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German-Ukrainian Agricultural Policy Dialogue

Within the the National Association of Agricultural Advisory Services of Ukraine ДОРАДА

English-Ukrainian Glossary on Terms of Climate Change and Agriculture



Kyiv 2019

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About the Project "German-Ukrainian Agricultural Policy Dialogue" (APD)

The project "German-Ukrainian Agricultural Policy Dialogue (APD)" has been implemented with the support of the Federal Ministry of Food and Agriculture (BMEL) since 2006 and is currently being implemented until 2021 at its request through the executor of GFA Consulting Group LLC, as well as a consortium consisting of IAK Agrar Consulting, Leibniz Institute for Agricultural Development in Transition Economies and AFC Consultants International. The recipient of the project is the National Association of Agricultural Advisory Services of Ukraine "Dorada". When implementing important measures for the development of the land market, the use of state land and privatization, the APD works in cooperation with the land management company (BVVG). The beneficiary of the project is the Ministry of Agrarian Policy and Food of Ukraine.

The project should support Ukraine in the areas of sustainable agriculture, efficient processing industry and international competitiveness in accordance with the principles of market and regulatory policies taking into account the development potential that arises under the Association Agreement between the EU and Ukraine. To meet this goal, the Project should provide information on German experience, in particular, East German, as well as international European experience in development of agrarian and forestry policy framework, as well as on the organization of relevant agrarian and political institutions.

APD German-Ukrainian Agricultural Policy Dialogue www.apd-ukraine.de

Author
Oksana Davis riabchenko_oksana@nubip.edu.ua

Translation
Yuliia Kisilova yuliia.kisilova@gmail.com

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Foreword and disclaimer

In the context of the major objective to increase the level of understanding and competences on international climate change and agriculture policy related issues, this glossary was created for a broad audience including policy makers, academics, public and commercial interests, among others.
Thus, definitions on climate change were selected and translated following these principles:

(I) Definitions, actual usage and relevancy refer to the current agricultural policy and agricultural sector needs.

(II) Affordability and accessibility for the broad auditoriums. The translation of the terms is presented in simple and accessible language without accumulating excessive terminology in the definition, but still captures the essence and preserves the original meaning as much as possible.

До деяких перекладених визначень були застосовані незначні зміни з метою підвищення їх відповідності до смислового навантаження та для збільшення їх вживаності в загальному контексті.

As main sources for the composition of the glossary the following were used:

- Paris Agreement
  https://unfccc.int/sites/default/files/english_paris_agreement.pdf
- Glossaries to the Intergovernmental Panel on Climate Change's special reports
  https://www.ipcc.ch/srccl-report-download-page/
  https://www.ipcc.ch/sr15/chapter/glossary/
- Food and Agriculture Organization of the United Nations (FAO) publications
  http://www.fao.org/publications/en/

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Despite careful and accurate preparation of this glossary and thorough translation of definitions, authors cannot assume any liability for the up-to-dateness, completeness or accuracy of the initial sources.

List of Acronyms Applied

AR4	Fourth Assessment Report of the United Nations Intergovernmental Panel on Climate Change
AR5	Fifth Assessment Report of the United Nations Intergovernmental Panel on Climate Change
BAU	Business-as-usual
BECCS	Bioenergy with carbon capture and storage
CCS	Carbon capture and storage
CH4	Methane
CMP	Conference of the Parties serving as the meeting of the Parties
CO2	Carbon dioxide
COP	Conference of the Parties
CRDP	Climate-resilient development pathways
CSA	Climate Smart Agriculture
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DRM	Disaster risk management
DRR	Disaster risk reduction
ECV	Essential Climate Variables
EHE	Extreme Heat Events
EU	European Union
FAO	Food and Agricultural Organization of the United Nations
GCF	Green Climate Fund
GDP	Gross domestic product
GHG	Greenhouse Gas
GMST	Global mean surface temperature
GtC	Gigatons of carbon
GWP	Global Warming Potential
HCS	High Carbon Stock
IPCC	Intergovernmental Panel on Climate Change
ISDR	International Strategy for Disaster Reduction
ISFM	Integrated soil fertility management
LCE	Low-carbon economy
LFFE	Low-fossil-fuel economy
LULUCF	Land use, land-use change, and forestry
N2O	Nitrous oxide

