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Ukraine and the European Green Deal

Guiding Principles for Effective Cooperation

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By Iryna Holovko

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List of abbreviations

| | |
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| AA | EU-Ukraine Association Agreement |
| CBAM | Carbon Border Adjustment Mechanism |
| EaP | Eastern Partnership |
| EBRD | European Bank for Reconstruction and Development |
| EC | European Commission |
| ECT | Energy Community Treaty |
| EGD | European Green Deal |
| EIB | European Investment Bank |
| EU | European Union |
| GDP | Gross Domestic Product |
| GHG | Greenhouse Gases |
| GIZ | Deutsche Gesellschaft für Internationale Zusammenarbeit/ German Corporation for International Cooperation |
| GUEP | German-Ukrainian Energy Partnership |
| LULUCF | Land Use, Land-Use Change and Forestry |
| NDC | National Determined Contributions under the Paris Agreement |
| NDICI | Neighbourhood, Development and International Cooperation Instrument |
| NECPs | National Energy and Climate Plans |
| UNFCCC | United Nations Framework Convention on Climate Change |

Abstract

To make Europe a climate-neutral continent by 2050, the European Union needs to work closely with its neighbours, including those in the Eastern Partnership, in getting them on board with the European Green Deal (EGD). Ukraine was among the first EU neighbours to announce their readiness to contribute to the EGD and a high-level EU-Ukraine dialogue on this topic has already commenced. However, what are the contours of Ukraine's engagement with the EGD and how will it move forward? How can it be made multidirectional and effective while leading to real and equitable decarbonisation? This report aims to contribute to a discussion in the EU on how to better integrate Ukraine into EGD implementation. It proposes a set of guiding principles for making the EGD work for Ukraine, and thus contributing to the achievability of the EU's goal of becoming a climate-neutral continent by 2050.

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Introduction

In December 2019, the European Commission (EC) approved the European Green Deal (EGD), a new economic strategy of the EU aiming to transform Europe into a climate-neutral continent by 2050. Success in this paramount task requires the transition to a low-carbon circular economy not only within EU borders, but also in neighbouring regions that include the Western Balkan states, Eastern Partnership (EaP) countries and Russia. These countries have close geographic, economic and social ties with the EU, and many of them, especially Western Balkans states, Ukraine, Georgia and Moldova, have aspirations for EU-integration and are recognised by respective bilateral accession or association agreements. As stated in EC's communication on the EGD, «the ecological transition for Europe can only be fully effective if the EU's immediate neighbourhood also takes effective action».^[1] The EU acknowledges it «can use its influence, expertise and financial resources to mobilise its neighbours and partners to join it on a sustainable path».^[2]

While the EC has already approved a Green Agenda and an investment plan for the Western Balkans,^[3] **a comprehensive strategy for getting the EU eastern partner countries on board with the EGD has yet to be developed.** The vision of the EaP beyond 2020 already features the important objective of striving towards environmental and climate resilience,^[4] in particular towards fulfilling countries' commitments under the Paris Agreement and modernising their economies on the way towards climate neutrality.^[5] During the Third EaP Ministerial Meeting in June 2021, the countries «commended the EGD as the EU's new growth strategy and expressed willingness to work together toward a 2050 climate-neutral and resilient continent».^[6] At the meeting, it was announced that **the EC will soon present a €2.3-billion Economic and Investment Plan for the EaP** to help kick-start post-COVID recovery and improve energy, environmental and climate resilience^[7] in the region.

Among the EaP countries, Ukraine stands out as the biggest eastern neighbour, and is responsible for 60% of the EaP region's greenhouse gas (GHG) emissions. The country is heavily dependent on fossil fuels and has huge untapped potential in improving its energy

1 COM (2019), 640 final, p. 20.

2 COM (2019), 640 final, p. 2.

3 Adopted as a part of an Economic and Investment Plan for Western Balkans adopted by the EC in October 2020.

4 SWD (2021), 186 final.

5 Joint Communication «The Eastern Partnership beyond 2020: reinforcing resilience – Eastern Partnership that delivers for all» (18.03.2020).

6 Presidency conclusions of the third Eastern Partnership ministerial meeting on environment and climate change (22.06.2021) .

7 The third Eastern Partnership (EaP) formal ministerial meeting – press-release (22.06.2021).

efficiency and use of renewable energy. Already in July 2020, the Ukrainian government announced the country's readiness to contribute to the EGD, stressing that «Ukraine sees itself as an integral contributor to the EGD goals».^[8] In this report, we look specifically at Ukraine because the country may very well represent the biggest challenge when it comes to expanding EGD to the EaP region, and the approach to addressing the challenges in Ukraine may be useful for other EaP countries, especially Georgia and Moldova.

With a number of EGD-related initiatives already at different stages of development and negotiation between Ukraine and the EU, it is important to ensure the application of a comprehensive approach. The EGD cooperation framework with Ukraine and other neighbouring countries is carefully designed **to avoid focusing on the EU's own interests and priorities and to aim at being helpful in strengthening climate resilience, improving the quality of life locally, protecting the natural environment and increasing prosperity.**

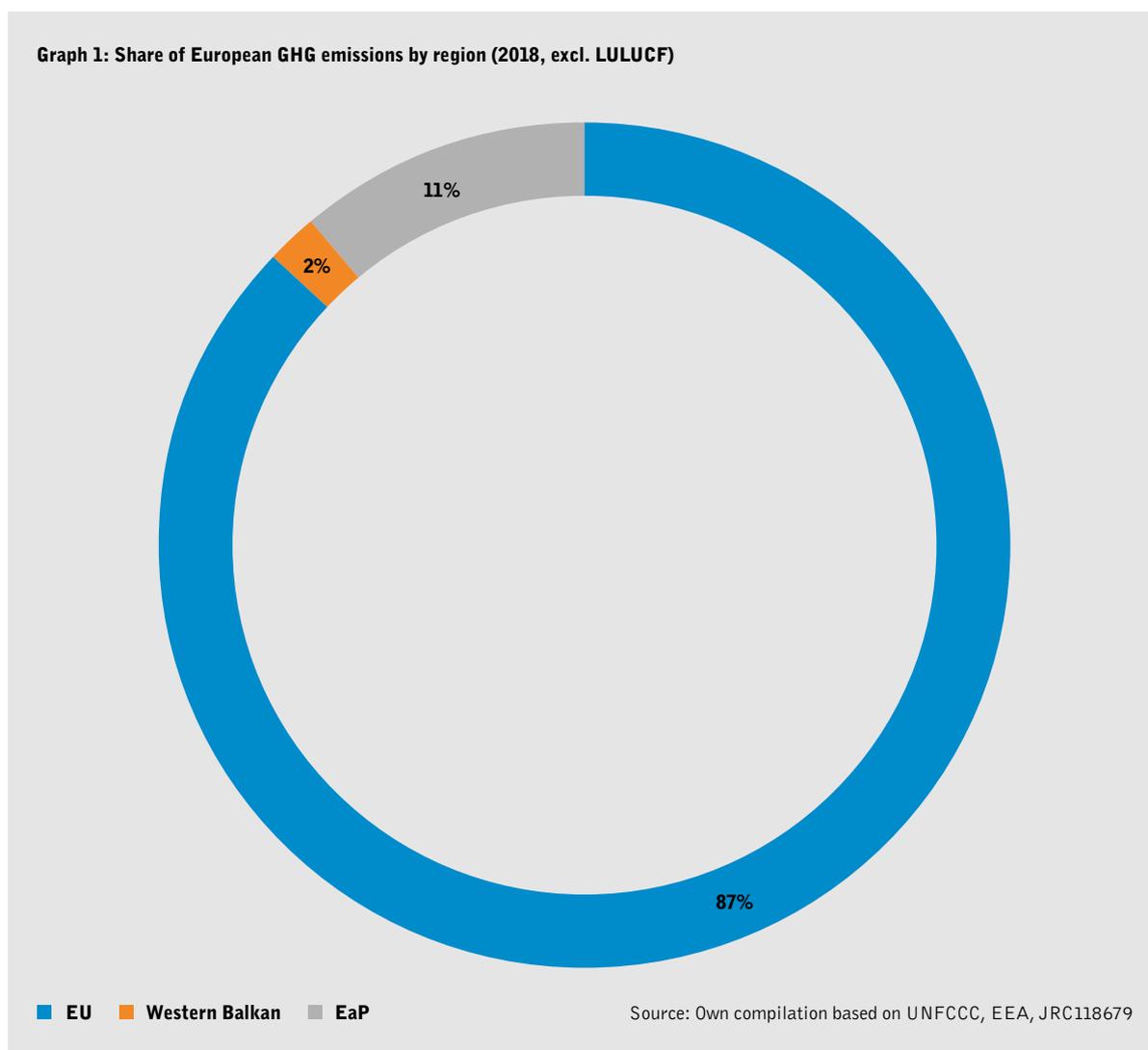
This report aims to **contribute to a discussion in the EU on how to better organise the integration of eastern neighbours like Ukraine into the EGD implementation.** The first chapter provides context, explaining why it is important – but also challenging – to extend the EGD into Ukraine. The chapter also maps existing multilateral and bilateral cooperation frameworks and assesses their relevance to and alignment with the EGD. The second chapter provides an overview of the current state of affairs in the EGD-related areas in Ukraine and of the progress in EU-Ukraine cooperation in those areas. The overview is made with an eye on potential opportunities and risks the EU institutions would need to consider in developing its EGD cooperation strategy with Ukraine. Finally, the third chapter presents a **set of guiding principles** for the EGD extension into Ukraine; in our view, these are essential to making the EGD work for Ukraine and to achieving Europe's carbon-neutrality by 2050.

8 Position Paper on the participation of Ukraine in the EGD submitted by the Ukrainian Government to the EC in summer 2020.

1 The EU and Eastern Europe in the context of the EGD

1.1 The importance of decarbonisation in the EaP region

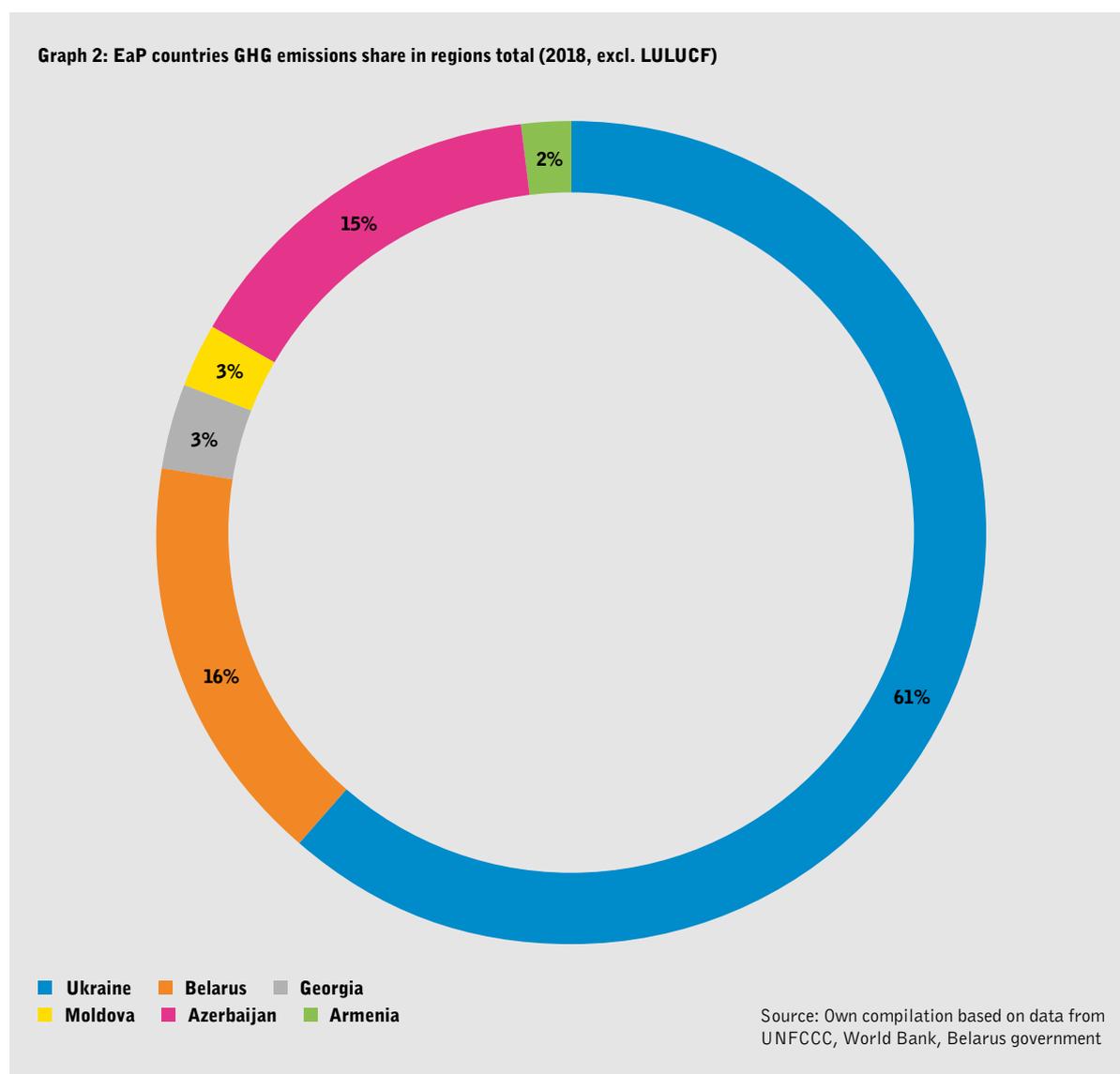
Decarbonisation of Eastern Europe is indispensable to reaching the EU's objective of a climate-neutral Europe, and the EC recognises the importance of actions in these countries. The region is responsible for 11% of Europe's GHG emissions (see Graph 1) and is tightly linked to the EU through trade, labour and other forms of economic cooperation.



