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**REPORT**

**of the UA CSP**

**“Climate change in the context of Paris Agreement commitments:**

**challenges and cooperation opportunities for EU and Ukraine”**

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**Climate change in the context of Paris Agreement commitments: challenges and cooperation opportunities for the EU and Ukraine**

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# Introduction

Recent decades have seen ongoing global processes of atmosphere and ocean warming, along with a reduction in snow, glaciers melting, rising sea levels, and increases in natural cataclysms. Increased temperatures have resulted in droughts, forest fires, the degradation of farming land, reduced biodiversity and increased extreme weather phenomena in terms of their frequency and severity, etc. Redistribution of precipitation has made some regions more arid, while in other regions precipitation has exceeded usual levels. These and other problems relating to climate change cause economic losses, have an impact on the condition of the Earth's general ecosystem as well as human lives and wellbeing, and concern every person on our planet, Ukraine being no exception.

This report examines how Ukraine fulfils its international climate change obligations in the context of meeting its commitments under the EU-Ukraine Association Agreement (AA). It analyses progress made in implementing Chapter 6 (Environment), Title V and Annexes XXX and XXXI of the AA, inasmuch as these concern climate change, as well as the status commitments made under the Paris Agreement on climate.

The report consists of two parts. The first part describes Ukraine's progress in meeting its international climate commitments, including the provisions of the AA. The second part outlines prospects for developing climate-related policies and legislation in pursuance of the Paris Agreement, within the framework of the AA climate provisions. This analysis was done as of the year 2017 and took into account Ukraine's earlier achievements in meeting its international climate commitments and its relevant plans for the future.

The question of how Ukraine meets its climate commitments under the AA and the Paris Agreement is addressed in the report at the level of the country's both national and regional authorities, namely the Cabinet of Ministers of Ukraine, the Ministry of Ecology and Natural Resources of Ukraine (Ecology Ministry) and other relevant ministries, the Verkhovna Rada of Ukraine, Oblast State Administrations, and local governments.

The study analysed public sources of information, including reports by state authorities, legislative and regulatory acts, and analytical studies by nongovernmental organizations and think tanks.

# Part 1. Issues of climate change in the context of the EU-Ukraine Association Agreement

## 1.1 The importance of fighting climate change for the reform agenda in Ukraine

Today, the reality of climate change as a global environmental problem is no longer questioned. As demonstrated by research findings, a significant, rapid increase in the concentration of atmospheric greenhouse gases (GHGs) was observed in the second half of the 20th century, during the period of fast-paced economic development. It is important to understand that the problem of climate change has a global character, and nations depend on each other in solving the problem. Scientists' certainty that there is an anthropogenic factor behind these changes in climate has been growing. According to the most recent Fifth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC),[[1]](#footnote-1) the probability that people are involved in global climate change has increased to 95%. In the fourth IPCC report in 2007,[[2]](#footnote-2) this probability was estimated to be 90%. As a consequence of the increased probability of climate's dependence on human activity, scientists call on national governments to take measures to reduce GHG emissions.

**Chart 1. Global annual mean surface air temperature change, 1880-2015**



Land-ocean temperature index, from 1880 to the present, with a base period from 1951-1980. The solid black line is the global annual mean and the solid red line is the five-year lowess smooth. The blue uncertainty bars (95% confidence limit) account only for incomplete spatial sampling. *(Source: NASA Goddard Institute for Space Studies)*

The difficulty of solving the global climate change problem lies in the specifics and the large scale of the adverse effects of climate change that are happening right now. For example, the rise in sea levels is predicted to deprive millions of people living in sea-locked and coastal countries of their homes, making them climate refugees; the changing conditions for growing food could result in famine for 550 million people[[3]](#footnote-3) and there will be significant adverse effects of climate change due to lost access to potable water; etc.

Over the last 50 years, the global temperature has increased by almost 1°C, leading to natural disasters worldwide.[[4]](#footnote-4) 2017 was one of the hottest years since records began.[[5]](#footnote-5) The losses caused by the consequences of climate change in 2017 reached $320 billion.[[6]](#footnote-6)

In December 2015, 195 countries signed the Paris Agreement, thus agreeing to cooperate on "holding the increase in the global average temperature to well below 2°C above pre-industrial levels" and "pursuing efforts to limit the temperature increase to 1.5°C." The Paris Agreement came into force in November 2016, when it was ratified by 55 countries, collectively accounting for 55% of GHG emissions. As of 1 March 2018, 175 countries had ratified the agreement.