NDC	Nationally Determined Contribution
NMVOC	Non-methane volatile organic compounds
NO	Nitrogen oxide
NO2	Nitrogen dioxide
NOx	is a generic term for the nitrogen oxides that are most relevant for air pollution, namely NO and NO2
NPP	Net primary production
O2	Molecular oxygen
O3	Ozone (Triatomic form of oxygen)
PaMs	Policies and measures
PM	Particulate matter
RCP	Representative Concentration Pathways
REDD+	Reducing emissions from deforestation and forest degradation
SCCF	Special Climate Change Fund
SD	Sustainable Development
SSP	Shared Socioeconomic Pathways
TOC	Total organic carbon
UN	United Nations
UNCED	United Nations Conference on Environment and Development
UNFCCC	United Nations Framework Convention on Climate Change
VOC	Volatile Organic Compound

English-Ukrainian Glossary on Terms of Climate Change and Agriculture

Term in English	Term in Ukrainian	Definition in English
1.5°C degree [3]	1,5 градуса за Цельсієм (1,5°C)	Average global temperature increase compared with 'pre-industrial times'. Since then, the world has already warmed approximately by 1°C on average. [3],[31]
Acclimatization [3]	Акліматизація	The physiological adaptation of an organism to changes in climate or environment, such as light, temperature, or altitude. [4]
Action on climate change [1]	Дії для протидії зміні клімату	Actions aimed at building social and political support to limit, and subsequently reduce, the concentration of greenhouse gases (GHGs) in the atmosphere, with the goal of mitigating climate change. Other actions seek to address the ethical and moral aspects of climate justice, especially with regard to the anticipated unequal impacts of climate change adaptation. [2]
Adaptation – Mitigation co-benefits [14]	Адаптація-Запобігання [1] Взаємодоповнення	Synergies between adaptation and mitigation policy are found where policies and investments that impact upon GHG emissions also reduce the adverse effects of climate change. Identifying these ancillary benefits can produce win-win scenarios. On the contraty, there may also be tradeoffs, with adaptation resulting in a net increase in emissions. [14]
Adaptation [3]	Адаптація	The process of adjustment to actual or expected climate and its effects. In human systems, adaptation seeks to moderate harm or exploit beneficial opportunities. In natural systems, human intervention may facilitate adjustment to expected climate and its effects. [3]
Adaptation benefits [12]	Вигоди від адаптації	The avoided damage costs or the accrued benefits following the adoption and implementation of adaptation measures. [12]
Adaptation costs [12]	Вартість адаптації	The costs of planning, preparing for, facilitating, and implementing adaptation measures, including transition costs. [12]
Adaptation measures [15]	Адаптаційні заходи	Actions targeted to reduce vulnerability to the effects of climate change. [15]

1 В цьому глосарії термін "запобігання" вживане як відповідний переклад терміну "Mitigation". Проте, у деяких національних документах зустрічається термін "пом'якшення", що є відповідним терміну "запобігання" .

Term in English	Term in Ukrainian	Definition in English
Adaptive capacity [3]	Адаптаційний потенціал	The ability of a system to adjust to climate change (including climate variability and extremes), to moderate potential damages, to take advantage of opportunities, or to cope with the consequences. [11]
Adaptive management [13]	Адаптивне управління	The process of iterative planning, implementing and modifying strategies for managing resources in the face of uncertainty and change. Adaptive management involves adjusting approaches in response to observations of their effects and changes in the system brought on by resulting feedback effects and other variables. [13]
Adverse effects of climate change [16]	Несприятливі наслідки зміни клімату	Changes in the physical environment or biota resulting from climate change which have significant deleterious effects on the composition, resilience or productivity of natural and managed ecosystems or on the operation of socioeconomic systems or on human health and welfare. [16]
Afforestation [3]	Лісорозведення	Planting of trees for the purpose of creating woodland or forest on land that has not recently been used to grow a crop of trees. [Afforestation leads to carbon sequestration and thus is a common climate mitigation option.] In the context of the Common Agricultural Policy, the term refers to measures, co-financed by the European Union, to encourage new woodland development to bring benefits for the environment. [9], [10]
Agricultural meteorology [7]	Агрометеорологія	The branch of meteorology that deals with the relationship of weather and climate to crop and livestock production and soil management. [8]
Agricultural productivity [17]	Ефективність сільськогосподарського виробництва	Agricultural productivity is measured as the ratio of a volume measure of agricultural output to a volume measure of agricultural input. While individual products are usually measured by weight, their varying densities make measuring overall agricultural output difficult. Therefore, output is usually measured as the market value of final output, which excludes intermediate products such as corn feed used in the meat industry. This output value may be compared to many different types of inputs such as labour and land (crop yield). These are called partial measures of productivity. [17],[18]