«The ecological transition for Europe can only be fully effective if the EU's immediate neighbourhood also takes effective action.»

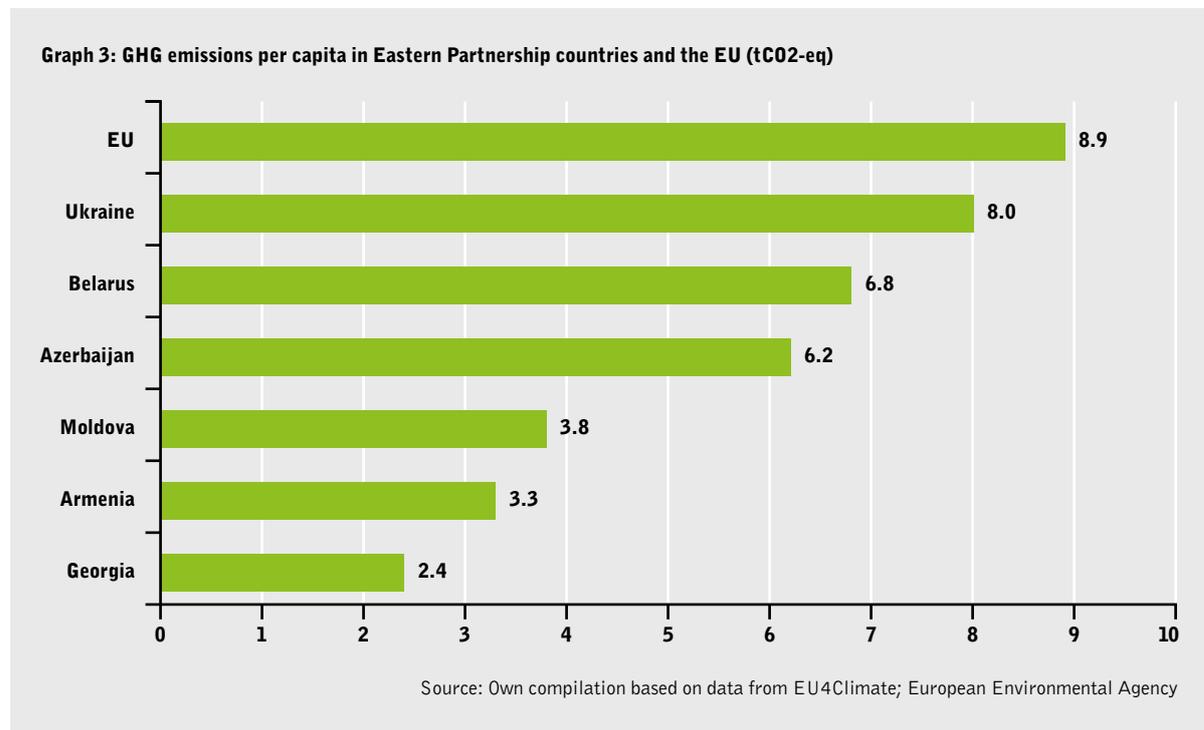
(Commission Communication on an EGD)

To translate this understanding into action, the EaP policy framework was updated in 2020 to reflect EGD priorities in the cooperation between the EU and six EaP countries – Azerbaijan, Armenia, Belarus, Georgia, Moldova and Ukraine. Since 2009, these countries have been working together with the EU to strengthen political, economic and social ties with the European Union. Environmental and climate issues have always been part of the EaP cooperation agenda but have never been top priorities (see 1.3.1 for more details).



Ukraine stands out among fellow EaP countries for being the largest EU neighbour to the east in terms of territory and population, but also GHG emissions. Within the EaP, Ukraine accounts for 60% of total GHG emissions (Graph 2) and is the country with the highest

emissions per capita. Despite the fact that Ukraine's GDP per capita is about 3 times lower than that of Poland and the Baltic states and 4.5 times lower than Germany's,^[9] Ukraine's per capita GHG emissions are nearly as high as those in the EU (Graph 3).



High emissions in Ukraine are caused by the extremely high energy intensity of the economy. In 2015, the energy intensity and carbon intensity of Ukraine's GDP were more than 3 times greater than those of the EU-28.^[10] This is due to a high share of heavy industry as legacy of Soviet times, and lack of modernisation programmes during Ukraine's independence, especially in terms of industry, electricity and heating production, and the housing sector. As a result, the country's disproportionately high levels of energy consumption per dollar of GDP leads to high levels of industrial pollution and GHG emissions.

High connectivity. The EU is Ukraine's biggest trading partner. In 2019, the share of exports to the EU relative to total exports was 41.5% and amounted to USD 20.75 billion.^[11] Through intensive trade, Ukraine exports large amount of its emissions to the EU. Between 16–19% of Ukrainian exports to the EU in 2017–2020 comprise carbon-intensive products such as steel and steel products, chemicals and minerals, which will now

⁹ *World Bank Data, 2017*; GDP PPP.

¹⁰ According to the *Low Carbon Strategy of Ukraine*, energy intensity of Ukraine's GDP in 2015 was 3.2 times greater than in the EU, and carbon intensity was 3.3 times higher.

¹¹ *State Statistics Service of Ukraine (n.d.), Commodity structure of the trade with the EU countries in 2019.*

become subject to the EU's forthcoming carbon border regulations.^[12] Ukraine is also an important transit country, connecting the EU through roads, pipelines and sea routes with the markets of Russia, the Caucasus and Central Asia. Ensuring the decarbonisation of trade and transportation means between the EU and neighbouring states is important for staying connected and is crucial for further integration processes.

High potential. Ukraine is recognised by the EU as a strategic partner in reaching its own decarbonisation targets. Owing to the country's high potential in renewables, proximity and existing transport infrastructure (gas transportation systems and energy grids), Ukraine has a potential to become an important supplier of low-carbon energy and feedstock for EU industry, such as renewable electricity and green hydrogen. This will strengthen the energy security of both Ukraine and the EU. This potential can and should be realised to the mutual benefit of both the EU and Ukraine economies and people, and is seen by many in Ukraine as a chance to start the country's long-awaited process of industrial modernisation.

High (geo)political relevance. Ecological modernisations will help to increase economic and social prosperity in Ukraine and the region. Leaving Ukraine and other EaP countries behind on the path of transformation is not a viable alternative; this would deepen the divide and widen the technological and welfare gap at the centre of Europe – a potential source of instability. To the contrary, improving energy efficiency of and transitioning to renewable energy would lead to greater energy independence for Ukraine, and thus to greater stability along the EU's eastern border. This is especially relevant as the role of Ukraine as a key gas transit country for the EU decreases (Nord Stream 2), creating economic losses for Ukraine and huge security risks for the country and for Europe as a whole.

1.2 Key challenges for expanding the EGD to Ukraine

Three main challenges in expanding the EGD to Ukraine are a lack of public demand for climate action, weak governmental institutions incapable of implementing the necessary reforms and a lack of financial resources, which is to a certain extent an outcome of the first two challenges.

- **Low public demand for climate action.** While in the EU 93% of respondents believe climate change is a major concern,^[13] climate change worries only 17.3% of survey

12 *The Impact of Carbon Border Adjustment Mechanism (CBAM) on the EU - Ukraine trade, Policy paper, Resource and Analysis Centre «Society and Environment» (2021), p. 17.*

13 *Eurobarometer, 2019.*

respondents in Ukraine.^[14] Environmental problems rank seventh in the list of Ukrainians' primary concerns, with the top three being high energy bills, military conflict in Eastern Ukraine and the COVID-19 pandemic.^[15] Environmental protection and decarbonisation are not among the priorities of any of the political parties represented in Ukrainian parliament.

- **Weak institutional capacities.** While on paper Ukraine has made significant progress in implementing reforms and policies, the country still faces significant challenges, including a high concentration of political and economic power.^[16] Considering the constant changes in the organisational structures of ministries, the juggling of ministers and a short-term planning horizon (usually within one election circle), it is extremely difficult to design and implement any long-term strategies in Ukraine, especially those that require transformational changes and may affect the future of incumbent leaders. The combination of corruption and inadequate institutional framework often leads to only nominal adoption of environmental legislation.^[17]
- **High cost of capital.** Due to high political risks, an exceptionally high level of corruption and war in the east of the country, it is difficult for Ukraine to attract the foreign investments needed to finance its economy's modernisation and decarbonisation. The cost of investments (capital) for Ukraine is substantially higher than in the EU: 11–12%^[18] as opposed to less than 2% in Germany.^[19] These facts combined with the country's own limited financial resources and low priority of environmental spending – environmental measures are financed according to the «leftover principle – make green transformation in Ukraine more difficult to fund than in the EU.

14 *Perceptions and priorities of Ukrainian citizens regarding sustainable energy and the environment (UNDP, 2020)*, p. 44.

15 *FES (2021)*, Ecological Trends in Ukraine: citizens perspective, p. 8.

16 *LibMod (2021)*, Towards a European Climate Diplomacy: a proposal to extend the EGD to Ukraine, Moldova, Georgia and beyond through strategic climate partnerships à la carte centred around conditional climate finance.

17 *Environmental Reform and Climate Change Adaptation in the Eastern Partnership. Civil Society Analysis and Recommendations (WG3 EaP Civil Society Forum, n.d.)*.

18 *Ukraine Bank Lending Rate, Trading Economics*.

19 *Germany Bank Lending Rate, Trading Economics*.

1.3 The existing EU-Ukraine cooperation frameworks relevant for the EGD

The cooperation between Ukraine and the EU in the EGD-related areas is on-going within several multilateral and bilateral frameworks, such as the Eastern Partnership (EaP), the EU-Ukraine Association Agreement (AA) and the Energy Community Treaty (ECT). These frameworks were established long before the EGD and their scope goes far beyond the issues of the EGD. None of them fully covers the spectrum of issues and goals defined by the EGD. To a certain extent, the post-2020 EaP framework already reflects the EGD priorities and sets a specific EGD-related objective and targets. A special case is the German-Ukrainian Energy Partnership, which was signed after the EGD was launched and thus better reflects the EGD priorities.

In January 2020, the Ukrainian government set up an inter-service governmental working group on the EGD to work on climate change within the framework of the EGD.^[20] In summer 2020, the Ukrainian government presented to the EU its position paper on Ukraine's participation in the EGD. The official EGD high-level dialogue between Ukraine and the EU began in 2021. The dialogue is led from the EU side by the Head of Support Group for Ukraine and Deputy Director- General for European Neighbourhood and Enlargement Negotiations (DG NEAR) Katarína Matheriová and from the Ukrainian side by the Deputy Prime Minister for European and Euro-Atlantic Integration of Ukraine Olha Stefanishyna. The main topics on the high-level agenda are climate governance architecture, green financing, the EU CBAM, hydrogen and industrial alliances.

1.3.1 Eastern Partnership (EaP)

The EaP is a joint initiative launched in 2009 by the EU, its Member States and Armenia, Azerbaijan, Belarus, Georgia, Moldova and Ukraine. The initiative aims to strengthen political, economic and societal ties between the EU and its eastern neighbours based on their common values and mutual interests. The form of cooperation can vary depending on a country's interests and progress in reforms; there are currently Association Agreements for Georgia, Moldova and Ukraine, and various forms of cooperation and partnership agreements with the rest of the EaP countries.^[21] The EaP is established under the auspices of the European Neighbourhood Policy (ENP) – a foreign relations instrument of the EU – and is separate from the accession process.

20 *Decree of the Cabinet of Ministers «On creation of inter-service working group on coordination of climate change impacts mitigation in the framework of EGD» (KMU, 24.01.2020).*

21 Comprehensive and Enhanced Partnership Agreement with Armenia, EU-Azerbaijan Partnership and Cooperation Agreement, Visa Facilitation Agreement with Belarus.

The issues related to climate and environment were formerly part of the «Stronger Connectivity» priority area and did not receive the attention they deserve. The partners' lack of commitments in this area resulted in weak political outcomes, as opposed to the high-level reactions triggered by anti-corruption efforts or human rights efforts. The amount of assistance was far from adequate for approaching anything close to climate neutrality.^[22]

In the post-2020 EaP framework, however, the EGD priorities are already partially integrated, as the framework's finalisation coincided with the launch of the EGD. Within this renewed EaP context, the partners commit to «strengthening climate policies and green investment in line with the European Green Deal, reducing the carbon footprint and moving towards climate neutrality by 2050».^[23] One of the EaP's five main objectives is to move «towards environmental and climate resilience». Three of the ten top targets of this cooperation framework relate to the EGD; these have to do with improvements in air and drinking water quality and energy efficiency enhancements in buildings (see Annex 1).^[24]

Some EGD priorities are reflected in the EaP framework only partially or not reflected at all. Despite acknowledging the need to move toward climate neutrality by 2050, the EC's joint staff working document titled «Recovery, resilience and reforms: post-2020 EaP priorities»,^[25] which details further actions, does not mention specific commitments on decarbonisation and transition to the circular economy of EaP countries. Important EGD areas such as the just transition of coal regions and sustainable agriculture are hardly mentioned, and the scope of the circular economy is limited to waste management and recycling. Objectives concerning the phasing out of coal, the transformation of industry to a sustainable model of inclusive growth, the decarbonisation of transport and the greening of national budgets are absent (see Annex 1). The design of the new EaP policy may have been influenced by the hesitancy of EaP countries to commit to radical changes, which was assumed by the EGD but not demanded by local constituencies. At the same time, the post-2020 framework shows a willingness of EaP governments to move forward with those EGD priorities that can demonstrate immediate and clear benefits to their citizens (pollution reduction, clean water, warmer homes, smaller energy bills) without stepping on the toes of industry.