*Article 2.1 of the Paris Agreement defines ways to strengthen the global response to the threat of climate change in the context of sustainable development and efforts to eradicate poverty. These include:*

*(a) Holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change;*

*(b) Increasing the ability to adapt to the adverse impacts of climate change and foster climate resilience and low greenhouse gas emissions development, in a manner that does not threaten food production; and*

*(c) Making finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development.*

To conclude the Paris Agreement, all countries submitted their expected nationally determined contributions (NDCs). However, the emissions reduction targets taken on by each individual country will lead to the world warming by 3*°C*[[7]](#footnote-7), which is incompatible with the existence of civilization.[[8]](#footnote-8) A dialogue is therefore scheduled for 2018 to encourage countries to set more ambitious targets, and their NDCs should be revised every five years, becoming progressively more ambitious.

Both Ukraine and the EU have signed and ratified the Paris Agreement, which imposes a number of new international legal obligations on the parties. One of the Paris Agreement's requirements is to prepare and implement a low carbon development strategy until 2050. The Agreement specifies that each of its parties is to define and communicate a national target relating to the global response to climate change (expected NDC). Thus, Ukraine and the EU have common commitments under their Association Agreement, as well as opportunities for cooperation and joint action.

There are two equally important response strategies to climate change: adapt to it and mitigate its outcomes. In the case of Ukraine, reducing emissions is directly related to energy efficiency, and consequently to the energy independence of the state. As for adaptation to climate change, this question is almost absent in its national documents.

With regard to energy efficiency, the most important thing for Ukraine in the context of its cooperation with the EU is compliance with the Energy Community's energy efficiency directives. Their implementation is envisaged by the governmental Action Plan on the implementation of the Association Agreement.

Besides the commitments Ukraine has undertaken in pursuance of international acts, including its commitment to implement the AA, the fight against climate change also opens up a number of opportunities for the country. This is because renewable and energy efficiency technologies have recently been attracting increasing investment and in certain cases investors have even diverted funds from fossil fuel extraction projects to alternative energy projects. Countries that create favourable conditions for the development of cutting-edge technologies will be able to attract such investment to their economies.

## 1.2 Progress on meeting climate commitments under the EU-Ukraine Association Agreement

***What climate commitments does the EU-Ukraine Association Agreement impose on Ukraine?***

The Association Agreement between the European Union and its Member States and Ukraine[[9]](#footnote-9) (AA), also signed by the European Atomic Energy Community (Euratom), binds Ukraine to international climate commitments in addition to those envisaged by special acts under international law. This AA was signed in March 2014 and became fully effective on 1 September 2017. According to Article 365, the cooperation objectives covered by the AA include, inter alia, the "development and implementation of a policy on climate change, in particular as listed in Annex XXXI to this Agreement".

Article 361 defines climate change as an important global and regional environmental problem to be addressed through EU-Ukraine cooperation, and Article 374 calls on the parties to "develop their scientific potential in order to fulfil their global responsibilities and commitments," in the area of climate change among others. The Preamble to the AA mentions that the parties are committed to implementing the Energy Community Treaty, which is also an important component of promoting and developing climate policy.

Annex XXXI lists three broad areas of cooperation on climate change:

1. Implementation of the Kyoto mechanisms, which also envisages promoting the Joint Implementation mechanism within the Kyoto Protocol framework. The implementation of this AA clause has given rise to an investigation against several officials over the embezzlement of UAH 336 million given to Ukraine under the assigned amount units and the green investment scheme;
2. Development of an action plan for mitigation of and adaptation to climate change;
3. Development and implementation of long-term measures to reduce GHG emissions.

Activities in the second and third areas comprise a wide range of technical and organizational measures. In fact, almost any emissions reduction or climate change adaptation measure will fall under these items. On the other hand, these items do not specify anything in particular, making it difficult to oversee their implementation based only on provisions of the AA.

Moreover, Annex XXX to the AA imposes certain obligations regarding GHG emission allowance trading and ozone layer protection. In particular, Ukraine undertakes to implement Directive 2003/87/EC establishing a scheme for GHG emission allowance trading within the Community, Regulation (EC) 842/2006 on certain fluorinated greenhouse gases, and Regulation (EC) 2037/2000 on substances that deplete the ozone layer.

