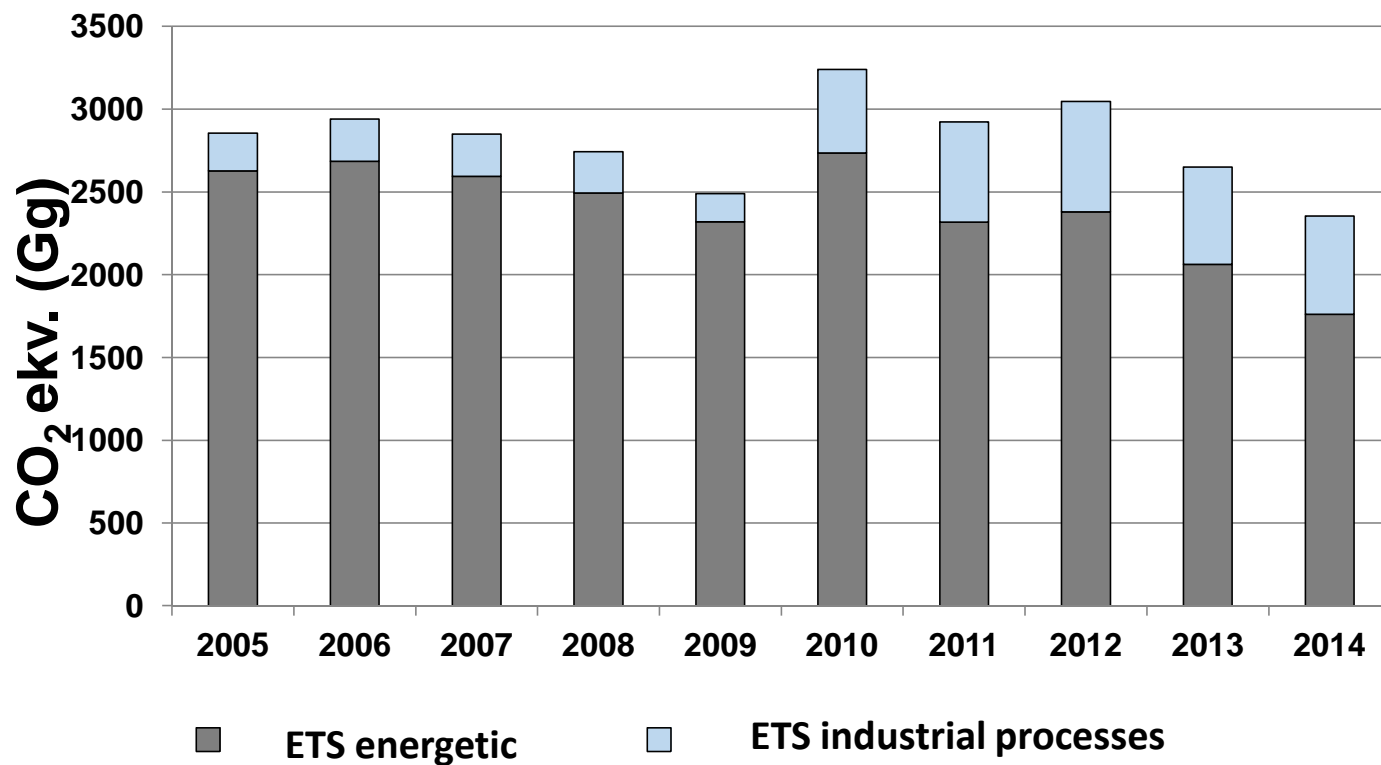
Total GHG emissions in Latvia, in 2013, were by more than 58 % lower than in 1990, but only by about 1 % lower than in 2005

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 %



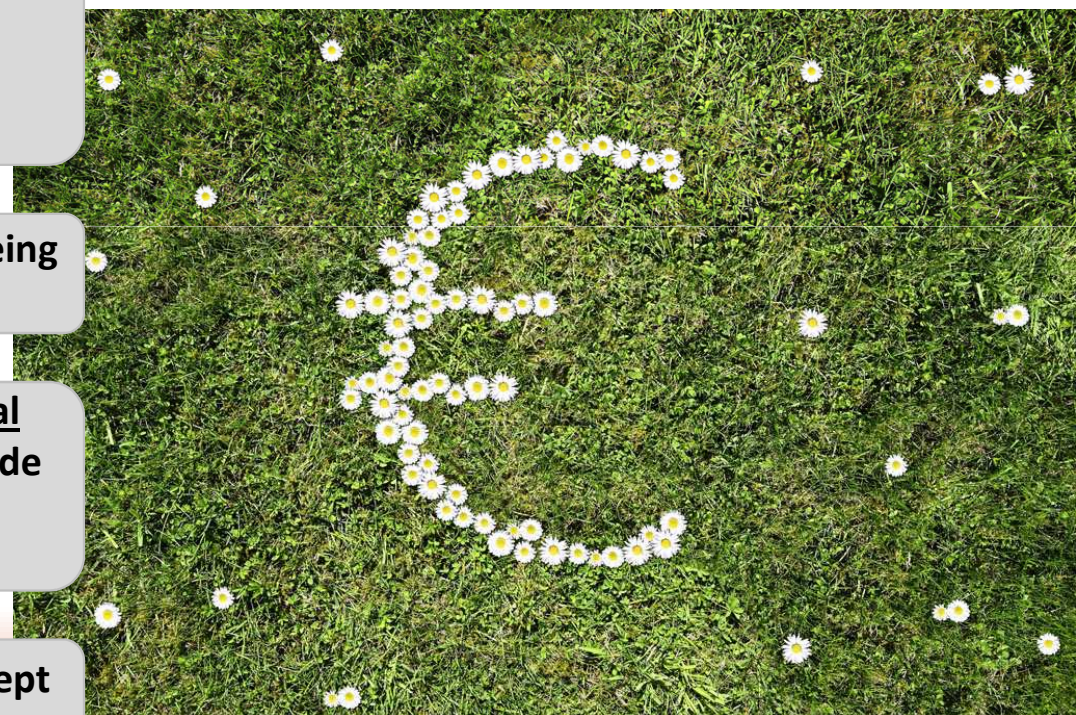
GHG emission projections prepared in 2015 showed that, taking into account existing and planned policy measures, the overall non-ETS GHG emissions during the period 2005-2020 will grow slightly by about 9% and thus will fulfill the objectives during the period until 2020

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



CCFI

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)

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!