The «flagship initiatives» for each EaP country, identified as a basis for the upcoming EaP Economic and Investment Plan, further reflect shared priorities and ambitions. For Ukraine, four out of five initiatives either fully implement EGD priorities or have significant «green» components (See Box 1).

22 RAC (2020), *European Green Deal: shaping the Eastern Partnership future. Policy paper.*

23 SWD (2021), 186 final, p. 10.

24 SWD (2021), 186 final.

25 Ibid.

Box 1: Economic and Investment Plan Flagships for Ukraine

Flagship 1: Supporting a sustainable, innovative, green and competitive economy — direct support for 100,000 SMEs

Flagship 2: Economic transition for rural areas — assistance to over 10,000 small farms

Flagship 3: Improving connectivity by upgrading border crossing points

Flagship 4: Boosting the digital transition — modernising public IT infrastructure

Flagship 5: Increasing energy efficiency support for renewable hydrogen

The EU also funds a set of thematic projects to assist EaP governments in implementing their environmental and climate-related goals and obligations under the Paris Agreement, the Energy Community Treaty, bilateral agreements with the EU, etc.

- **EU4Climate:** implemented by the UNDP, supports governments in implementing the Paris Agreement and improving climate policies and legislation, including in the areas of climate adaptation. For example, in Ukraine, the EU4Climate project coordinated the work on developing the country's Environmental Security and Climate Adaptation Strategy.
- **EU4Energy:** implemented by International Energy Agency (IEA), the Energy Community^[26] Secretariat and the Energy Charter Secretariat. Phase II (2021–2024) is set to foster the clean energy transition and decarbonisation in EaP countries. Key areas are energy markets, energy security and sustainable development (renewable energy, energy efficiency, climate change, fuel switching).
- **EU4Environment:** implemented by the OECD, UNECE, UN Environment, UNIDO and the World Bank. The aim is to help countries preserve natural capital and increase people's environmental well-being, unlock the opportunities of green growth and set mechanisms for better environmental risk assessment and management. Programme areas include (non-exclusively): Environmental Impact Assessment (EIA), green public procurement, green investments and finance, resource-efficient and cleaner production, sustainable forestry, and the timber trade.

Conclusion: The EaP framework in the post-2020 period partially reflects the EGD priorities and sets an objective to move towards environmental and climate resilience. However, some areas of cooperation are misaligned with EGD priorities or are not covered, such as the decarbonisation of transport, phasing out fossil fuels, transforming industry and agriculture and «greening» national budgets.

26 The Energy Community Treaty works only with three EaP countries, the contracting parties of the ECT: Georgia, Moldova and Ukraine.

1.3.2 EU-Ukraine Association Agreement (AA)

The EU-Ukraine Association Agreement (AA) is a key legal framework for bilateral relations between the EU and Ukraine. It was signed in March 2014^[27] and aims to deepen political dialogue and economic relations by providing an institutional framework for Ukraine's increasing association with the EU's policies and programmes. The AA also fostered «Ukraine's gradual integration in the EU internal market»^[28] by setting up a Deep and Comprehensive Free Trade Area (DCFTA), which has been in force since 2016.

The AA envisions a gradual approximation of Ukraine's legislation to EU laws and policies, including in the EGD-related areas of energy efficiency, renewable energy, energy products taxation, waste management, climate change, etc. The agreement includes, inter alia, a specific cooperation objective on «development and implementation of a policy on climate change, in particular as listed in Annex XXXI to this Agreement» (Art. 365). The agreement also stipulates that both parties «shall develop and strengthen their cooperation on environmental issues, thereby contributing to the long-term objective of sustainable development and green economy» (Art. 360). Article 361 specifies that cooperation between the EU and Ukraine shall promote measures aimed at addressing global and regional environmental problems, such as climate change, air and water quality, waste management, nature protection and many others.

Annex XXX «Environment» provides a long list of EU legislations that Ukraine shall implement. For the purpose of the EGD, some directives from Annex XXXII «Transport» and Annex XXVII «Energy» may also be relevant. There is an on-going process of revising Annexes XXX and XXXI to reflect the changes in EU law that took place after the AA was signed, including those related to the EGD. Updating the text of the AA itself to better reflect EGD priorities is not yet on the agenda, as any changes to the text of the AA would require a new ratification process by all member states.

Conclusion: the AA only partially reflects EGD priorities through a cooperation objective to develop and implement climate policy and through Ukraine's obligations to implement a set of EU laws and policies in environment, energy, transport, agriculture domains. The alignment could be strengthened through the on-going revision process of environment-related Annexes XXX and XXXI.

27 It became fully in effect only in September 2017.

28 Art. 1 (d) of the EU-Ukraine Association Agreement.

1.3.3 Energy Community Treaty (ECT)

Three EaP countries – Ukraine, Moldova and Georgia – are full members of the Energy Community Treaty (ECT), an organisation set up by the EU and its neighbours to create an integrated pan-European energy market. The important part of the ECT mission is to «improve the environmental situation in relation to energy supplies in the region and foster the use of renewable energy and energy efficiency.^[29] The ECT contracting parties took on obligations to adopt and implement the EU energy and environmental acquis within the agreed timeframe, namely the legislative frameworks for the electricity and gas sectors and requirements in the areas of renewable energy, competition and the environment (see Fig. 1). The ECT Secretariat conducts regular monitoring of the implementation progress and publishes Annual Implementation Reports. The Secretariat plays an important role in providing comments to the respective draft legislation in member countries and in conducting valuable research. Under the ECT, there is a dispute settlement mechanism, but it lacks an effective instrument to enforce compliance by parties, as no penalties exist for in-compliance besides the suspension of voting right on the ECT's highest decision-making board, the Ministerial Council.

Under the ECT, there are a number of initiatives directly related to EGD priorities: development of National Energy and Climate Plans (NECPs), the Just Transition Initiative, EU4Energy Governance. The adoption of the Clean Energy Package as part of the ECT in November 2021^[30] extends the treaty's scope for advancing renewables and energy efficiency in its contracting parties. A separate initiative under the ECT covers the development of PECIs (Projects of Energy Community Interest) and PMIs (Projects of Mutual Interest). The ECT helps to streamline permitting processes and facilitate investments in PECIs/PMIs. Examples of PECIs are enhancements to electricity and gas networks in contracting parties and projects supporting their integration with respective EU networks. Some changes in eligibility criteria for RECI/PMIs (when necessary changes are made to respective Regulation (EU) 347/2013 on guidelines for trans-European energy infrastructure) may be necessary, as gas and oil transport infrastructure (including the oil pipeline between Ukraine and Poland) is currently supported.

Conclusion: The ECT sets legally binding obligations for parties to implement selected EU directives in relation to the energy sector and the mitigation of the sector's impact on the environment. In this regard, it partially covers EGD priorities in terms of energy, climate, zero pollution, energy efficiency in buildings and biodiversity. Some ECT initiatives directly promote EGD priorities, but some are not fully in line, such as projects of mutual interest (RECI/PMIs) that support gas and oil infrastructure.

29 *Energy Community: who we are.*

30 *Energy Community adopts Clean Energy Package (30 November 2021).*

1.3.4 German-Ukrainian Energy Partnership

The German-Ukrainian Energy Partnership (Deutsch-Ukrainische Energiepartnerschaft, or GUEP), a platform for high-level intergovernmental dialogue on energy matters and climate change, was established in July 2020 by the German Federal Ministry for Economic Affairs and Energy (BMWi) and Ukraine's Ministry of Energy. The partnership consolidates cooperation between the two countries around five themes: decarbonisation, energy efficiency, renewable energy, hydrogen and the just transition of coal regions. The platform organises annual German-Ukrainian Energy Days where progress and plans for further work are discussed at a high political level. The commitment to further deepen GUEP has been confirmed in the incoming German government's coalition agreement.^[31]

The work under GUEP is managed by the German Energy Agency (dena) in cooperation with the German Corporation for International Cooperation (Deutsche Gesellschaft für Internationale Zusammenarbeit, or GIZ) and includes coordination of technical support, the provision of capacity development, knowledge exchange and best-practice sharing between experts and business through the organisation of visits and the preparation of publications. The essential element of the partnership is the transformation of coal regions and the associated structural changes, for which Germany has already allocated EUR 60 million for two pilot projects in Ukraine.^[32] The importance of this topic is underscored by the appointment of a Special Envoy of the Federal Government of Germany for Structural Change in Ukrainian Coal Regions.

Conclusion: The German-Ukrainian Energy Partnership, although it does not explicitly mention the EGD, consolidates and coordinates cooperation between different players from the two countries – including those in government and business – around the theme of energy transition to a sustainable energy system.

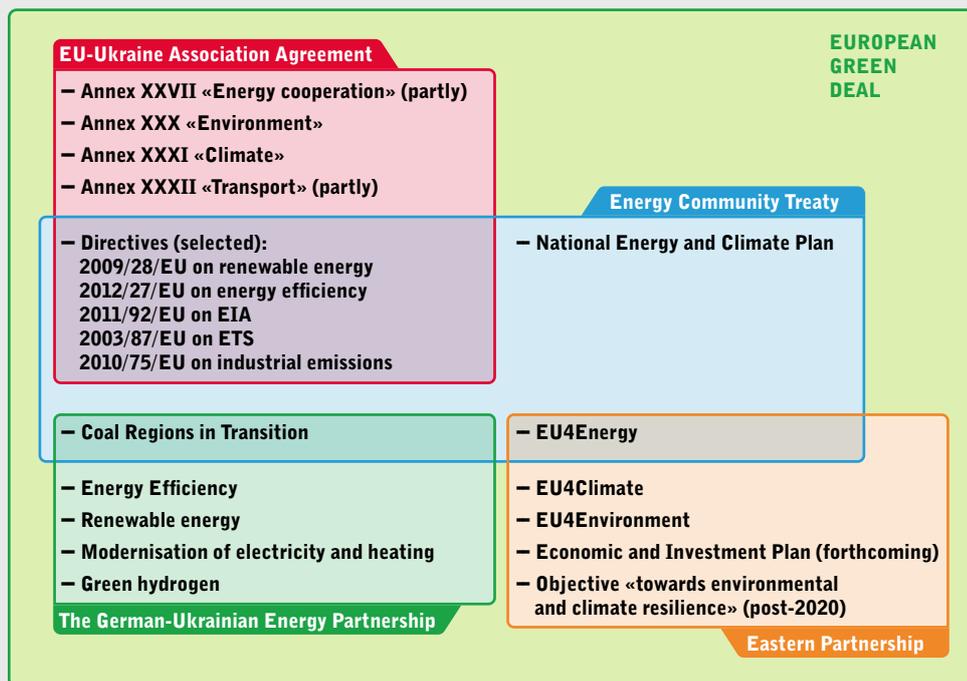
³¹ Koalitionsvertrag 2021–2025 zwischen der Sozialdemokratischen Partei Deutschlands (SPD), BÜNDNIS 90/DIE GRÜNEN und den Freien Demokraten (FDP), p. 156.

³² As discussed during the Second German-Ukraine Energy Day on 1 December 2021 in Kyiv.

1.3.5 EGD cooperation - pieces of a puzzle

Each of the existing multilateral and bilateral EU-Ukraine cooperation frameworks partially provides for cooperation in EGD-related areas, but none of those frameworks is fully aligned with the EGD principles. This is true also for the post-2020 EaP policy framework, which, despite being developed after the launch of the EGD, does not provide for such important EGD priorities as the decarbonisation of transport, the phasing out of fossil fuels, the transformation of industry and agriculture and the «greening» of national budgets. The Energy Community's scope is limited to the energy sector, while the scope of the EGD goes far beyond that. The exception is the German-Ukrainian Energy Partnership established in 2020, whose structure is fully in line with EGD priorities but is also limited to a number of priority areas where the interests of Germany and Ukraine match. There are ways to improve the alignment of certain cooperation frameworks; one example is through the revision of EGD-related annexes to the AA. The scope of possible changes to the AA is, however, limited by the politically complicated procedure of approval of any changes to the text of the agreements.

Figure 1: An overview of connections between the EGD areas and the existing cooperation framework between the EU and Ukraine



2 EU-Ukraine Cooperation progress in EGD areas

2.1 Perception of the EGD in Ukraine and its influence on climate policy

2.1.1 Perception of the EGD in Ukraine

In July 2020, the Ukrainian government officially announced the country's readiness to contribute to the European Green Deal (EGD). According to a government position paper, «Ukraine sees itself as an integral contributor to the European Green Deal». ^[33] It proposes, inter alia, to establish a structured dialogue with the EU on modalities of the early involvement of Ukraine in the development and implementation of policies under the EGD and to develop a joint roadmap for Ukraine's participation in it.

Ukrainian environmental NGOs, think tanks and export-oriented businesses reacted to the EGD swiftly, and generally see the EGD as both a challenge and an opportunity. Some environmental NGOs welcomed Ukraine's joining of the EGD as a strong show of support for balancing the country's long-term development with a minimisation of further damage to the environment. ^[34]

Others point out that the EGD creates strategic growth opportunities for Ukraine, such as integration of Ukrainian businesses into the EU's new industrial processes, including in hydrogen production and access to the EU's financial and technical support instruments. ^[35] They also highlight a range of related threats for Ukraine, especially those associated with enhanced quality requirements for certain types of products and technologies and potentially restricted access of Ukrainian goods to the European market, including via the carbon border adjustment mechanism (CBAM). ^[36]

Ukrainian big business was, unintuitively, supportive to the idea of the country participating in the EGD; this may be explained by the threats they would face stemming from the country's non-participation. The primary threat would be the EU CBAM, a carbon border adjustment mechanism that will put a surcharge on carbon-intensive imports such as steel, cement and electricity from countries with no comparable national carbon tax. Although

33 Position Paper on the Participation of Ukraine in the EGD submitted by the Ukrainian Government to the Commission in summer 2020.