However, it should be mentioned that some of the climate commitments under the AA are currently not relevant, being inconsistent with contemporary EU legislation, and need to be updated. This is because the EU-Ukraine Association Agreement was concluded before the Paris Agreement on climate change was adopted.[[10]](#footnote-10)

Article 356 of the AA provides, among other things, for the development of sectoral strategies on air quality, industrial pollution, industrial hazards and chemicals; the development of financing strategies for investment in infrastructure and technology; the development of an overall strategy on environment, covering planned institutional reforms (with timetables) for ensuring the implementation and enforcement of environmental legislation; the promotion of integrating environmental concerns into other policy areas; and the identification of necessary human and financial resources.

According to Article 293, the Parties will strive to facilitate and promote foreign direct investment in environmental goods, services and technologies, as well as in sustainable renewable-energy and energy-efficient products and services.

***What did Ukraine do in 2017 to implement the climate component of the EU-Ukraine Association Agreement?***

In 2017, climate policymaking in Ukraine was on the upswing. Having climate change questions on the Ukrainian political agenda and the active role played by the Ecology Ministry at European and international level on these questions could be the beginning of it putting its commitments into practice on the one hand, and the strengthening of Ukraine's role in global and European climate-related processes on the other.

Regretfully, we cannot say that the AA provisions have been properly applied and the directives – to which Ukraine has to align its legislation – fully implemented. Nevertheless, its progress has positive aspects. A number of important planning and strategic instruments have been adopted and others have been developed and are pending approval, e.g. the draft Low Carbon Development Strategy.

In 2017, Ukraine implemented the following measures in pursuance of the AA provisions on climate change:

* On 6 December 2017, the Cabinet of Ministers approved the **Action Plan on the Execution of the Concept of Implementation of State Climate Change Policy until 2030**.[[11]](#footnote-11) The main elements of the concept implementation process include: enhancing institutional capacity to develop and ensure the implementation of state climate change policy; preventing climate change by reducing anthropogenic emissions and increasing the absorption of GHGs; ensuring a gradual transition to low carbon development of the state and adapting to climate change, strengthening resilience and reducing risks related to climate change. According to the Concept Implementation Plan,[[12]](#footnote-12) the following, inter alia, is scheduled to take place in 2018: laws on setting up, monitoring and reporting and verification systems for GHG emissions and emissions trading are to be drafted; procedures for GHG emissions monitoring, reporting and verification are to be approved; a National Plan on quota distribution between plants and the procedure for a GHG emissions permit system are to be developed; a Climate Change Adaptation Strategy of Ukraine is to be adopted; an act on amending the regulations on the interagency commission for the implementation of the UN Framework Convention on Climate Change (approved by Cabinet of Ministers Decree No. 583 of 14 April 1999) with regard to extending its tasks in accordance with the Paris Agreement and the AA provisions on climate change to be drafted and introduced into the Cabinet of Ministers; and a Low Carbon Development Strategy for Ukraine until 2050 is to be approved;
* The **Low Carbon Development Strategy for Ukraine until 2050**[[13]](#footnote-13) was drafted;
* In April 2017, the Cabinet of Ministers of Ukraine approved the **Medium-term Priority Government Action Plan until 2020**.[[14]](#footnote-14) Under this plan, the annual total anthropogenic GHG emissions in various sectors of the Ukrainian economy should be limited to a level that does not exceed Ukraine's annual average GHG emissions in 2008-2012 – the first commitment period under the Kyoto Protocol to the United Nations Framework Convention on Climate Change (UN FCCC);
* On 18 August 2017, the Cabinet of Ministers issued decree No. 605 approving the **Energy Strategy of Ukraine until 2035:** "Security, Energy Efficiency, Competitiveness."[[15]](#footnote-15) The strategy envisages: making progress in renewable energy (RE), by increasing the share of end-use consumption that it accounts for by up to 11% by 2020; implementing investment projects under the National Plan for Emissions Reduction from Large Combustion Plants; upgrading and improving systems for consumption metering and consumer engagement, with regard to control over demand for energy resources; attracting investments in the RE sector by 2025; and developing RE at a faster pace in comparison with other generation types, thus increasing its share of the primary energy supply structure by up to 25% by 2035. In the area of energy efficiency and environment protection, a GHG emissions trading system is expected to be set up. It is possible to meet future (after 2020) GHG emissions requirements by implementing the GHG emissions trading system, establishing specific indicators for the largest emission sources and introducing other market and nonmarket tools to reduce GHG emissions. However, the Energy Strategy sets targets for GHG emissions at up to 60% of 1990 levels by 2030 and up to 50% of 1990 levels by 2035. As current GHG emissions levels are far below these targets, it could be possible to increase emissions and this is inconsistent with the purpose and principles of the emission trading system. At the same time, the strategy names the development of legislation on the implementation of a GHG emissions trading scheme and other market and nonmarket emissions reduction tools among the main measures for implementing its strategic goals in environment protection;
* In September 2017, Ukraine informed the Kyoto Protocol Compliance Committee of the timely completion of all measures defined in the Kyoto Protocol Target Achievement Plan. It had met the commitments made for the Protocol's first commitment period. The Committee concluded that the information provided was sufficient to decide on Ukraine's compliance with the Protocol. The decision was taken at the Compliance Committee meeting held in Bonn on 6 September 2017;[[16]](#footnote-16)
* On 25 October 2017, the Cabinet of Ministers approved the **Association Agreement Implementation Action Plan**.[[17]](#footnote-17) The plan provides[[18]](#footnote-18), among other things, for the setting up of a permit system for GHG emissions and a system for putting into circulation GHG emission quota units that will be traded at national level between plants in Ukraine; the development and adoption of a relevant regulatory act on procedures for determining activity-specific and product-specific emission indicators for GHGs in the industry and energy sectors; the development and submission to the Cabinet of Ministers of a draft law on ozone depleting substances and fluorinated greenhouse gases and other measures on the legal regulation of climate change issues that must be fulfilled by the end of 2018. It should be mentioned that the Action Plan was approved in violation of the procedure for civil society participation, and its publication was much delayed;
* On 8 November, 2017, the Cabinet of Ministers approved the **National Emissions Reduction Plan for Large Combustion Plants** (which provides for measures on gradual reduction in emissions of sulphur dioxide (SO2) and nitrogen oxide (NOX) as well as substances in the form of suspended solids of undifferentiated composition (dust);
* On 31 January 2017, the Ecology Ministry set up a section for environment monitoring and ozone layer protection within its Climate Change and Ozone Layer Department. The section had five staff members.[[19]](#footnote-19) Thus, a separate unit was defined within the Ministry's structure to take charge of preparing, agreeing and submitting necessary information and documents within as part of the AA implementation process and fulfilment of international commitments in relation to ozone layer protection.[[20]](#footnote-20) It should be mentioned, however, after the new structure of the department had been approved, its staff was then cut by three persons – an unjustified move considering the number of issues that have to be solved in the area of climate change and ozone layer protection.