Term in English	Term in Ukrainian	Definition in English
Agroforestry [5]	Агролісомеліорація	An integrated approach to the production of woody perennials and crops or grasses and/or animals on the same piece of land. Agroforestry is also an important strategy for climate change mitigation and adaptation. [5], [6]
Albedo [20]	Альбедо	The fraction of solar radiation reflected by a surface or object, often expressed as a percentage. Snow-covered surfaces have a high albedo, the albedo of soils ranges from high to low, and vegetation-covered surfaces and oceans have a low albedo. The Earth's planetary albedo varies mainly through varying cloudiness, snow, ice, leaf area and land cover changes. [20]
Anaerobic digestion technology [6]	Технологія анаеробного зброджування (переробки)	To harness microorganisms to degrade organic materials, including manure, in containers where oxygen is absent to produce methane that can be used for heating, cooking or energy production. [6]
Animal and herd management [6]	Управління стадом у тваринництві	An option for land-based systems that can enhance animal productivity, improve feed conversion efficiency and thereby reduce enteric emission intensities. Improving animal husbandry through activities that ensure proper nutrition and appropriate feeding and reproductive strategies, regularly maintaining animal health and using antibiotics responsibly can improve reproduction rates and reduce mortality. All of these measures will increase the amount of output produced for a given level of emission. [6]
Animal breeding [6]	Селекція тварин	A strategy to enhance [livestock] productivity and thereby lower methane emission intensity. [6]
Annex I Parties [19]	Сторони Додатку I РКЗК ООН	Parties to the UNFCCC include the industrialized countries that were members of the Organisation for Economic Co-operation and Development in 1992, plus countries with economies in transition, including the Baltic States, and several Central and Eastern European States. [19]
Annex II Parties [19]	Сторони Додаток II	Consist of the Organisation for Economic Co-operation and Development members of Annex I, but not the countries with economies in transition. They are required to provide financial resources to enable developing countries to undertake emission reduction activities under the UNFCCC and to help them adapt to adverse effects of climate change. In addition, they have to "take all practicable steps" to promote the development and transfer of environmentally friendly technologies to countries with economies in transition and developing countries. [19]

Term in English	Term in Ukrainian	Definition in English
Anthropogenic (greenhouse gas) emissions [3]	Антропогенні викиди (парникових газів)	Greenhouse gas emissions resulting from human activities, including the burning of fossil fuels, deforestation, land use and land use changes (LULUC), livestock production, fertilisation, waste management and industrial processes. [3]
Anthropogenic [20]	Антропогенний	Resulting from or produced by human activities. [20]
Atmosphere [3]	Атмосфера	The gaseous envelope surrounding the Earth. The dry atmosphere consists almost entirely of nitrogen (78.1% volume mixing ratio) and oxygen (20.9% volume mixing ratio), together with a number of trace gases, such as argon (0.93% volume mixing ratio), helium and addiatively active greenhouse gases such as carbon dioxide (0.035% volume mixing ratio) and ozone. In addition, the atmosphere contains the greenhouse gas water vapour, whose amounts are highly variable but typically around 1% volume mixing ratio. The atmosphere also contains clouds and aerosols. [3]
Baseline [20]	Базовий рівень	The state against which change is measured. A baseline period is the period relative to which anomalies are computed. [20]
Baseline scenarios [20]	Базові сценарії	Scenarios that are based on the assumption that no mitigation policies or measures will be implemented beyond those that are already in force and/or are legislated or planned to be adopted. Baseline scenarios are not intended to be predictions of the future, but rather counterfactual constructions that can serve to highlight the level of emissions that would occur without further policy effort. Typically, baseline scenarios are then compared to mitigation scenarios that are constructed to meet different goals for greenhouse gas (GHG) emissions, atmospheric concentrations, or temperature change. The term 'baseline scenario' is used interchangeably with 'reference scenario' and 'no policy scenario'. In much of the literature the term is also synonymous with the term 'business-as-usual (BAU) scenario', although the term 'BAU' has fallen out of favour because the idea of business-as-usual in century-long socioeconomic projections is hard to fathom. [20]
Bioenergy [22]	Біоенергія	Energy that is derived from biological matter (i.e. from plants and animals) but which has not undergone a geological process (cf. fossil fuels). Carriers of bioenergy may be solid (e.g. wood, straw), liquid (e.g. biodiesel, bioethanol) or gaseous (e.g. methane). [22]