34 *Ecoaction's views on the EGD and Ukraine's role (20 April 2021).*

35 *Andrusevych et al. (2020), European Green Deal: Opportunities and threats to Ukraine. Policy Paper.*

36 Ibid.

the expected negative macroeconomic impact of the EU CBAM on Ukraine is projected to be moderate,^[37] it is sufficient to alert carbon- and energy-intensive industries (i.e. the steel and coal sectors) to the EU CBAM as a threat to their interests.^[38] This is largely due to a high dependence of Ukraine's energy-intensive business on the EU market – over one-third of all Ukrainian exports to the EU are potentially subject to the EU CBAM.^[39] While Ukrainian business and government representatives see the EU CBAM as a protectionist tool that discriminates against those countries lacking the resources to quickly decarbonise,^[40] they did not visibly oppose the EGD as a whole.

2.1.2 Climate policy in Ukraine and the EGD impact

Climate policy in Ukraine used to be very low on the political agenda due to country's high dependence on carbon-intensive industries and low public demand for ambitious climate action. Despite being a party to the UNFCCC and among the first countries to ratify the Paris Agreement, Ukraine's progress on climate and the decarbonisation agenda has been very slow, yet has shown some intensification since 2019.

Due to a significant decline in Ukrainian GDP after the collapse of the Soviet economy and later due to Russia's annexation of Crimea and the war in Eastern Ukraine, the country's GHG emissions plummeted by 64% from its 1990 level – from 942.1 MT-CO₂ in 1990 to 332.2 in 2019.^[41] The energy sector is by far the largest GHG emitter (28% + 14%), followed by industry (23%) and agriculture (13%) (Graph 4).

37 *Chepeliev, M. (2021), Possible implications of the European Carbon Border Adjustment Mechanism for Ukraine and other EU trading partners.*

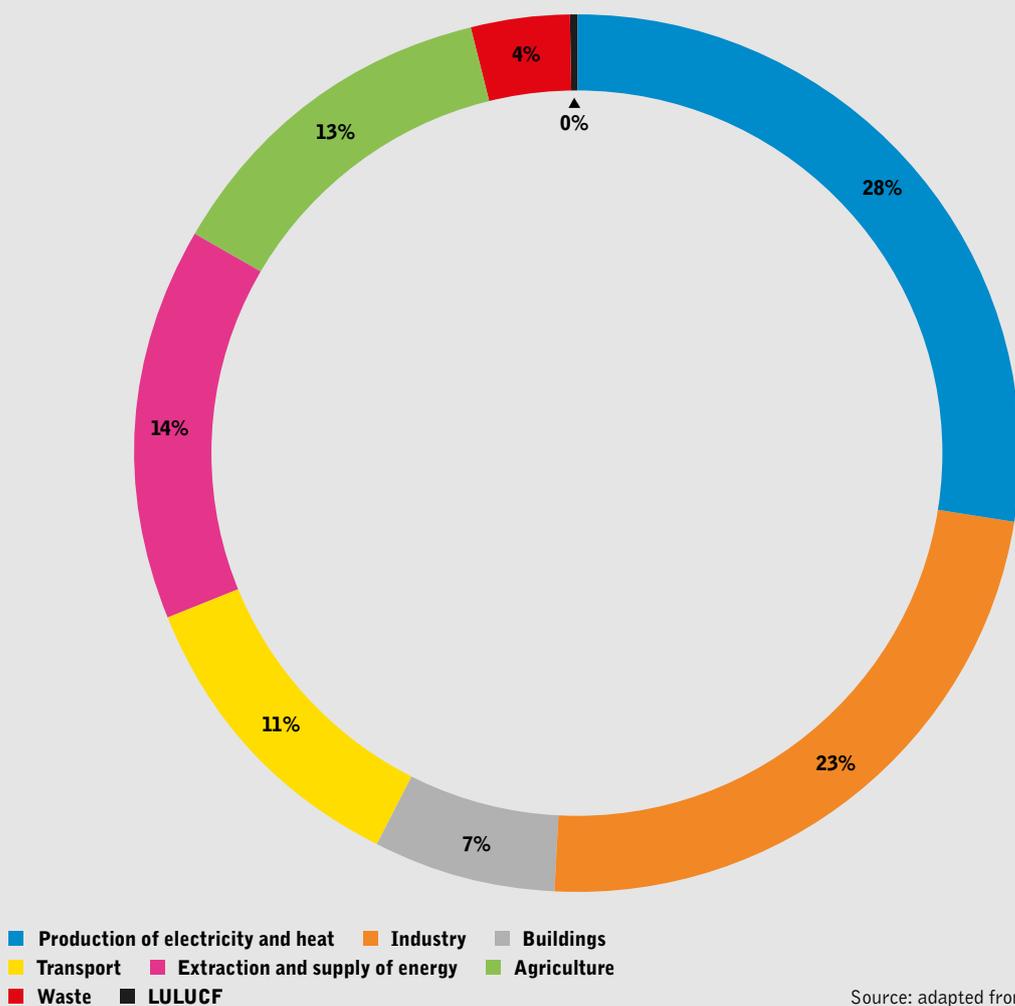
38 *IASS (2021), The Role of the EU CBAM in raising climate policy ambition in trade partners: the case of Ukraine.*

39 Ibid.

40 *IASS (2021), The Role of the EU CBAM in raising climate policy ambition in trade partners: the case of Ukraine.*

41 According to Ukraine's national GHG inventory 2019; excluding land use, land-use change and forestry (LULUCF).

Graph 4: Sectoral GHG emissions in Ukraine (2019)



The first intended nationally determined contribution (INDC) of Ukraine under the Paris Agreement from 2015 set a goal of «not exceeding 60% of 1990 GHG emissions level in 2030».^[42] That target allowed for an increase of national GHG emissions by 75% by 2030 compared to the 2017 level^[43] and was assessed by the Climate Action Tracker as «critically insufficient».

In 2021, discussions about climate action and the updated second NDC have become more frank and attracted influential stakeholders from the government and business. The Ukrainian climate policy stakeholders attribute this change to the EGD and the upcoming

42 INDC of Ukraine to the Paris Agreement (2016).

43 Andrusevych et al. (2020), *European Green Deal: opportunities and threats to Ukraine. Policy Paper.*

EU CBAM.^[44] In July 2021, the Ukrainian government approved Ukraine's new NDC, despite much criticism from the affected businesses. At the COP26 in Glasgow, the same businesses were already praising Ukraine for its ambitious climate targets, stressing that «this creates for us favourable starting conditions for addressing the range of practical economic development tasks and cooperation with international partners».^[45]

BOX 2: Comparison first and second NDC.

Two parameters:

- 1) Reduction from the 1990 level – 60% vs. 65%
- 2) Reductions from 2019 level – possible increase vs. -7%.



The new Ukrainian NDC, developed with support from the EBRD and the Swedish government, sets a much more ambitious target – a GHG reduction of 65% from the 1990 level.^[46] This effectively means a nearly 7% reduction from the 2019 level,^[47] and the largest contribution to emission abatements is expected from the energy sector (a 26% reduction from the 2019 level). Nuclear power is projected to remain the main source of electricity (50%), with renewables providing up to 30%, with the remaining 20% coming from gas and coal by 2030. In parallel, the National Economic Strategy of Ukraine 2030 adopted in March 2021 sets 2060 as a year when Ukraine should reach carbon neutrality. During the

44 IASS (2021), *The Role of the EU CBAM in raising climate policy ambition in trade partners: the case of Ukraine*.

45 *Climate summit in Glasgow: what Ukraine will see there*. Op-ed by N. Bobytskiy, UBTA (Interfax, 28 October 2021).

46 *Ukraine's second NDC under the Paris Agreement*.

47 <https://commons.com.ua/uk/sho-zminit-nova-klimatichna-meta-ukrayini-do-2030-roku/>

COP26 in Glasgow, Ukraine announced it will phase out state-owned coal power generation by 2035,^[48] but the government later retreated and said the date will be revised.^[49]

Conclusions. In Ukraine, the EGD is perceived rather positively, with an understanding of its potential risks and opportunities for the country. Some EGD elements, namely the EU CBAM, have been identified by trade-oriented Ukrainian businesses and the government as potentially damaging to trade with the EU and to the country's economy in general. The EU CBAM and awaited financial support for green transition are especially visible in the EGD-related discourse in Ukraine. At the same time, the EGD has already positively impacted the climate policy debate in Ukraine by attracting influential business and political players, and thus elevating climate policy on the political agenda. In 2021, Ukraine adopted a new, relatively ambitious target under the Paris Agreement and pledged to reach climate neutrality by 2060.

2.2 Current progress in the EGD areas in Ukraine

The EGD is not about marginal improvements; it focuses on deep economic transformations. Through the Association Agreement (AA) and by joining the Energy Community Treaty (ECT), Ukraine has already taken on a number of obligations, including in the environmental and climate domain, and has been implementing them with moderate success. Pursuing the extension of the EGD to Ukraine will mean going far beyond that. Both sides will be poised for further actions. Ukraine will become better prepared for faster and more transformational changes, and the EU will now be offering more political, financial and technical support in the EGD areas.

This chapter presents an overview of each EGD area. It provides 1) a brief overview of the relevance of the area in terms of EU-Ukraine cooperation, 2) a report of the recent progress achieved by Ukraine in each area and 3) an assessment of the prevalence of the area in EU-Ukraine EGD dialogue and actions.

2.2.1 Climate

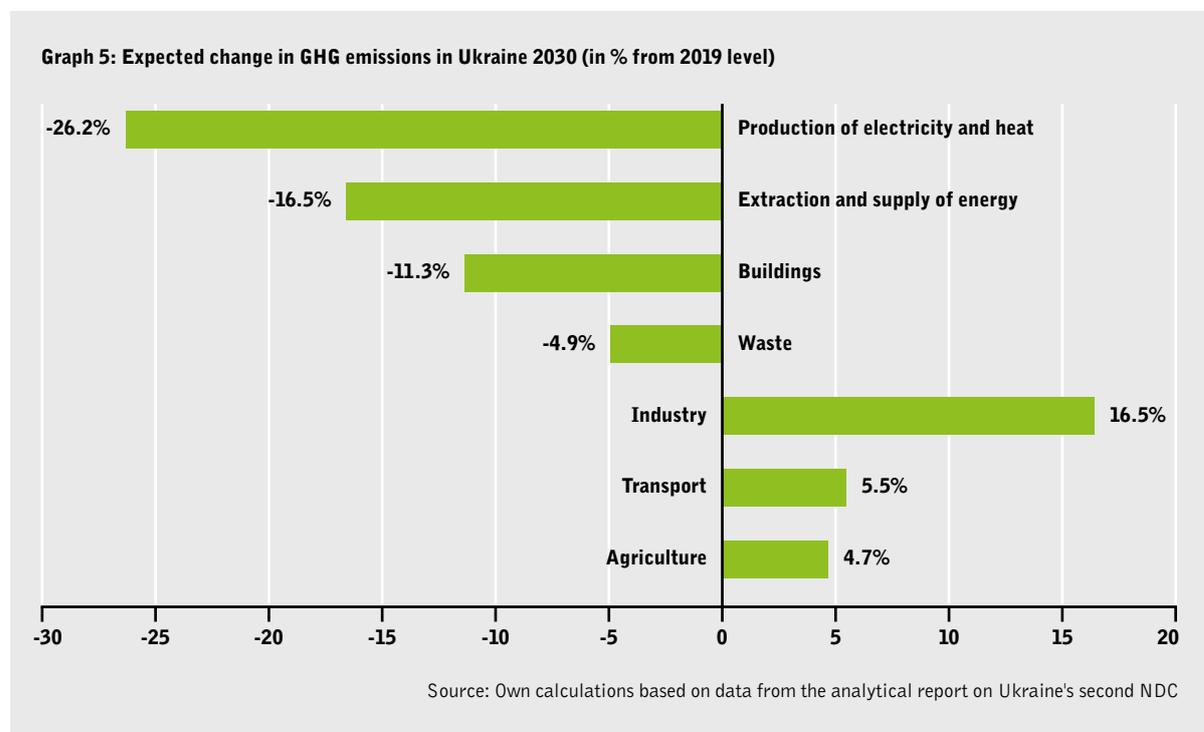
Relevance. Climate policy is a cross-cutting issue. It sets goals and develops incentives for emission reduction in all sectors and demonstrates the country's overall ambition in addressing climate change and readiness for decarbonisation.

48 *COP26: Ukraine aims for 2035 coal phase-out as more European nations join alliance (S&P Global, 4 November 2021).*

49 *The government did not set a goal to phase out coal by 2035 – Stefanishyna (Ukrinform, 22 November 2021).*

The theme of climate policy and climate governance architecture is among the most-discussed topics in the EU-Ukraine EGD dialogue. It was raised during the 7th Association Council between the EU and Ukraine (February 2021) and is a constantly feature of the high-level EGD EU-Ukraine dialogue. The EU welcomed the adoption by Ukraine of the updated NDC to the Paris Agreement (see Chapter 2.2.2) and invited the country to further develop climate-related strategic planning and pursue reforms that would facilitate and accelerate its green transition.^[50]

Climate targets. Ukraine adopted an updated NDC, which sets a new relatively ambitious target of 65% of the 1990 level by 2030, which means a 7% reduction from the 2019 level. During COP26 in Glasgow, Ukraine joined the Powering Past Coal Alliance and pledged to phase out power-generating coal by 2035 (see Chapter 2.2.2 for details). GHG emission cuts were not envisaged in all sectors; growth is allowed in industry, transport and agriculture in consideration of expected economic growth (Graph 5).