Moreover, in pursuance of the AA, Ukraine adopted the **Law "On Environmental Impact Assessment"**, which came into force in 2017. This assessment intends to prevent environmental harm, ensure environmental security, protect the environment and ensure the harmonious use and reproduction of natural resources when taking decisions on economic activities that may have a significant impact on environment, taking into account state, public and private interests. In particular, the impact assessment procedure requires an outline of the impact of planned activity on climatic factors (including climate change and GHG emissions).[[21]](#footnote-21) Thus, a decision on whether or not it is possible to carry out an activity specified by the law will be taken subject to the probable impact of this activity on climate change.

The development of the above documents is certainly a positive trend. However, no framework law has been adopted in Ukraine on the prevention of and adaptation to climate change, and there are problems with integrating climate policy in various spheres. The obstacles to policy implementation are due to the low institutional capacity and human resource potential.

# Part 2. Prospects for climate policy and legislative development in accordance with the Paris Agreement under the Association Agreement

## 2.1 The cross-cutting and integral character of climate policy

The integral character of a climate policy is the basis of its successful implementation. It is not possible to solve issues of mitigation of the anthropogenic impact on climate and adaptation to climate change without the involvement of practically all economic sectors: energy, agriculture, transport and others. Regretfully, the climate policy still remains the prerogative of the Ministry of Ecology and Natural Resources of Ukraine. And in the cases where other agencies are charged with certain policy areas, there is no interagency policy coordination whatsoever.