Term in English	Term in Ukrainian	Definition in English
Bioenergy feedstock [22]	Біо-енергетична сировина [2]	Living or recently dead organic material or its metabolic by-products. [22]
Black Carbon (BC) [20]	Чорний (Технічний) вуглець	Operationally defined aerosol species based on measurement of light absorption and chemical reactivity and/or thermal stability. It is sometimes referred to as soot. BC is mostly formed by the incomplete combustion of fossil fuels, biofuels, and biomass but it also occurs naturally. It stays in the atmosphere only for days or weeks. It is the most strongly light-absorbing component of particulate matter (PM) and has a warming effect by absorbing heat into the atmosphere and reducing the albedo when deposited on ice or snow. [20]
Cancun Adaptation Framework [23]	Канкунська рамкова програма з адаптації	Parties adopted the Cancun Adaptation Framework (CAF) as part of the Cancun Agreements at the 2010 Climate Change Conference in Cancun, Mexico (COP 16/ CMP 6). In the Agreements, Parties affirmed that the objective is to enhance action on adaptation, including through international cooperation and coherent consideration of matters relating to adaptation under the Convention. [23]
Cap and trade [24]	Система обмеження і торгівлі квотами на викиди	A common term for a government regulatory program designed to limit, or cap, the total level of emissions of certain chemicals, particularly carbon dioxide, as a result of industrial activity. [24]
Capacity building [3]	Зміцнення потенціалу	In the context of climate change, the process of developing the technical skills and institutional capability in developing countries and economies in transition, to enable them to address and report effectively on the implementation of the Convention on Climate Change. [3]
Carbon capture and storage (CCS) [22]	Уловлювання та зберігання вуглецю (УЗВ)	The process of capturing and storing carbon dioxide (CO2) before it is released into the atmosphere. The technology can capture up to 90% of CO2 released by burning fossil fuels in electricity generation and industrial processes such as cement production. [22]

[2] У визначених випадках може вживатись термін поданий у відповідному національному законодавстві: " біомаса -це продукти, що складаються повністю або частково з речовин рослинного походження, які можуть бути використані як паливо з метою перетворення енергії, що міститься в них, зокрема рослинні відходи сільського і лісового господарства". (Наказ №540 https://zakon.rada.gov.ua/laws/term/z1023-09).

Проте при вживанні такої форми даного визначення повинна уточнюватись різниця між викопним паливом, що сформувалось із решток біомаси та зазначатись, що рештки тваринного походження можуть бути використані як біоенергетична сировина.

Term in English	Term in Ukrainian	Definition in English
Carbon dioxide (CO_2) [20]	Двоокис вуглецю/ вуглекислий газ (CO_2)	CO_2 is a naturally occurring gas, also a by-product of burning fossil fuels from fossil carbon deposits, such as oil, gas and coal, of burning biomass and of land use changes and industrial processes (e.g. cement production). It is the principal anthropogenic greenhouse gas (GHG) that affects the Earth's radiative balance. [20]
Carbon dioxide removal (CDR) [20]	Видалення вуглекислого газу (ВВГ)	Anthropogenic activities removing CO_2 from the atmosphere and durably storing it in geological, terrestrial, or ocean reservoirs, or in products. It includes existing and potential anthropogenic enhancement of biological or geochemical sinks and direct air capture and storage, but excludes natural CO_2 uptake not directly caused by human activities. [20]
Carbon footprint [22]	Вуглецевий слід	The amount of carbon emitted by an individual or organisation in a given period of time, or the amount of carbon emitted during the manufacture of a product. [22]
Carbon management [24]	Управління викидами	To examine and focus on business areas where cost-reduction can be achieved through minimising: energy use; raw material consumption; and waste generation. For a company with a committed, long-term business strategy carbon management is a high priority. [24]
Carbon market [24]	Вуглецевий ринок / ринок квот на викиди парникових газів	A popular but misleading term for a trading system through which countries may buy or sell units of greenhouse-gas emissions in an effort to meet their national limits on emissions, either under the Kyoto Protocol or under other agreements, such as that among member states of the European Union. The term comes from the fact that carbon dioxide is the predominant greenhouse gas and other gases are measured in units called "carbon-dioxide equivalents." [24]
Carbon neutral [3]	Нейтральний рівень емісії	A process where there is no net release of CO_2. For example, growing biomass takes CO_2 out of the atmosphere, while burning it releases the gas again. The process would be carbon neutral if the amount taken out and the amount released were identical. A company or country can also achieve carbon neutrality by means of carbon offsetting. [3]