Climate law: In 2021, the Ministry of Environment announced the development of the framework climate law, which will set a basis for implementation and monitoring of the NDC at the national level.^[51]

50 *Joint statement following the 23rd EU-Ukraine Summit (23 October 2021).*

51 *Ukraine presented further steps in climate policy to international partners (Ministry of Environment, 12 October 2021).*

The Ministry of Environment is also working on developing **an action plan and financial strategy for the implementation of the new NDC**. Effective cooperation (willingness, efforts and respective capacities) from the side of sectoral ministries would be essential to the swift creation and implementation of the action plan on the NDC. The two-pronged financial strategy will focus on the creation of a Climate Fund and an increase to the CO₂ tax. According to the Climate Fund concept, the fund is planned as a separate legal entity, which will accumulate money from ecological taxes, including a CO₂ tax, and channel it for emission reduction projects in public and private sectors based on a strict set of criteria and monitoring system. The Ministry of Environment expects that international donors will contribute to the fund to multiply the effect of the flow stemming from taxes (see Chapter 2.9 for more details on financing).

Carbon pricing. Ukraine introduced the carbon tax in 2010 at the level of USD 0.02/tonne of CO₂, creating only a negligible reduction in GHG emissions. In 2019, the carbon tax was raised 25-fold and currently sits at USD 0.36/tonne of CO₂, a level whose effect is more fiscal than it is about emissions reduction.^[52] In 2021, the Ministry of Finance initiated an increase of the CO₂ tax to 30 UAH/tonne CO₂ (approx. 1 EUR per tonne), and in November a respective legislative proposal was approved by parliament. The proceeds from the CO₂ tax used to go to the general budget without earmarking, but the most recent law envisages partial earmarking for the modernisation of energy and industry.

The emissions trading system is at the very early stages of development – under support from the World Bank and GIZ, modelling of the system is under way. The law on monitoring, verification and reporting of GHG emissions (MRV), which will provide essential data for ETS modelling, took force in 2021, and the first verified emission reports are expected in 2022.

Climate Adaptation Strategy. The Environmental Security and Climate Adaptation Strategy of Ukraine was developed with support from the EU4Climate project and was adopted in October 2021.^[53] Regional strategies for climate change adaptation for the three regions are now under development with EU support.^[54]

Conclusion. In the past year, Ukraine has increased its climate ambitions by approving the new Paris Agreement target (NDC) that envisages emissions cuts from the current level by 7% and by committing to achieve climate neutrality by 2060. Climate policy and climate governance are widely covered by the EU-Ukraine cooperation and feature in the

52 *Andrusevych et al. (2020), European Green Deal: opportunities and threats to Ukraine. Policy Paper. Government adopts new strategy to make Ukraine more resilient to climate crisis (UNDP, 21 October 2021).*

54 *Ukraine presented further steps in climate policy to international partners (Ministry of Environment, 12 October 2021).*

EU-Ukraine EGD dialogue. The EU should further support Ukraine in building its climate governance architecture, including through the provision of resources for expert policy advice in drafting climate law, a financial strategy for NDC implementation and in designing respective climate policies (ETS, industrial policy, etc.).

2.2.2 Energy

Relevance. The energy sector is responsible for 42% of Ukraine's total GHG emissions (see Graph 4) and is expected to produce its deepest emission cuts by 2030 (see Graph 5). The sector is a key one for the EU-Ukraine cooperation, considering the tight energy security links and the upcoming integration of energy markets. It is also a crucial sector for the EGD in the context of Ukraine's energy market reforms that are required to facilitate the transition to renewables and potential green hydrogen supplies to the EU.

Development and integration of renewables. According to the new NDC, Ukraine plans to have 22% of renewable energy in electricity and 17% in total primary energy supply by 2030. Ensuring growth of the share of renewables in the electricity mix from 7.3% to 22% in 10 years will be challenging for Ukraine due to the poorly functioning electricity market and the lack of effective renewable energy policies.

The renewables «boom» in Ukraine in the past decade was due to the very high feed-in tariff (FIT), but progress was halted due to poorly designed electricity market reforms in 2019, which led to seven- and eight-figure debts to renewable energy producers, retrospective cuts in FIT levels and many companies suing the Ukrainian government for breach of contract.^[55] These developments led to a sharp decrease in new investments in the renewable energy sector in 2020 and 2021. The auctions for new renewable capacities (as a replacement of the FIT) and stimuli for energy balancing and storage capacities, which were envisaged by the 2019 Law on Renewables Auctions, are still nowhere to be found.

Energy poverty. Energy poverty is widespread in Ukraine, as paying utility bills is a substantial problem for the majority of Ukraine's population.^[56] As a result of bringing the energy costs for households to economically justified levels,^[57] the share of Ukrainian households unable to sustain reasonable room temperatures raised from 11% in 2013 to 29% in 2017.^[58] Historically, the Ukrainian government has addressed this problem by providing subsidies to low-income households (non-monetary) while other elements of the problem – low energy efficiency of buildings and the absence of instruments to stimulate

55 *Companies sue Ukraine's Guarantee Buyer for lack of payments (Ukrainenu, 21 July 2021).*

56 *Energy poverty: problems and approaches in the EU and Ukraine.*

57 Household energy prices are not yet at economically justified levels and are expected to increase further.

58 *Energy poverty: problems and approaches in the EU and Ukraine.*

efficient energy use – have hardly been addressed. In 2021, following a long process, utility subsidies were fully monetised,^[59] but the work on offering affordable energy efficiency programmes for the population must still be intensified and widened (see Chapter 2.2.6).

Regional energy networks integration: as a party to the Energy Community Treaty, Ukraine is working on integrating its electricity network with the EU network, an ENTSO-E. In the context of the EGD, integration of the two networks is very important for improving the flexibility of the system and competitiveness on the market, as both facilitate cost-effective development and increased connectivity of renewables to the grid.

From the technical side, most of the issues for enabling synchronisation of the two systems are resolved, and a testing phase will commence in 2022. However, problems exist with Ukrainian market regulations not being fully in line with the EU requirements; Commissioner Simson stressed that improved governance and transparency of the electricity market are required for networks integration to proceed.^[60]

Energy and Climate Plan. Although Ukraine is not an EU member state, it must develop a National Energy and Climate Plan (NECP) as part of its obligation under the ECP. Ukraine has missed the original deadline to create and approve the NECP by the end of 2020, although the draft NECP prepared by the Low Carbon Ukraine (LCU) project in cooperation with the Ministry of Energy^[61] was completed in the first half of 2020.

Electricity market reform. In formal terms, the Ukrainian electricity market has been free since July 2019, but in reality it remains fragmented, only partially free and rife with problems, including low competition and high levels of concentration and monopolisation risk.^[62] Despite efforts to «extinguish fires» and implement certain regulatory changes, no fundamental steps have been taken to stabilise or improve the situation.^[63] The issue is now being addressed at the highest political level; during the EU-Ukraine Summit in October 2021, a high level working group was established «to accelerate electricity and gas market reforms in Ukraine».^[64]

Green hydrogen: despite not featuring a prominent role in the Commission's EGD communication, green hydrogen has become one of the most rapidly developing areas of the EU-Ukraine EGD dialogue. The Ukrainian Ministry of Energy has already commenced with the

59 *Monitoring of the reforms progress by civil society experts, Energy sector (8 July 2021).*

60 *Speech by Commissioner Simson at the Conference on the Integration of Ukraine into ENTSO-E (11 October 2021).*

61 *LCU submitted draft for Integrated Energy and Climate Plan (28 July 2020).*

62 *Monitoring of the reforms progress by civil society experts, Energy sector (8 July 2021).*

63 *Monitoring of the reforms progress by civil society experts, Energy sector (8 July 2021).*

64 *Joint statement following the 23rd EU-Ukraine Summit (12 October 2021).*

preparation of Ukraine's hydrogen strategy with support from USAID.^[65] Major state energy companies like Naftogaz and Energoatom announced great interest, fuelled by an aspiration for Ukraine to become a major supplier of green hydrogen to the EU. German politicians have stated that Ukraine could have a key role in supplying EU with green hydrogen as the country has both good renewables potential and existing transport infrastructure (gas pipelines) linked with the EU.^[66] As part of the country's hydrogen strategy, Germany designated EUR 2 billion for international hydrogen partnerships.^[67] However, some Ukrainian business experts remain sceptical and call the enthusiasm around green hydrogen mere «political declarations»,^[68] as Ukraine lacks the basis for the development of green hydrogen production: a well-developed renewables sector. Instead, Ukraine's Ministry of Energy in October 2021 suggested that the work on hydrogen could start from «pilot hydrogen projects based on nuclear energy».^[69] Hydrogen produced with nuclear energy is, however, not green hydrogen per definition. Any investments into production of hydrogen with electricity from old Soviet power plants in Ukraine will contribute to increasing nuclear safety risks in the region and undermine the development of renewable energy sources. It may lead to «nuclear risks leakage» from the EU to Ukraine when hydrogen is exported to the EU, while the burdens related to its production – risk of accidents, spent nuclear fuel – will be shouldered by Ukrainians.

While actively developing hydrogen strategies and announcing plans for new nuclear constructions with Westinghouse (USA), Ukraine's Ministry of Energy has not been active in areas that are crucial in the context of the EGD. Finalisation of the NECP, the development and launch of the new support scheme for renewables and – most important – reforms of the dysfunctional electricity market are not moving forward. These topics also do not feature on the agenda of the high-level EU-Ukraine EGD dialogue – a grave oversight considering their crucial role in enabling energy transition.

Conclusion. Progress with energy transition in Ukraine is poor. Some necessary strategic documents and reforms are pending, and crucial elements such as the development of a new support scheme for renewables and storage facilities as well as reforms of the electricity market are not moving forward. The focus of the EU-Ukraine dialogue in the energy sector is primarily on green hydrogen and the technical integration with the ENTSO-E. While green hydrogen may become an important part of the future energy cooperation between Ukraine and the EU, the biggest attention now should be paid to facilitating progress in

⁶⁵ *Hydrogen strategy should provide for Ukraine's competitiveness in hydrogen production and transportation to the EU (KMU, 14.09.2021).*

⁶⁶ *Ukraine could become important part of Europe's hydrogen supply chain (CleanEnergyWire, 4.05.2021).*

⁶⁷ *The National Hydrogen Strategy (BMW, 2020).*

⁶⁸ *Hydrogen economy, European Green Deal? Not yet in Ukraine (op-ed by I. Petryk, Wärtsilä Energy).*

⁶⁹ *Ukraine's Hydrogen Strategy can become the basis for international cooperation in hydrogen energy sector, says German Galushchenko (KMU, 22.10.2021).*

reforms that are a prerequisite for the green transformation and integration with the EU energy markets: completion of electricity market reforms, development of the new renewable energy schemes and phasing out coal power generation. Support to controversial initiatives such as nuclear-based hydrogen should be avoided for risk of dis-incentivising Ukraine's energy transition and increasing nuclear energy risks in Europe.

2.2.3 Circular Economy

Relevance. Industry is Ukraine's second highest emitter of GHG (23%), while energy-intensive products are high relevant to trade with the EU: over one-third of Ukraine's exports to the EU comprise products covered by the upcoming EU CBAM (see Chapter 2.1.2). Ukraine as an immediate EU neighbour has the potential to become an important partner for developing trade in sustainable products and becoming part of new EU production chains for carbon neutral and circular products.

Transition to circular economy. Decarbonisation and movement towards a circular economy are recognised as key principles in the recently adopted National Economic Strategy of Ukraine 2030. The strategy does not offer a vision of such a transition, but sets 2060 as the year by which Ukraine should achieve climate neutrality.

Decarbonisation of energy-intensive industry. Ukraine's high share of energy-intensive industries (production of steel, chemicals, fertilisers and building materials) and their high dependence on EU markets make Ukraine vulnerable in the view of the upcoming EU CBAM (see Chapter 2.1.2). This vulnerability can be seen as a main reason for energy-intensive businesses to get on board with decarbonisation discussions, as at the joint event by DTEK and UBTA on the opening day of the COP26 in Glasgow.^[70] On the other hand, real developments observed in the energy sector (pending NECP, absence of new support schemes for renewables, repeated postponement of the emissions reduction plan implementation) as well as further delays in implementation of the EU directive on industrial pollution (see Chapter 2.4) cast doubt on the seriousness of the decarbonisation aspirations declared by the government and influential business. The main strategy in addressing the EU CBAM has thus far been to work with the EU on exempting Ukraine from CBAM application. In March 2021, the Ukrainian government set up a dedicated inter-service working group on the CBAM to establish a position for the negotiations with the EU regarding CBAM's potential application to Ukrainian goods based on «significant synergies with the climate goals of the European Green deal».^[71] The EU CBAM is the only element of the EGD that has thus far earned its own governmental working group.

70 *Ukraine's political and business leaders commit to driving the country's sustainable future (Politico, 15 November 2021).*

71 *A working group to cooperate with the European Commission on carbon border adjustment to be set up in Ukraine (KMU, 25 March 2021).*

Joined value chains in sustainable products. The EU-Ukraine Partnership on Critical Raw Material and Batteries was signed in July 2021 with the aim of bettering the integration of critical raw materials and battery value chains between Ukraine and the EU.^[72] This will help develop mineral resources in Ukraine «in a sustainable and socially responsible way». The respective Roadmap under the Partnership was endorsed with a number of concrete tasks for 2012–2022, including joint-venture projects between Ukrainian and EU companies. It is important to ensure that production steps with higher added value within this and other resource-related partnerships are also developed in Ukraine; these would be crucial for maximising the positive economic effects of the transition to a green economy and ensuring that Ukraine is treated as a partner and not as a «resource appendage» of the EU.