There are quite a lot of examples of a lack of such coordination at governmental level. Let us mention just two:

1. Ukraine's accession to the Bratislava Declaration of civil aviation CEOs from EU Member States and the other Member States of the European Civil Aviation Conference[[22]](#footnote-22) on support of the global GHG emissions market.[[23]](#footnote-23) As a party to the Bratislava Declaration, Ukraine undertakes to implement a monitoring, reporting and verification system for GHG emissions in civil aviation, as well as to set up a system for trading in emission reduction units in aviation between 2021 and 2026. The Ministry of Infrastructure of Ukraine made this decision single-handedly despite objections from the Ecology Ministry.

2. The adoption of the Energy Strategy of Ukraine until 2035 "Security, Energy Efficiency, Competitiveness" in August 2017. While declaring that it promotes low carbon development, the strategy actually provides for an increase in the GHG emissions level and the use of fossil fuels, as well as a very doubtful intensification of nuclear energy and hydraulic power engineering on lowland rivers,[[24]](#footnote-24) which is inconsistent with the principles of the Paris Agreement.

These examples are evidence that Ukraine's climate policy-making is still based on the "remainder principle," and consequences of such decisions are unpredictable in terms of both reputation and financial losses to Ukraine.

Moreover, there is the aggression in Eastern Ukraine and the temporary occupation of Crimea. The obsolete technological base inherited by Ukraine from the Soviet Union was degrading and obviously in need of quality replacement. The hostilities have destroyed it finally. Moreover, the war has been damaging the ecosystem irrecoverably in both the combat area and Ukraine as a whole. Special attention should therefore be paid to the country's development strategy and innovative activities should become its most effective tool.

The Government of Ukraine shares the vision that an increase in the anthropogenic impact on ecosystems and climate as a result of the intensification in agriculture and/or heavy industry is the only negative trend in "innovative" development. This opinion is also conveyed through the media. At the same time, the issue of steep competition on the global market for Ukrainian agriculture and industry has been sidestepped, while actually being a problem for Ukraine's success

In this context, a number of European and world practices, along with the Ecology Ministry's initiatives, open up new possibilities, including the engagement of nongovernmental participants. In addition, the Paris Agreement has laid down principles to ensure such a financial and economic breakthrough (through the mechanisms in Article 6).

Under these circumstances, by including issues such as water, sustainable development and poverty eradication in the purview of the Paris Agreement, the integrated greening of the national economy and proper environmental governance have probably become the only way for Ukraine to make an innovation breakthrough. Provided there is political will, this will give Ukraine an opportunity to introduce truly integrated and crosscutting innovative climate and ecosystem policies as alternatives to increased anthropogenic pressure on these systems.

An innovative policy such as this also must define the place and critical role of local governments in order to achieve national climate targets. It should provide for means of communicating the national targets to local level authorities and engaging local governments in coordinated adaptation and emissions reduction efforts, in order to the guarantee the success of these targets. It also should provide for the participation of the private sector, local communities and civil society as a whole – who have been already taking a lot of action on their own initiative, something which is not reflected in national documents.

## 2.2 The role of the authorities in climate policy implementation and their institutional capacity

The institutionalization of climate policy implementation in Ukraine includes the Presidential Decree "On the Coordinator of Measures to Meet Ukraine's Commitments under the UN Framework Convention on Climate Change and the Kyoto Protocol to the UN Framework Convention on Climate Change" (12 September 2005, No. 1239/2005), the Cabinet of Ministers Decree "On the Interagency Commission for the Implementation of the UN Framework Convention on Climate Change (14 April 1999, No. 583) and the Cabinet of Ministers Decree "On the Procedure for Coordination of Measures to Meet Ukraine's Commitments under the UN Framework Convention on Climate Change and the Kyoto Protocol to the said Convention."

According to the abovementioned Presidential Decree,[[25]](#footnote-25) the Ecology Ministry is to coordinate activities aimed at meeting the country's commitments under the UN FCCC and the Kyoto Protocol. The Ministry has been granted the role of implementing the environmental and economic policies on climate change. Its tasks are to ensure state policy-making on regulation of the adverse anthropogenic impact of climate change and adaptation to it and fulfilment of UN FCCC and Kyoto Protocol requirements (Regulations on the Interagency Commission for the Implementation of the UN Framework Convention on Climate Change[[26]](#footnote-26)). On 31 January 2017, the Ecology Ministry set up a special Climate Change and Ozone Layer Department.