Term in English	Term in Ukrainian	Definition in English
Carbon pricing [25]	Виплати за викиди вуглецю в атмосферу/ Система тарифів за викиди вуглецю	An instrument that captures the external costs of greenhouse gas (GHG) emissions—the costs of emissions that the public pays for, such as damage to crops, health care costs from heat waves and droughts, and loss of property from flooding and sea level rise—and ties them to their sources through a price, usually in the form of a price on the carbon dioxide (CO2) emitted. A price on carbon helps shift the burden for the damage from GHG emissions back to those who are responsible for it and who can avoid it. Instead of dictating who should reduce emissions where and how, a carbon price provides an economic signal to emitters, and allows them to decide to either transform their activities and lower their emissions, or continue emitting and paying for their emissions. This way, the overall environmental goal is achieved in the most flexible and least costly way to society. [25]
Carbon sequestration [22]	Депонування (секвестрація) вуглецю	The process of removing carbon from the atmosphere and depositing it in a reservoir, [typically soil or biomass]. [22]
Carbon stocks [22]	Запаси вуглецю	The quantity of carbon contained in a "pool", meaning a reservoir or system which has the capacity to accumulate or release carbon. Carbon (C) is stored in five different pools: (1) aboveground biomass; (2) belowground biomass; (3) litter; (4) deadwood/woody debris; and (5) soil. [22]
Carbon tax [26]	Вуглецевий податок/ Податок за викиди двоокису вуглецю	A fee imposed on the burning of carbon-based fuels (coal, oil, gas). More to the point: a carbon tax is the core policy for reducing and eventually eliminating the use of fossil fuels whose combustion is destabilizing and destroying our climate. [26]
Climate [23]	Клімат	The composite or generally prevailing weather conditions of a region, as temperature, air pressure, humidity, precipitation, sunshine, cloudiness, and winds, throughout the year, averaged over a series of years. Climate in a narrow sense is usually defined as the average weather, or more rigorously, as the statistical description in terms of the mean and variability of relevant quantities over a period of time ranging from months to thousands or millions of years. The classical period for averaging these variables is 30 years, as defined by the World Meteorological Organization. The relevant quantities are most often surface variables such as temperature, precipitation and wind. Climate in a wider sense is the state, including a statistical description, of the climate system. [23]

Term in English	Term in Ukrainian	Definition in English
Climate change [23]	Зміна клімату	Change in the state of the climate that can be identified (e.g. by using statistical tests) by changes in the mean and/or the variability of its properties, and that persists for an extended period, typically decades or longer. Climate change may be due to natural internal processes or external forcings such as modulations of the solar cycles, volcanic eruptions and persistent anthropogenic changes in the composition of the atmosphere or in land use. Note that the United Nations Framework Convention on Climate Change (UNFCCC), in its Article 1, defines climate change as: 'a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods' [the classical period is 30 years]. The UNFCCC thus makes a distinction between climate change attributable to human activities altering the atmospheric composition, and climate variability attributable to natural causes. [23]
Climate change adaptation (Adaptation) [22]	Адаптація до зміни клімату (Адаптація)	Initiatives and measures to reduce the vulnerability of natural and human systems against actual or expected climate change effects. [22]
Climate change commitment [22]	Зобов'язання щодо боротьби зі зміною клімату	Due to the thermal inertia of the ocean and slow processes in the cryosphere and land surfaces, the climate would continue to change even if the atmospheric composition were held fixed at today's values. Past change in atmospheric composition leads to a committed climate change, which continues for as long as a radiative imbalance persists and until all components of the climate system have adjusted to a new state. The further change in temperature after the composition of the atmosphere is held constant is referred to as the constant composition temperature commitment or simply committed warming or warming commitment. Climate change commitment includes other future changes, for example in the hydrological cycle, in extreme weather events, in extreme climate events, and in sea level change. The constant emission commitment is the committed climate change that would result from keeping anthropogenic emissions constant and the zero emission commitment is the climate change commitment when emissions are set to zero. [22]