Waste reduction and recycling. The 2030 State Strategy on Waste Management of Ukraine declares the move towards circular economy as one of its main principles and endorses the principle of «reuse, reduce, recycle». However, the implementation of the strategy has been slow, and most of the actions from the first implementation period were not implemented, including the adoption of the law on waste and secondary raw materials.^[73] Another problem is that existing strategic documents in areas of climate and waste envisage minimal cooperation between responsible authorities; this leads, for instance, to a complete absence of any reference to the Paris Agreement and GHG emissions in the above-mentioned waste strategy.^[74]

Certain initiatives in the area of circular economy are implemented in Ukraine through the EU4Environment project, namely the introduction of sustainable public procurement (SPP), the drafting of legislation on eco-labelling and introducing the concept and tool of the EU Single Market for Green Products (SMGP) to local producers.^[75]

Conclusion. Transition to a circular economy is acknowledged among the priorities of the economic development in Ukraine, but there no strategy for such a transition in place or under discussion. Active steps within the EU-Ukraine EGD dialogue are limited to sub-sectors where the EU has an apparent interest, such as developing critical mineral resources or where Ukraine sees most critical risks for itself: the application of the EU CBAM. The national discussion on the decarbonisation of energy-intensive industries has started – having been induced by the EU CBAM – but real action is pending.

72 *EU and Ukraine kick-start strategic partnership on raw materials (EC, July 2021).*

73 *Does a national strategy on waste management work? (EPL, 26 April 2019).*

74 *New EU policy on circular economy: opportunities for Ukraine (Dixi Group, 2020).*

75 *Towards a green economy in EaP countries: progress at mid-term (2021)*

2.2.4 Zero pollution

Relevance: Air and water pollution matters have high relevance for the Ukrainian people, as well as in the context of transborder water basins shared with EU countries.

The topic of pollution, especially air pollution in industrial cities, is very sensitive in Ukraine. Two-thirds of the population in Ukraine lives on territories where air quality does not meet hygienic standards,^[76] with the main sources of the pollution being the extraction and processing industry, thermal power plants and transport. To date, most of the cities and regions in Ukraine do not have automated air quality monitoring systems.

The Ukrainian government's priorities in this EGD area consist of implementing the air quality improvement plans in Ukrainian cities and improving the quality of the water supply and reducing water pollution.^[77] Access to clean water in rural areas and improved monitoring of air quality in some 300 cities are among the top ten strategic priorities under the post-2020 EaP, with around EUR 750 million to be provided through the Economic and Investment Plan to upgrade water supplies and sanitation and for the management of water basins.^[78] Another EUR 485 million will be provided to improve other municipal services and air quality and to promote green urban areas.

Air quality. Ukraine has committed to implementing a number of EU directives and regulations in this area, above all a Directive 2001/80/EC on the pollutants into the air from large combustion plants (the LCPD) and a Directive 2010/75/EU on industrial emissions. Implementation of both directives has been severely delayed, and hardly any positive dynamic has been observed since Ukraine announced its readiness to join the EGD. Transposition of the Directive on industrial emissions into Ukrainian law is pending – the Ukrainian Parliament has failed to pass the respective law, which was prepared with support from international donors^[79] in 2021 amid heavy lobbying against the draft law by the major polluting firms. Practical implementation of the National Plan of Emission Reductions from Large Combustion Installations had not commenced as of 2019; changes in the plan postponed implementation^[80] and no progress was observed in 2020-2021.

76 *About the main principles (strategy) of Ukraine's state environmental policy for the period up to 2030*, approved by the law № 2697-VIII from 28 February 2019.

77 Position Paper on the Participation of Ukraine in the EGD submitted by the Ukrainian Government to the Commission in summer 2020

78 SWD (2021), 186 final

79 The draft law 4167 «On Prevention, Reduction and Control of Pollution Caused by Industrial Activity», developed with assistance from the GIZ project «Reduction industrial emissions protects the environment, climate and health»

80 *Ukraine and the Association Agreement: monitoring report on Ukraine's progress in implementing the Association Agreement with the EU in areas of energy and environment over 9 months in 2019.*

Water quality. Under the AA, Ukraine has committed to implementing six «water» directives aimed at improving water quality, including drinking water. In 2019, a new procedure for water monitoring, consistent with requirements of EU's Framework Water Directive, took effect, introducing procedures for monitoring surface, ground and sea water.^[81] However, the European rules for water pollution permitting (envisaged by the Directive 2010/75/EU on industrial emissions) and the Directive 91/676/EEC on the protection of water against nitrogen pollution are not yet implemented; the situation concerning the pollution of water basins and the quality of drinking water in many Ukrainian cities, and especially in rural areas, remains dire.

Within the framework of regional cooperation, Ukraine is a part of the EU Danube Region Strategy, and assumed the chair of the Strategy in 2021.^[82] Among the priorities for Ukraine are the introduction of the integrated water basin management, adaptation to climate change in the Danube basin, the protection and restoration of Danube's delta wetlands and biodiversity. From 2016 to 2021, the EU Water Initiative Plus (EUWI+)^[83] supported Ukraine and other EaP countries in aligning their legislation with EU rules in terms of water basin management domain, with a particular focus on transborder rivers.

Conclusion: This area is of crucial importance for the citizens of Ukraine, and it is prioritised at the level of specific projects in the post-2020 EaP framework. While some progress has been observed in implementing the EU's approach to water quality monitoring, the necessary legislative changes needed to address the causes of air and water pollution are still pending. A zero-pollution approach or anything related to systemic work on addressing environmental pollution is not visible on the EU-Ukraine EGD agenda.

2.2.5 Smart Mobility

Relevance: GHG emissions in Ukraine's transport sector have been rising since 2015 and the new NDC provides for a rise by another 5.5% by 2030. Ukraine is an important transit country, connecting the EU through roads, pipelines and sea routes with the markets of Russia, the Caucasus and Central Asia. Plans exist to further expand and improve transportation links.

Targets and challenges. Ukraine's newly adopted NDC allows for a further increase in transport emissions, with the sector now being responsible for 11% of the country's total emissions. The government expects a further significant increase in the number of passenger cars, with 90% of Ukraine's transport fleet in 2030 comprising outdated automobiles

81 *Surface water monitoring (DAVR, 13 May 2020).*

82 *The EU strategy for the Danube region: key tasks in the area of environmental protection (DAVR, 16 November 2021).*

83 *The European Union Water Initiative Plus (EUWI+).*

imported from abroad.^[84] In 2019, Ukraine postponed introduction of Euro-6 vehicle emission standards, which, combined with the sluggish control over used car imports, allows Ukraine to be continuously flooded with substandard second-hand vehicles from the EU. This further exacerbates the critical situation concerning air pollution and congestion in large Ukrainian cities, where car emissions are often responsible for 90–95% of the overall air pollution. The political importance of road infrastructure in Ukraine is so high that roughly half of the money from the fund for fighting the COVID-19 pandemic in 2020 was channelled to the «Big construction» project for construction and renovation of roads across the country.^[85]

The 2030 Transport Strategy of Ukraine looks to be more ambitious in terms of decarbonisation of transport than Ukraine's new NDC. It sets a target of 75% of transport being electric^[86] by 2030 and 50% of fuel and electricity in the sector stemming from renewable sources.^[87] Still, the strategy is rather broad and provides for the development of all modes of transportation without prioritisation of climate-friendly options.

In terms of stimulating policies for low-carbon transport, Ukraine introduced legislation providing for duty-free and VAT-free imports of electric cars and stimulating provisions for potential development of domestic e-vehicle manufacturing. Still, the number of e-cars in Ukraine is very low – 25,800 as of January 2021 (out of the country's total of 12 million private cars).

Meanwhile, within the framework of the EGD, the Ukrainian government highlighted the need to work with EU partners on a reorientation towards high-speed railway transport, multimodal systems and the digitalisation of transport, as well as a general shift away from road transport and toward railway and waterways in freight operation.^[88] The transport component of the EU-Ukraine AA provides a basis for improved transport infrastructure, services and road safety, but not explicitly for decarbonisation. In the current high-level EU-Ukraine EGD dialogue, transport sector decarbonisation is largely not covered. On other high-level bilateral fora, the focus is still on traditional priorities of improved connectivity. One example is the Common Aviation Area Agreement, signed by the EU and Ukraine at the most recent EU-Ukraine Summit in October 2021.^[89]

84 *What will the new 2030 climate goal of Ukraine change? (Commons, 2 November 2021).*

85 *Volodymyr Zelensky's «Big construction» project runs into problems (Emerging Europe, 16 June 2021).*

86 This includes city public transport and railways.

87 *National 2030 Transport Strategy of Ukraine (30 May 2018).*

88 *European Green Deal (Mission of Ukraine to the EU, 15 April 2021).*

89 *EU-Ukraine Summit in Kyiv: main accomplishments and challenges (Ukraine crisis media centre, 16 October 2021).*

As an EaP country, Ukraine is covered under an **Indicative TEN-T Investment Action Plan**, which envisages implementation of certain transport infrastructure projects with assistance from the EC and the World Bank in all sub-sectors, including road, aviation, sea transport and railway.^[90] The plan will be revised, and it is important that priority for post 2020 investments is placed on «sustainable transport connectivity»,^[91] meaning to the development of railway and multi-modal transportation. So far, most of the high-priority investment projects in this action plan are highways.^[92]

Smart urban mobility. Ukraine receives support from its EU partners and IFIs for the introduction of smart mobility planning in Ukrainian cities and the renovation of public transportation fleets. The first sustainable urban mobility plans in Lviv, Zhytomyr and Poltava were developed with the support of the GIZ in 2019,^[93] and more cities (Mykolaiv, Dnipro) have begun smart mobility planning. In 2021, the financial agreement «Urban Public Transport Ukraine II», between Ukraine and the EBRD and EIB, took effect, which will allow Ukraine to receive EUR 200 million for the improvement of its public transport in up to 20 cities, with a focus on electric transport.^[94] The National Cycling Strategy of Ukraine is also under development with support from the EU4Climate project.^[95]

Conclusion: Ukraine's national level transport agenda has begun to reflect the need for decreasing the sector's impact on the environment, but the focus is still on further development of automobile transport. Even before the EGD, the concept of sustainable mobility started to take root at the city level with the support of the EU partners; its further implementation and spread to more cities should be one of the areas of EU-Ukraine cooperation under the EGD. The EaP's Indicative TEN-T Action Plan must be updated to reflect the EGD priorities and shift investments from airports and highways to railway and sustainable multi-modal transport in order to ensure that transport links between the EU and its eastern neighbours are developed in line with the EGD priorities.

90 *The TEN-T Transport Network: How the European Union Sees Development of Ukraine's Infrastructure (Centre for Transport Strategies, 5 March 2019).*

91 SWD (2021), 186 final. p. 19.

92 SWD (2021), 186 final.

93 GIZ implements the project «Integrated Urban Development in Ukraine for the period 2019-2023».

94 *Ukraine could get EUR 200 to improve public transport (Kasatka Media, 04 December 2021).*

95 *EU and UNDP working to develop National Cycling Strategy for Ukraine (UNDP, 27 September 2021).*

2.2.6 Buildings

Relevance. Ukraine's untapped potential in reducing energy use and thus related GHG emissions in buildings is among the highest across sectors and is directly relevant to critically important issues of energy poverty and the country's dependence on energy exports. By utilising energy improvement potential in the housing sector alone, Ukraine could save up to 9m TOE of energy or EUR 3 billion annually.^[96]

In the last 5 years, Ukraine has implemented a number of EU directives in this area (as part of the obligations under the ECT and AA), including the introduction of 100% commercial metering of energy resources, energy management, energy service contracts (ESCOs) and more. The latest success is the adoption in October 2021 of the framework law «On energy efficiency»^[97] – a crucial step towards transposition of the Directive 2012/27/EU.

In Ukraine, there are two main instruments for implementing energy efficiency modernisations in the housing sector: the Energy Efficiency Fund for apartment blocks managed by homeowners' associations and the «Warm credits» loan facility for private single-family homes. The Energy Efficiency Fund was created in 2019 with extensive technical support and co-financing from the EU and GIZ^[98]; to date it has co-financed about 760 thermo-modernisation projects,^[99] which has kick-started the long-awaited modernisation of Ukraine's housing sector. Meanwhile, Ukraine has millions of houses that need efficiency improvements, including low-income households, houses that lack home-owners associations and public buildings.

In November 2021, President Zelensky announced the «Big thermo-modernisation» programme, promising to allocate up to UAH 300 billion (a little less than EUR 10 billion) into a massive energy efficiency programme for housing and public buildings to «protect ourselves from rising energy prices and gain real energy independence».^[100] The first UAH 30 billion is already earmarked in the 2022 state budget. The programme, however, is not yet available, and Ukrainian experts are calling on the president to ensure that the programme develops transparently and that all existing instruments remain in place.^[101]

In the scope of the EU-Ukraine EGD dialogue, new initiatives in the area of building renovations have yet to be seen. Energy efficiency standards for buildings and

96 *Energy efficiency system in Ukraine: discussion draft (GIZ, 2018).*

97 *The parliament approved the law on energy efficiency (KMU, 21 October 2021).*

98 *Energy Efficiency Fund reduces costs and emissions (GIZ).*

99 Own calculations based on information from the *Energy Efficiency Fund*.

100 From the speech of President Zelensky in the Ukrainian Parliament on 1 December 2021.

101 *Letter to President Zelensky from the civil society expert organisations from 3.12.2021.*

comprehensive affordable large-scale renovations of public and residential buildings feature among the key priorities in post-2020 EaP framework, but it is not yet clear how these will be realised.