Various central executive agencies may take decisions that influence climate change policy implementation in Ukraine. Besides the Ecology Ministry, these include the Ministry of Energy and the Coal Industry, the Ministry of Economic Development and Trade, the Ministry of Finance, the Ministry of Regional Development, Trade, Housing and Utilities, the Ministry of Infrastructure, the Ministry of Agrarian Policy and Food, the Ministry of Health, the Ministry of Justice, the Ministry of Foreign Affairs, the State Agency on Energy Efficiency and Energy Savings, the State Emergency Service, the State Statistics Service, the State Agency on Forest Resources, the State Agency on Water Resources, and others.

There is a need for proper coordination between the activities of different authorities in the climate change policy implementation process and for trained experts within these authorities.

Exercising certain powers is often the responsibility of several authorities and decisions made by one authority may influence the operation of another authority, or even conflict with the policies and decisions of other state agencies. It is therefore important to set up a body responsible for coordinating decision-making on climate change issues, where joint conferences and discussions can take place. This body is currently the Interagency Commission for the Implementation of the UN Framework Convention on Climate Change. However, its work cannot be deemed efficient enough, since decisions affecting solutions to climate change problems made by different authorities do not have to be agreed upon by the commission and it has no power to call for a mandatory assessment of the climate change policy impact of a decision.

In order to coordinate the authorities' decision-making activities on climate change, amendments should be made to the Regulations on the Interagency Commission for the Implementation of the UN Framework Convention on Climate Change, granting the Commission additional powers in the area of climate change policy implementation, including powers to: participate in the authorities decision-making process; initiate a procedure for discussing and agreeing on such decisions; develop an agreed Ukrainian position to be conveyed at international negotiations; consider, discuss and monitor the Ukraine's fulfilment of its international commitments and develop recommendations for the authorities.

The Action Plan on the Execution of the Concept of Implementation of State Climate Change Policy until 2030, which was approved on 6 December 2017, provides for a number of acts to be drafted and submitted to the Cabinet of Ministers for consideration. These include draft amendments to the Regulations on the Interagency Commission for the Implementation of the UN Framework Convention on Climate, in order to extend its tasks in accordance with the Paris Agreement and the AA provisions related to climate change.

Developing proper oversight mechanisms and ensuring the inevitability of punishment for violation of or non-compliance with climate change legislation are important aspects of climate change policy implementation. To regulate the issues of oversight and responsibility in the climate change policy implementation process, there need to be new rules that define relevant criminal, punishable actions and administrative infractions, and corresponding amendments must be made to the Criminal Code and the Code of Administrative Offences of Ukraine. Supervisory authorities in this area should be also identified, and amendments made to the Regulations on corresponding authorities, accordingly.

Thus, the legal prerequisites for avoiding conflict of interests in regulation, implementation and oversight should be established for the climate change policy implementation process, since these powers cannot be exercised by only one authority or within one power branch.

## 2.3 Incentives for low carbon technologies

Measures to encourage low carbon technologies primarily aim to decarbonise the energy and industrial sectors, which account for a total of 82% of all GHG emissions, and reduce GHG emissions in other sectors (agriculture, waste management and forestry, etc.).

The development of low carbon technologies in the EU is based on the Low Carbon Development Roadmap, the main goal of which is to reduce relevant emissions by 80% from their 1990 level. A similar document in Ukraine is the draft Low Carbon Development Strategy, which aims for a 70% reduction against 1990 levels. However, whereas the EU roadmap provides for an actual reduction in the emissions, the Ukrainian strategy in fact expects them to stabilise at 2015 levels, since the real 70% reduction happened as a result of the shutdown of industrial enterprises after 1990. Support for low carbon technologies is tied up with a country's real intention to reduce emissions.

**Chart 2. GHG emissions in Ukraine (megatons carbon dioxide equivalent), 1990-2015**



*(Source: National Cadastre of anthropogenic emissions from sources and absorption of greenhouse gases absorbers in Ukraine)*

An increase in fuels prices, provoked by the Russian aggression and the hybrid war, which it wages on the economic battlefield too, has become the biggest incentive to reduce emissions in Ukraine. Similarly, the green tariff implementation has become the main incentive to develop renewable power generation sources. Under these circumstances, energy efficiency decisions are also the most appealing from the point of view of low carbon development.

According to a basic (conservative) scenario, where the characteristics of most energy use technologies, consumption by the population and the production of goods and services at any stage remain unchanged until 2050, GHG emissions in the "energy" and "industrial processes" sectors will grow 2.2 times (223%) by 2050 compared to 2015.[[27]](#footnote-27) This projection can only be altered by encouraging low carbon technologies in the aforementioned sectors.