Term in English	Term in Ukrainian	Definition in English
Climate change impacts (Effects of climate change) [23]	Наслідки зміни клімату [23]	Climate change consequences which influence the physical, biological, and human systems. First, variations in the physical systems of the planet can be observed in the melting of the poles, which at the same time cause glacial regression, snow melting, warming and thawing of permafrost, flooding in rivers and lakes, droughts in rivers and lakes, coastal erosion, sea-level rise and extreme natural phenomena. In human systems, climate change affects and destroys crops and food production, causes disease and death, destruction, and loss of economic livelihoods and migrations of climate refugees.
Climate change mitigation [22]	Запобігання зміні клімату	A human intervention to reduce the sources or enhance the sinks of greenhouse gases. Examples include using fossil fuels more efficiently for industrial processes or electricity generation, switching to solar energy or wind energy, improving land use to remove greater amounts of carbon dioxide from the atmosphere. [22]
Climate finance [24]	Кліматичне фінансування	A term used to refer to local, national or transnational financing, which may be drawn from public, private and alternative sources of financing. Climate finance is critical to addressing climate change due to the fact that large-scale investments are required to reduce emissions significantly and to adapt to the adverse effects and reduce the impacts of climate change. [24]
Climate justice [27]	Кліматична справедливість	Relating the effects of climate change to concepts of justice, particularly environmental justice and social justice and by examining issues such as equality, human rights, collective rights, and the historical responsibilities for climate change. A fundamental proposition of climate justice is that those who are least responsible for climate change suffer its gravest consequences. [27]
Climate prediction [20]	Кліматичне прогнозування	Or climate forecast is the result of an attempt to produce (starting from a particular state of the climate system) an estimate of the actual evolution of the climate in the future, for example, at seasonal, interannual or long-term time scales. Because the future evolution of the climate system may be highly sensitive to initial conditions, such predictions are usually probabilistic in nature. [20]

Term in English	Term in Ukrainian	Definition in English
Climate projection [20]	Проекції зміни клімату	The simulated response of the climate system to a scenario of future emission or concentration of greenhouse gases (GHGs) and aerosols, generally derived using climate models. Climate projections are distinguished from climate predictions in order to emphasize that climate projections depend upon the emission/concentration/radiative forcing scenario used, which are based on assumptions concerning, for example, future socioeconomic and technological developments that may or may not be realized.[20]
Climate services [23]	Кліматичні послуги	The provision of climate information to assist decision-making. The service must respond to user needs, must be based on scientifically credible information and expertise, and requires appropriate engagement between the users and providers. [23]
Climate system [23]	Кліматична система	The highly complex system consisting of five major components: the atmosphere, the hydrosphere, the cryosphere, the lithosphere and the biosphere, and the interactions between them. The climate system evolves in time under the influence of its own internal dynamics and because of external forcings such as volcanic eruptions, solar variations and anthropogenic forcings such as the changing composition of the atmosphere and land use change. [23]
Climate zones [22]	Кліматичні зони	Areas with distinct climates, which occur in east-west direction around the Earth, and can be classified using different climatic parameters. Generally, climate zones are belt-shaped and circular around the Poles. In some areas, climate zones can be interrupted by mountains or oceans. [22]
Climate-change policy [23]	Політика у сфері зміни клімату	Encompasses policies formulated specifically to tackle climate change and can be local, national or international in scope. These broadly fall into two categories; those designed to minimize the extent of climate change – climate change mitigation – and those intended to minimise risks and seize upon new opportunities – climate change adaptation. [23]
Climate-related factors [22]	Кліматотворні чинники	Various external forcing mechanisms, the most important of which is the sun. Also, the direct effect of human activities on the climate system is considered an external force. [22]