Conclusions. The scope of energy efficiency programmes in Ukraine has been insufficient to tap the country's massive energy efficiency potential in this sector, despite critical social necessity and continued promotion of the topic by international partners. While it is yet unclear if and how «Big thermo-modernisation» will go ahead, the EU should further support implementation of related legislation, continue co-financing the Energy Efficiency Fund and potentially offer assistance in designing the plan for the renovation of massive buildings proposed by President Zelensky.

2.2.7 Sustainable Agriculture

Relevance. The agricultural sector in Ukraine produces 11% of the country's GHG emissions, and these are projected to increase. The sector is highly relevant to Ukraine's trade with the EU and provides vast opportunities for Ukraine in the context of the EGD (organic farming, trade in organic products).

In the last 10 years, GHG emissions in Ukraine's agricultural sector have been growing, together with an increase in arable land and the use of mineral fertilisers. The National Economic Strategy of Ukraine envisages 3% of the total agricultural land in Ukraine to be used for organic farming by 2030 (up from 1.1% currently), while the new NDC further allows for a slight increase of GHG emissions (4.7%) in the sector.

The trade in agricultural products constitutes nearly 40% of Ukraine's total exports to the EU; and in terms of organic food, Ukraine is the EU's 4th biggest supplier (8%).^[102] The greatest potential for Ukraine in the context of the EGD lies in expanding organic farming, the application of EU standards for safe and sustainable food production and the digitalisation of agriculture.^[103] However, if Ukrainian food producers fail to comply with the relevant EU environmental standards, they risk losing access to the EU market. Progress in implementing respective sectoral EU legislation has thus far been sluggish. The law on organic production was adopted in 2018 but is still not enforced, as the by-laws have not been developed. The implementation of Directive 91/676/EEC on the protection of water against nitrogen pollution from agriculture is also lagging behind; it has been hindered by constant changes in the government's structure, among other factors.

102 *EU imported slightly fewer organic agri-food products in 2020 (EC, 9 June 2021).*

103 *RAC (2021), Mapping of strategic targets of Ukraine and the EU in context of the EGD: development vectors and flagship initiatives.*

Sustainable agriculture is largely absent from high-level EGD talks between the EU and Ukraine, despite the «Fork to Farm» strategy cited in the initial list of prospective areas of cooperation outlined in Ukraine's government position paper on the EGD. It is also not featured among EaP priorities for the post-2020 period (see Annex).

Conclusion: Despite its important role and the potential for increased EU-Ukraine trade in agricultural products, the topic of «greening» the agricultural sector appears to be off the agendas of both the EU-Ukraine dialogue on the EGD and the EaP. Progress on Ukraine's current obligations is slow. The EU should press the topic of sustainable agriculture and seek to engage with the Ministry of Agrarian Policy as part of the EU-Ukraine EGD dialogue.

2.2.8 *Ecosystems and biodiversity*

Relevance: Biodiversity protection and ecosystem restoration are highly relevant to preserving Europe's natural environment, which, besides its inherent value, is essential for climate resilience and for providing society with numerous ecosystem services.

Halting the loss of biodiversity will be one of the main goals of cooperation under the post-2020 EaP framework.^[104] To these ends, it is envisaged that EaP countries will use the EU assistance to extend and connect protected areas (Emerald Network) and improve sustainable forests management and forest law enforcement, governance and trade.^[105]

The Ukrainian government places emphasis on forest restoration, afforestation, the expansion of nature protection areas, including the Emerald Network, the restoration of wetlands and the creation of the Ukrainian cluster of the Natura 2000 network.^[106] Of these aims, the high-level EU-Ukraine dialogue focusses on improvements in forest management and the development of nature protection territories.

Strengthening control over the imports of timber to the EU is one element of the EU's Forestry Strategy. It will have a positive effect on combating illegal logging in Ukraine, which currently constitutes a major problem and has led to an unprecedented legal dispute with the EU over Ukraine's raw wood export ban in 2015.^[107] Illegal logging severely threatens the biodiversity-reach of primary forests in the Carpathian Mountains and worsens climate resilience in the region. The State Strategy on Forest Management 2035 draft

104 JOIN (2020), 7 final.

105 SWD (2021), 186 final.

106 Position Paper on the Participation of Ukraine in the EGD submitted by the Ukrainian Government to the Commission in summer 2020.

107 *Ukraine wood export ban found illegal in independent panel ruling (EC, 12 December 2020).*

was developed in 2020; it introduces new forest management practices and looks to tighten control over logging in certain regions, but its approval is still pending.

Under the AA, Ukraine is implementing two directives on biodiversity protection, the EU Bird Directive and Habitats Directive. If they are fully implemented, Ukrainian nature protecting sites will achieve a certain status in the Natura 2000 network, provided that some formal obstacles to the full implementation, which relate to Ukraine being a non-EU state, are removed. The EGD provides an excellent opportunity for the Ukrainian government and the EU to work together to eliminate such barriers by creating a format for an additional cluster to the Natura 2000 network and to attract additional funding for Ukraine's nature protection areas.^[108]

Among the latest positive developments in the area, Ukraine's Marine Conservation Strategy was adopted in October 2021, which implements the EU Marine Strategy Framework Directive in Ukraine.

Conclusion: Biodiversity protection is among the priorities within the post-2020 EaP framework, while some important aspects such as improved forests management and the development of nature protection areas are also discussed at high-level bilateral talks between the EU and Ukraine.

2.2.9 Just transition for the regions

Relevance. The transition of Ukraine's coal regions has been on the latest EU-Ukraine Association Council's agenda and featured in the high-level EU-Ukraine dialogue on the EGD. The topic is supported through the ECT initiative and the German-Ukrainian Energy Partnership (see chapter 1. and Fig. 1).

Just Transition Mechanism: Ukraine has two coal mining regions – Donbas and the Lviv-Volyn coal basin – where 25 communities with a total of 850,000 people will be affected as coal mines closures proceed. In September 2021, the government approved the Concept of the State Target Programme for the Just Transition of Coal Regions until 2030, a first-ever attempt by the Ukrainian government to outline a comprehensive plan for solving the socio-economic problems faced in coal-dependent regions.^[109] A concrete transition mechanism has yet to be developed.

The bottom-up initiatives in the affected regions started to develop before the EGD with the support of international partners. In 2019, mayors of six coal-dependent cities in the

108 *Andrusevych et al. (2020), European Green Deal: opportunities and threats to Ukraine. Policy Paper.*

109 *The government has supported a just transition of coal regions by 2030. What does it mean and what's next? (Ecoaction, 29 September 2021).*

Donbas region, three regional NGOs and the Donetsk Chamber of Commerce and Industry created a Platform for Sustainable Development of Coal Towns. Today the Platform includes nine towns and develops its own transformation strategy, including strategic goals, concrete objectives and ideas for potential projects.^[110]

However, there is a severe gap between the international cooperation agenda and actual developments in the Ukrainian coal sector. Just transition planning cannot effectively go forward without clear plans concerning when and which mines should be closed and how coal will be replaced in the energy mix; these issues are still not addressed in any of the official documents. So far, the necessary links between regional development and energy sector development are missing. In May 2020, the Coordination Centre for the Transformation of the Coal Regions under the Cabinet of Ministers of Ukraine was established, but as of now the Centre is more of an information exchange platform between ministries and other members and does not effectively coordinate any policy processes.^[111] Therefore, there is an urgent need to consolidate and integrate the work of different ministries related to coal region transformation processes by providing the Coordination Centre with a mandate and resources to become a true inter-ministerial and cross-level coordinating body. The enhanced Coordination Centre should also provide a currently lacking effective communication channel between national and regional levels – despite representatives of the Platform for Sustainable Development being formally included in the Coordination Centre, they are not effectively involved. The platform representatives point out, for example, that the pilot projects in the region must be selected through a transparent and open procedure and ensure a positive effect on region as a whole.^[112] However, the first two projects within the German-Ukraine Energy Partnership were selected without such as open selection process.

Conclusion: Since 2020, Ukraine has demonstrated some progress in addressing the need for coal region transformation. The actions in this direction receive substantial attention and support within different EU-Ukraine cooperation frameworks. The EU partners should help the Ukrainian government consolidate the work of the various ministries and regional and local stakeholders to ensure further progress in this area.

110 *Platform for sustainable development.*

111 As discussed during the high level forum «Just Transition of Coal Regions: From Plans to Action!» on 6 October 2021 in Kyiv.

112 *Coal towns of Donetsk region: view on just transition for mining regions (Ukrinform, November 2020).*

2.2.10 Financing green transformation

Relevance. Availability of financing is a cross-cutting and, without a doubt, dominant issue in green transition planning.

Receiving additional financial resources for supporting the country's green transformation is one of the critical expectations of the Ukrainian government and business sector in the context of the EGD. Much focus within the EU-Ukraine EGD dialogue is on financing Ukraine's NDC implementation, and a designated «**coordinating platform on financial issues**» is set to help attract international finance in support of Ukraine's green transformation.^[113]

Ukraine's own commitments to climate finances are relatively moderate, comprising green bonds and sustainable public procurements,^[114] but no targets on climate budgetary spending are envisaged or discussed.^[115] The on-going international support in promoting green finance within Ukraine is directed to assist the Ukrainian government in preparation for carbon pricing reform (see 2.2.1) and in introducing green public procurements (through the EU4Environment project).

Within the EaP framework, the EU commits to helping partners set up a financial system that supports sustainable growth.^[116] The EU also commits to allocating 30% of the funds channelled through the Neighbourhood, Development and International Cooperation Instrument (NDICI)^[117] to climate-related objectives.^[118] The EUR 2.3 billion **Economic and Investment Plan for the EaP (EIP)** will «contribute» to the NDICI; it may thus be assumed that 30% of it (EUR 690 million) is to be spent on EGD-related initiatives in the six EaP countries. This amount looks relatively modest considering, for example, that the implementation of Ukraine's moderately ambitious NDC alone will require EUR 102 billion. The EIP is expected to leverage additional funding from international financial institutions such as the EIB and the EBRD and from individual member states. Private capital can be further leveraged through the External Action Guarantee mechanism and

113 *The results of the second meeting of the high-level Dialogue on the EGD and Ukraine's green transformation (MENR, 23 September 2021).*

114 Position Paper on the participation of Ukraine in the EGD submitted by the Ukrainian Government to the EC in summer 2020.

115 The only exception would be 1% of the annual state budget to be allocated for energy efficiency programmes set in the recently adopted law «On energy efficiency».

116 SWD (2021), 186 final.

117 NDICI is the EU's new primary mechanism for international development, with the total budget of EUR 79.5 billion for the 2021–2027 period.

118 SWD (2021), 186 final; in the initial EDG Communication it was 25%.

the European Fund of Sustainable Development Plus^[119]; both are expected to play an important role in leveraging and de-risking private green investments in EU partner countries. Through these means, the EIP may mobilise up to EUR 3.4 billion into sustainable energy projects in the region.^[120]

Besides the NDICI, Ukraine is eligible for funding from one of the EU's internal development funds – **Horizon Europe**, the EU research and innovation programme for 2012–2027.^[121] The association of Ukraine to Horizon Europe was finalised at the latest EU-Ukraine Summit.^[122] No other EU fund that supports the EGD implementation within the EU (such as Innovation Fund or Just Transition Fund) is accessible to Ukraine and other non-members of the EU. As an Annex 1 country under the Kyoto Protocol, Ukraine is also ineligible for financing from the UNFCCC's Green Climate Fund.

Moreover, with the launch of the **EU CBAM**, Ukraine may be forced to pay «carbon fees» to the EU budget on its steel and other carbon-intensive exports – money that could otherwise be invested in emission reduction measures within the country. One way to make the CBAM instrumental in kick-starting green transformations in trade partners like Ukraine, and thus increasing the mechanism's acceptability internationally, would be to transfer a significant part of the CBAM revenues to CBAM-affected countries. This would support the climate neutrality transition of the industry and power sectors in those countries.^[123] The parallel process of improving the country's carbon pricing system and developing industrial policy (see 2.2.1) should, in the middle term, help to decrease CBAM payments and stimulate industrial modernisations.

Yet another envisaged channel of green finance for Ukraine is a **Green Fund**, announced jointly by the US and Germany as compensation for the losses Ukraine will suffer if the Nord Stream 2 pipeline becomes operational. Although not directly stemming from the EGD framework, this fund will allegedly aim to support Ukraine's energy transition, energy efficiency and energy security, including the development of hydrogen projects through the commitment to attract USD 1 billion (EUR 847.4 billion) in investments, including from the private sector.^[124] So far, Germany has made a modest initial donation of EUR 148.3 million to this yet-to-be-established fund. It would be essential to ensure that this financing

119 Both External Action Guarantee and the Sustainable Development Fund are financial instruments within the NDICI.

120 SWD (2021), 186 final.

121 *LibMod (n.d.), Investment plans of the EU: opportunities of Ukraine in the area of the EGD implementation. Policy paper*

122 *EU-Ukraine Summit: moving forward together (EC, 12 October 2021).*

123 *Germanwatch (2021), Less confrontation, more cooperation: increasing the acceptability of the EU Carbon Border. Adjustment in key trading partner countries: policy brief*, p. 26.

124 *Ukraine gets compensation on exchange for US-Germany deal on Nord Stream 2 (Euractive, 22 July 2021).*

is entirely in line with the EGD goals. If nothing else, it would help Ukraine improve its efficiency of energy use, which would subsequently decrease the country's dangerous over-dependence on imported fossil fuels from Russia.