It should be noted that the application of green tariffs to hydropower facilities and renewable energy sources, as well as the efforts to increase the energy efficiency of large combustion plants (thermal power stations and cogeneration plants) and their ecologization, are currently the main components of the state policy to encourage the implementation of low carbon technologies. The formation of the gas and power market in Ukraine also facilitates low carbon development, inter alia, by raising the cost of fossil fuel consumption. At the same time, certain state policies have negative effects on the GHG emissions reduction objectives. Specifically, the system of state subsidies to low-income households, which cover a part of their housing and utilities bills, needs to be improved in order to encourage reduced energy consumption. Moreover, the way that the tariffs on the wholesale electricity market are formed does not encourage the use of non-fossil fuels as sources of power production either.

The key tasks included in the draft Low Carbon Development Strategy for Ukraine, aimed at decarbonizing its economy and primarily the energy sector, are well grounded and will create incentives for the implementation of low carbon technologies in all key sectors of the Ukrainian economy. In particular, the draft highlights four groups of such tasks in the energy sector and predicts a ***reduction*** in GHG emissions by 2050:[[28]](#footnote-28)

* Energy efficiency;
* Renewable energy;
* Modernization and innovation;
* Market and institutional transformations.

**Projected GHG emissions in the sectors "Energy" and "Industrial Processes"**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | **2012** | **2015** | **2020** | **2030** | **2040** | **2050** |
| Basic scenario | Mt CO2-eq. | 367 | 265 | 347 | 455 | 540 | 592 |
| % of 1990 | 44 | 31 | 41 | 54 | 64 | 79 |
| Scenario: "Energy efficiency, renewable energy, modernization and innovation, and market and institutional transformations" | Mt CO2-eq. | 367 | 265 | 265 | 242 | 264 | 261 |
| % of 1990 | 44 | 31 | 31 | 29 | 31 | 31 |

*(Source: draft Low Carbon Development Strategy for Ukraine)*

However, certain measures that will encourage the implementation of low carbon technologies and the decarbonisation of basic sectors may pose threats to the environment and give rise to resistance from some environmentalist groups. In particular, they criticise the governmental "Hydropower Development Programme of Ukraine until 2026". Similarly, the obvious priority given to nuclear energy in the draft Low Carbon Development Strategy may lead to debates with anti-nuclear groups.

There are a number of barriers that restrict the development of low carbon technologies:

* The Energy Strategy of Ukraine until 2035 provides for only a 25% share of renewable sources in end-use energy consumption, which reflects general priority of these technologies for the government;
* Energy and climate policies are not sufficiently integrated;
* The energy market is monopolised;
* There are no limits on GHG emissions in industry.

 In summary, encouraging low carbon technologies is an integral part of Ukraine's state policy on development planning, as reflected in particular in the draft Low Carbon Development Strategy for Ukraine. Decarbonising the economy is certainly among priorities of the Ecology Ministry, and civil society should seize this political opportunity to support the adoption and implementation of the strategy, probably by voicing reservations on prioritising biodiversity protection and environmental security.

***The following may be suggested to ensure more efficient implementation of the EU-Ukraine Association Agreement's climate component:***

* Postponing the implementation of the Emissions Trading System in Ukraine until all advantages and risks have been taken into account and the GDP's energy intensity is substantially reduced. Premature implementation of the ETS is associated with significant risks;
* Giving higher priority to energy efficiency measures and those relating to reduced energy consumption than to measures relating to increased generation.

## 2.3 Cooperation between Ukraine and the EU

Ukraine-EU cooperation in the area of climate change has a long and fruitful history, which acquired a deep and systemic significance after the AA was signed.

However, two systemic problems have been becoming more marked recently:

1. **A lack of systemic dynamics in treaty relations regarding Ukraine-EU cooperation**. Work on the AA began as long ago as 2008. At the time, the instruments specified in the annexes to the AA were effective and they remain the most recent adopted by the parties. The first commitment period under the Kyoto Protocol to the UN FCCC had just come into force, the second phase of the EU Emissions Trading System had been launched, and the world's climate order had not yet been time-tested and tried in practice. Ukrainian NGOs have been pointing out the outdated status of some AA provisions for some time, and representatives of both the EU and the Government of Ukraine also recognize this fact, though informally. In particular, this concerns ETS implementation in Ukraine, which follows rules and procedures that have already been revised in the EU.