Term in English	Term in Ukrainian	Definition in English
Climate-resilient development pathways (CRDPs) [23]	Сценарії розвитку, що забезпечують стійкість до зміни клімату	Trajectories that strengthen sustainable development at multiple scales and efforts to eradicate poverty through equitable societal and systems transitions and transformations while reducing the threat of climate change through ambitious mitigation, adaptation and climate resilience. These include strategies, choices, and actions that reduce climate change and its impacts. They also include actions to ensure that effective risk management and adaptation can be implemented and sustained (high confidence; medium evidence, high agreement). [23]
Climate-Smart Agriculture [22]	Клімато-орієнтоване сільське господарство (КОСГ)	An approach to agriculture (including cropland, livestock, forests and fisheries) that sustainably increases productivity, enhances resilience (adaptation), reduces/ removes GHGs (mitigation) where possible, and enhances achievement of national food security and development goals. In this definition, the principal goal of CSA is identified as food security and development while productivity, adaptation, and mitigation are identified as the three interlinked pillars necessary for achieving this goal. [22]
Climatic variables [22]	Кліматичні змінні	or Essential Climate Variables are a physical, chemical or biological variable or a group of linked variables that critically contributes to the characterization of Earth's climate. Global Climate Observing System currently specifies 54 ECVs. ECV datasets provide the empirical evidence needed to understand and predict the evolution of climate, to guide mitigation and adaptation measures, to assess risks and enable attribution of climate events to underlying causes, and to underpin climate services. [22]
CO2 fertilization [22]	Удобрення двоокисом вуглецю (CO2)	The enhancement of plant growth as a result of increased atmospheric carbon dioxide (CO2) concentration. The magnitude of CO2 fertilization depends on nutrients and water availability. [22]
Co-benefits for Adaptation/Mitigation [22]	Додаткові вигоди для адаптації та\ або запобігання зміні клімату	See "Adaptation – Mitigation Co-Benefits".

Term in English	Term in Ukrainian	Definition in English
Conservation agriculture [28]	Ґрунтозберігаюче землеробство	The collective umbrella terms commonly given to no-tillage, minimum tillage and/or ridge tillage, to denote that the inclusive practices have a conservation goal of some nature. Usually, the retention of at least 30% ground cover by residues after seeding characterizes the lower limit of classification for conservation tillage or conservation agriculture, but other conservation objectives include conservation of money, labour, time, fuel, earthworms, soil water, soil structure and nutrients. [28]
Conservation tillage [28]	Ґрунтозберігаючий обробіток ґрунту	A farming system that promotes maintenance of a permanent soil cover, minimum soil disturbance (i.e. no tillage), and diversification of plant species. It enhances biodiversity and natural biological processes above and below the ground surface, which contribute to increased water and nutrient use efficiency and to improved and sustained crop production. [28]
Conventional farming [22]	Традиційне сільське господарство	Farming systems which include the use of synthetic chemical fertilizers, pesticides, herbicides and other continual inputs, genetically modified organisms, Concentrated Animal Feeding Operations, heavy irrigation, intensive tillage, or concentrated monoculture production. Thus, conventional agriculture is typically highly resource and energy intensive, but also highly productive. [22]
Conventional tillage [22]	Традиційна система обробітку ґрунту	A cultivation system using tillage as the major means of seedbed preparation and weed control. Context: Typically includes a sequence of soil tillage, such as ploughing and harrowing, to produce a fine seedbed, and also the removal of most of the plant residue from the previous crop. [29]
Cropland [22]	Орні землі (рілля)	Includes areas used for the production of adapted crops for harvest. Cultivated cropland comprises land in row crops or close-grown crops and also other cultivated cropland, for example, hay land or pastureland that is in a rotation with row or close-grown crops. [22]
Decarbonised economy	Декарбонізована економіка	See "low-carbon economy".

Term in English	Term in Ukrainian	Definition in English
Decoupling (of emissions from economic growth) [22]	Відособлення (викидів парникових газів від економічного зростання	Decoupling occurs when the growth rate of an environmental pressure (for example, CO2 emissions) is less than that of its economic driving force (for example, GDP per head) over a given period. Decoupling can be either absolute or relative. Absolute decoupling is said to occur when CO2 emissions are stable or decreasing while the GDP per head growth is growing. Relative decoupling occurs when the growth rate of the CO2 emissions is positive, but less than the growth rate of the GDP per head. [34]
Deforestation [22]	Знеліснення	Conversion of forest to non-forest, [thereby causing CO2 emissions]. [22]
Desertification [3]	Опустелювання	Land degradation in arid, semi-arid, and dry sub-humid areas resultingfrom many factors, including climatic variations and human activities. [3]
Disaster risk [32]	Ризик катастроф	Expressed as the likelihood of loss of life, injury or destruction and damage from a disaster in a given period of time. Therefore, considered as the combination of the severity and frequency of a hazard, the numbers of people and assets exposed to the hazard, and their vulnerability to damage. [32]
Disaster risk management (DRM) [32]	Управління ризиками катастроф (УРК)	Can be thought of as the implementation of DRR, since it describes the actions that aim to achieve the objective of reducing risk. [32]
Disaster risk reduction (DRR) [32]	Зниження ризику катастроф (ЗРК)	The concept and practice of reducing disaster risks through systematic efforts to analyse and reduce the causal factors of disasters. Reducing exposure to hazards, lessening vulnerability of people and property, wise management of land and the environment, and improving preparedness and early warning for adverse events are all examples of disaster risk reduction. DRR aims to reduce the damage caused by natural hazards like earthquakes, floods, droughts and cyclones, through an ethic of prevention. [32]