Such a variety of existing and envisaged financing channels for the EGD-related initiatives in Ukraine will present a coordination challenge between donors, funds and Ukrainian partners. In order to ensure limited donor support is channelled into the most important initiatives, **a comprehensive strategy for EGD extension in Ukraine is needed** as well as a **donors coordination mechanism**. To create incentives for domestic green spending, enhancing the transformative power of the EU financial support, the EU could establish a «national climate fund» to be co-financed by domestic emissions pricing schemes and matching EU funds.^[125] The EU would match the country's domestic funds at a certain ratio, depending on the country's NDC ambition level. The fund's spending would be strictly limited to implementing the commitments the recipient country set in the designated «Paris partnership» agreement with the EU.^[126]

Conclusion: Financing the green transformation is among the key issues on the EU-Ukraine EGD agenda. The EU support to Ukraine in EGD-related areas will be channelled through a variety of instruments, and most of them are still under development. The amount of direct EU funds to be available for Ukraine is limited, and the hope is that the upcoming Investment and Economic Plan for the EaP and other re-risking instruments would allow for the leveraging of substantial private investments. In view of the limited financial resources, it is crucial that the funds are channelled into the most important and cost-effective initiatives and that support is transparent and well-coordinated among donors and with Ukrainian partners. Furthermore, it is important to ensure specific elements of the EGD, such as the CBAM, do not undermine but rather support Ukraine's efforts at transforming its economy.

125 *LibMod (2021)*, Towards a European Climate Diplomacy: a proposal to extend the EGD to Ukraine, Moldova, Georgia and beyond through strategic climate partnerships à la carte centred around conditional climate finance.

126 *LibMod (2021)*, Towards a European Climate Diplomacy: a proposal to extend the EGD to Ukraine, Moldova, Georgia and beyond through strategic climate partnerships à la carte centred around conditional climate finance.

3 Guiding principles → What to take into account while developing a cooperation framework for extending the EGD to Ukraine

Through the analysis of developments within the EU-Ukraine cooperation in key EDG areas, we propose the following guiding principles, which should facilitate the successful extension of the EGD to Ukraine for the mutual benefit of the EU and Ukrainian societies and nature.

Guiding principles:

- 1) Comprehensiveness
- 2) Inclusiveness
- 3) Strategic and consistent approach
- 4) Fairness
- 5) Public Awareness

1) Comprehensiveness

To succeed, an integration of the EGD priorities into EU-Ukraine cooperation should be a comprehensive and structured process. A jointly built and implemented bilateral **EGD Roadmap** would go a long way in providing a robust basis for cooperation in all prospective EGD areas and in avoiding missed opportunities.

None of the existing multilateral or bilateral frameworks of EU-Ukraine cooperation thus far provides a robust basis for getting the most of the EGD for both sides. The most promising framework – the new post-2020 EaP policy – reflect some of the EGD priorities but represents the smallest «common denominator» across all EaP countries. It does not yet provide a sufficient basis for pursuing the decarbonisation of industrial production, the «greening» of the agricultural and transport sectors, and an overall transition to low-carbon economies in EaP countries, including in Ukraine. Dedicated bilateral roadmaps for each EaP country that wishes to have one will provide the best opportunity to account for specific circumstances based on a country's ambitions, priorities and needs. It would allow **setting jointly developed objectives** to guide further cooperation on the EGD and monitor the progress. The Ukrainian government has already requested such a roadmap from the EC and the EU should use this opportunity to build its cooperation with Ukraine on the EGD in a comprehensive and structured way.

2) Inclusiveness

The process of integration of EGD principles in Ukraine should be more inclusive and should seek to **engage wider circles of state decision-makers, private sector and NGOs.**

The EU should encourage and assist Ukrainian leadership in engaging a wider circle of governmental and societal stakeholders, including from business and civil society in all sectors, into the process of defining the country's priorities and setting objectives for EU-Ukraine cooperation on the EGD, including in the development of the EGD Roadmap. The EU should further strive to establish closer contacts in the scope of the EGD dialogue with all relevant ministries and agencies, such as the Ministry of Finance, Ministry of Energy, Ministry of Agrarian Policy and Food and others, as well as the Ukrainian Parliament. The participation of sectoral ministries and parliamentarians is critical, as many tasks require decisions that are far beyond the competencies of the Ministry of Environment and can only be made if there is ownership and interest from the side of all respective sectoral ministries.

3) Strategic and consistent approach

The EU should focus its support on assisting Ukraine in **strategic planning and systemic reforms** in all EGD-related sectors. Existing and planned bilateral and multilateral **investment plans for EaP countries should be aligned with EGD principles.** Specific projects should be financed only when they are identified through a strategic sectoral transformation planning process, and via **transparent and inclusive procedures.**

The EU should focus further assistance on helping the Ukrainian government with the strategic planning of green transformation. This will help to **avoid fragmentation** and losing sight of important aspects, as is now the case with sustainable agriculture, industrial pollution and the decarbonisation of transport. The EC should also work with the Ukrainian government on strengthening the alignment of existing cooperation instruments with EGD priorities, for example through the revision of Annex XXX and XXXI to the Association Agreement and investment plans (such as Indicative TEN-T Investment Action Plan) within the EaP policy framework.

Financing of questionable projects (such as nuclear-based hydrogen) should be avoided in order not to undermine the concept of sustainable and just transition, and to prevent «nuclear risk leakage» from the EU to Ukraine. All projects to receive EU financing or to benefit from EU-leveraged green investments should be selected through **transparent and inclusive procedures.** This principle is crucial for ensuring consistency and the integrity of EU support under the EGD umbrella and for preserving trust in the EGD among Ukrainian stakeholders. And last but not least, any **financial support should be strictly conditional** to the timely implementation of the agreed sectoral reforms, including current EGD-related

obligations under the Association Agreement and the objectives of the potential EGD Roadmap.

4) Fairness

The EU should actively **promote EGD priorities also in areas where the EU does not have a direct economic interest**, but where progress is crucial for the improved well-being of people and nature protection.

To date within the EU-Ukraine EGD dialogue, most of the areas with the best progress are the ones where the EU has direct economic interest – green hydrogen, development of Ukraine's raw materials, power grids integration – or where Ukrainian business sees the biggest risk – the EU CBAM. There is significantly less intense dialogue and progress observed in areas where the primary beneficiaries of improvements are the Ukrainian people and nature. Tackling industrial pollution, developing sustainable mobility, decreasing pressure on natural ecosystems and the widening of energy efficiency programmes for housing should be given more weight within the EGD dialogue. The EU needs to **fix the existing imbalance in cooperation topics** in order to ensure that the EGD is an all-encompassing strategy that brings benefits to all, and to avoid the risk of creating an image of Ukraine's role in the EGD as being the EU's «raw material appendage».

5) Public awareness

The EU should help the Ukrainian government launch a **broad public discussion** in Ukraine on the need to decarbonise the economy and about EGD as a strategy to achieve it.

To make EGD work for Ukraine, people in the country should know what it is, understand the benefits of transformations and the risks of inaction. So far, awareness about climate change and public demand for climate action in Ukraine is significantly lower than in the EU; there is thus a major risk that the next government can roll back on Ukraine's climate ambitions and that the progress achieved to date in joining the EGD could be blocked.

Within the scope of the German-Ukrainian Energy Partnership, Germany could consider proposing that Ukraine **establish a Ukrainian «coal commission»** to launch societal debate on phasing out coal and building a green economy together with the EU as a stimulus for boosting economic development. The EU should also **continue supporting the work and institutional development of Ukraine's civil society** and multi-stakeholder initiatives in all EGD-related areas; their role is crucial in monitoring and supporting reforms and in steering public debate on climate and decarbonisation.

Conclusions

To reach the EGD goal of a climate-neutral Europe, the EU must work proactively with its neighbours, including with the EaP countries, to help pursue decarbonisation of their economies. Ukraine may represent the biggest challenge in this regard, considering its significant share of the region's carbon emissions, its heavy reliance of fossil fuels and its (geo)political vulnerability.

Many of the existing EU-Ukraine bilateral and multilateral cooperation frameworks already *partially reflect* the EGD priorities, as the approximation of legislation in the area of environmental and climate policy was an element of EU-Ukraine relations years before the EGD. At the same time, **none of the existing cooperation frameworks provides a robust basis for either side to maximise returns on what the EGD has to offer**. Some frameworks, namely the Energy Community Treaty or German-Ukraine Energy Partnership, cover only selected energy-related aspects of a green transition, while reaching EGD goals requires substantial transformation in all sectors of the economy. Others, namely the post-2020 EaP policy, represent the smallest «common denominators» in terms of ambition and interest across all six EaP countries, and have some «blind spots» when it comes to the transformation of industry and agriculture, the decarbonisation of transport system or «greening» national budgets in EaP countries. Reflecting Ukraine's ambitions, interests and specific challenges and avoiding missed opportunities requires a robust basis for bilateral cooperation on the EGD. A jointly developed **EGD roadmap with clearly defined objectives** could provide such a basis for guiding further cooperation and monitoring the progress.

The EU should encourage and **assist Ukrainian leadership in engaging a wider circle of governmental and societal stakeholders** – including from business and civil society in all sectors – into the process of defining the country's objectives and designing the EGD roadmap. The EU should further **assist in launching societal debate on phasing out coal and building a green economy** to raise public awareness of the benefits of transformations and the risks of inaction. The progress in climate-related areas that we have observed in Ukraine in the last year – the adoption of an improved NDC, setting a climate neutrality year, launching a transformation process for coal regions – is highly fragile, and can be blocked by future governments unless there is more support for a green transition from key stakeholders and a better understanding among the wider public.

The EU must **fix the existing imbalance in cooperation topics** to ensure that the EGD is an all-encompassing strategy that brings benefits to all. Thus far within the EU-Ukraine EGD dialogue, most of the areas with the best progress are the ones where the EU has direct economic interest – green hydrogen, development of Ukraine's raw materials, power grids integration – or where Ukrainian business sees the biggest risk – the EU CBAM. The EU should more actively **promote EGD priorities in areas where progress is crucial for the**

improved well-being of people and nature protection, but also where such progress is challenging or not a priority for Ukrainian government. Tackling industrial pollution, prioritising development of sustainable modes of transportation, decreasing pressure on natural ecosystems and widening energy efficiency programmes for housing should be given more weight within the EGD dialogue and should be reflected in EGD roadmap or any other form of future structuring of the dialogue. This would encourage true transformation (as opposed to marginal improvements in certain preferable areas) and would **avoid the risk of creating an image of Ukraine's role in EGD as being the EU's «raw material appendage»**.

When it comes to financial support, it is essential that it is organised in a transparent and well-coordinated way among donors and with Ukrainian partners. As an EaP country, Ukraine is eligible for receiving rather limited EU support under the Neighbourhood, Development and International Cooperation Instrument (NDICI), but will not have access to most of the EU funds created for financing green transitions in the EU. In view of limited envisaged support, the task of channelling it to the most important and effective projects becomes of paramount importance. All projects to receive EU financing or benefiting from EU-leveraged green investments should be selected through **transparent and inclusive procedures**. It is also important that all EU financial support is fully consistent with the EGD principles. Existing and planned bilateral and multilateral **investment plans should be aligned with the EGD priorities**, meaning they should be revised to exclude any investments in unsustainable modes of transport, in fossil fuel extraction or supporting infrastructure, or in industrial production or agriculture that does not meet EU environmental standards. And last but not least, any **financial support should be strictly conditional** to the timely implementation of the agreed sectoral reforms, including current EGD-related obligations under the Association Agreement and the objectives of the potential EGD Roadmap.

Annex: Reflection of the EGD priorities in the post-2020 EaP policy

Table 1. EGD-related targets and objectives of the post-2020 EaP policy

| EGD-related targets and objectives as presented in SWD (2021) 186 final | Corresponding EGD areas |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|
| <p>Benefits for people's health and wellbeing</p> <p>Top Target 1: Another 3 million people with access to safe water service</p> <p>Top Target 2: Improved air monitoring and quality in 300 cities</p> <ul style="list-style-type: none"> – Enhance green and climate change public awareness | Zero pollution |
| <p>Circular economy, climate neutrality and green growth</p> <ul style="list-style-type: none"> – strengthen climate policies and green investment to move towards carbon neutrality by 2050 – scale up climate and green financing for municipal infrastructure, sustainable urban transport, the energy sector and SMEs – support improved waste management and increase recycling | Climate Green finances Zero pollution |
| <p>Biodiversity and the economy's natural assets base</p> <ul style="list-style-type: none"> – fight water scarcity and support water management – extend Emerald Network and restore ecosystems – improve sustainable forest management and forest law enforcement, governance and trade – strengthen maritime administrations around the Black Sea and foster alignment with EU marine-related legislation | Ecosystems and biodiversity |
| <p>Strengthening energy security and nuclear safety</p> <p>Top Target 3: 250,000 households reduce energy consumption by at least 20%</p> <ul style="list-style-type: none"> – improve the functioning of energy markets – strengthen national energy legislative and regulatory frameworks in line with ECT – realise the full potential of renewable energy and create green sustainable local jobs | Clean and affordable energy Buildings |
| <p>Accelerating the shift to sustainable and smart mobility</p> <ul style="list-style-type: none"> – Extend sustainable urban mobility planning | Smart mobility |

Table 2. EGD-areas that lack reflection in the post-2020 EaP policy*

| |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> – Just transition – Reference to «just transition» is made only as a statement that the EU will support it. – Circular economy – transformation of industry to a sustainable model of inclusive growth, yet the development of breakthrough technologies is missing – Smart mobility/transport – priority placed on roads development (TEN-T network, p. 20). Only urban mobility is covered. There is nothing on emissions performance standards for cars or on ending fuel-subsidies, aviation or decarbonising freight transport. – Sustainable energy – phasing out of coal and decarbonisation of gas is not discussed, but there is mention of «discouraging further investments in fossil fuel-based energy». – Agriculture – is not discussed, no objectives (but two flagships for Ukraine and Azerbaijan). Reference to sustainable agriculture is made only as statements that EU will support it. – Greening national budgets and price signals (carbon pricing, eco-tax reforms) – not discussed |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

*This list is a selection of the most important missing elements and is not exclusive

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