The experience and lessons learned by Kyoto Protocol member countries have resulted in the signing and ratification of the Paris Agreement, which gave up the static and discrete approach to national GHG emissions reduction commitments. It also gave up global budgeting, country differentiation and many other aspects that made it impossible to take climate change dynamics and changes in national, eco-systemic and other circumstances into account.

Moreover, no Paris Rulebook has been adopted so far, and there are reasonable concerns that it will not be adopted in 2018 either. A modern model of relations must provide for changing dynamics in the parties international commitments and national circumstances.

1. **A lack of parity between Ukraine-EU cooperation parties**. Although Ukraine is far behind the EU in terms of policies and governance, it has developed a powerful expert and civil community in the area of climate change. Ukrainian experts often head commissions and committees under the FCCC, carrying out inspections in the G7 countries. Thus, competence gaps have formed – not only between the Government and the expert community / civil society in Ukraine but also between Ukrainian experts and European experts who participate in cooperation programmes on the EU side.

During the UN FCCC discussion on the Paris Rulebook, the Ecology Ministry in conjunction with Ukrainian experts came up with the concept of establishing an Integrated Climate Partnership as an inter-state, treaty-based organisation.[[29]](#footnote-29) Such a partnership, joined by both Ukraine and the EU, would allow them to solve the abovementioned systemic problems affecting their cooperation, through direct operative communications. It would also offer an opportunity to create a joint expert pool.

***The following may be suggested to increase the efficiency of Ukraine-EU cooperation:***

* Considering the possibility of setting up, as soon as possible, an Integrated Climate Partnership of individual countries from the EU, the East Balkans, Eastern Partnership and Central Asia, as well as their nongovernmental institutions and civil society;
* Supporting close interaction with the Energy Community's Energy and Climate Committee, which is called to ensure integration of climate and energy policies, also in Ukraine.

# Conclusions and recommendations

Ukraine has to opt for **low carbon development**, qualitatively altering its economic model and relationships with its ecosystem. This would lead to the mitigation of anthropogenic pressure on the climate system. Legislative targets on limiting GHG emissions need to be the basis for further development of climate change policy.

**Incentives for low carbon technologies**. The expedience and effectiveness of the "green tariff" – the only incentive for the use of low carbon technologies – is currently the subject of debate. The green tariff needs to be optimised in terms of its impact on the economy, and a variety of incentives and restrictions should be developed to encourage emissions reductions in all sectors.

**Institutional capacity building** for climate change policy development and implementation is a priority. Important considerations in this area include: HR training, the existence of relevant staff positions / sections / departments within various authorities and collaboration between authorities and the Ecology Ministry – which is the leading authority in climate change policy development and implementation – and the Interagency Commission on climate change. Attention should be paid to improving the coordinating role of the Ecology Ministry and increasing its authoritativeness and influence on development of climate change policy. To this end, it would be expedient to carry out a functional analysis of the Ministry with a view to finding out which human resources are available and which are lacking in relation to its climate change policy development and implementation tasks.

The **critical role of local governments** in achieving national climate targets. Communicating national targets to local level authorities and engaging local governments in coordinated adaptation and emissions reduction efforts, is a means of guaranteeing the achievement of these targets.

The **crosscutting and integral character** of climate policy should be implemented, by taking climate change into account in all strategic documents and by coordinating climate change action taken by all central executive agencies. Different ministries must collaborate when they make decisions on issues that have an impact on climate change prevention and adaptation policies.

The influence on climate change impact should be considered when applying tools such as the **strategic environmental assessment** and the **environmental impact assessment**.

Special attention should be paid to **adaptation** to the effects of climate change. Especially relevant for Ukraine in this regard is the relationship between **water resources management** and climate change: the probability of a future lack in potable water resulting from climate change needs to be taken into account, and a policy developed to address these adverse effects.

**The population should be better informed** of the implementation of environmental legislation and Ukraine's environmental commitments to greening the economy, energy savings, climate change prevention and adaptation to climate change.

**Cooperation dynamics**. The objectives and tasks defined by the EU-Ukraine Association Agreement are mostly outdated and do not fit the international (Paris Agreement), regional (EU) and national legal frameworks anymore. Other new and effective cooperation formats that reflect the dynamics of sustainable partnership development – in particular through Ukraine's participation in the Energy Community's climate initiative – are required.

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