Term in English	Term in Ukrainian	Definition in English
Droughts [22]	Посухи	Reduction in precipitation over an extended period. This rain shortfall creates a water shortage which damages crops, livestock, and other human activities. A drought has both direct and indirect impacts. It directly reduces plant growth, thus farmers' crop harvest. It indirectly causes job and business losses in the farmers' communities and around the world. Scientists measure it as a deviation from average rainfall. They use the previous 30 years of rainfall to create the average. Scientists measure drought with the Palmer Drought Severity Index. Normal climate conditions vary between +0.5 (wet) to -0.5 (dry). Readings below -0.4 indicate drought. Readings below -0.6 are rare. [33]
Dryland water scarcity [22]	Нестача води в посушливих районах	The lack of sufficient available water resources to meet the demands of water usage within a region. [22]
Early Warning Systems [23]	Система раннього оповіщення	Technology and associated policies and procedures designed to predict and mitigate the harm of natural and human-initiated disasters and other undesirable events. Early warning systems for natural hazards include those designed for floods, earthquakes, avalanches, tsunamis, tornadoes, landslides and drought. Other systems exist for a variety of events including missile launches, road conditions and disease outbreaks. The United Nations' International Strategy for Disaster Reduction (ISDR) recommends that early warning systems have the following four components: • Risk knowledge: Data should be systematically collected and analyzed and risk assessments performed. • Dissemination and communication: Risk information and early warning messages must be delivered. • Response capability: Systems should be in place to respond to events. [34]
Ecosystem-based adaptation [35]	Екосистемна адаптація / Адаптація на основі екосистемного підходу	Uses biodiversity and ecosystem services in an overall adaptation strategy. It includes the sustainable management, conservation and restoration of ecosystems to provide services that help people adapt to the adverse effects of climate change. It can be cost-effective and generate social, economic and cultural co-benefits and contribute to the conservation of biodiversity. [35]
Effects of climate change [12]	Наслідки зміни клімату	See " Climate change impacts".

Term in English	Term in Ukrainian	Definition in English
Emission pathways [31]	Траєкторії поширення викидів	The modelled trajectories of global anthropogenic emissions over the 21st century are termed emission pathways. Emission pathways are classified by their temperature trajectory over the 21st century: pathways giving at least 50% probability based on current knowledge of limiting global warming to below 1.5°C are classified as 'no overshoot'; those limiting warming to below 1.6°C and returning to 1.5°C by 2100 are classified as '1.5°C limited-overshoot'; while those exceeding 1.6°C but still returning to 1.5°C by 2100 are classified as 'higher-overshoot'. [31]
Emission projections [3]	Прогнози викидів	An outlook or forecast of future emissions based on certain assumptions. [3]
Emission reduction targets [23]	Цільові показники скорочення викидів	Refer to the emission reduction levels that states set out to achieve by a specified time. [23]
Emissions [3]	Емісія парникових газів (Викиди)	Emissions are any release of gases such as carbon dioxide which cause global warming, a major cause of climate change They can be small-scale in the form of exhaust from a car or methane from a cow, or larger-scale such as those from coal-burning power stations and heavy industries. [3]
Energy (use) efficiency [3]	Енергоефективність	Reducing the amount of energy used per unit of product is an effective way to reduce production costs and lower emissions. As an example, dairy farms are seen as having great potential for energy use efficiency gains. Energy is used for the milking process, cooling and storing milk, heating water, lighting, and ventilation. Cooling milk generally accounts for most of the electrical energy consumption on a dairy farm in developed countries. [36]
Essential climate variables [37]	Основні кліматичні змінні	See "Climatic Variables".
Exposure [22]	Незахищеність	The presence of people, livelihoods, species or ecosystems, environmental services and resources, infrastructure, or economic, social, or cultural assets in places that could be adversely affected. See also Vulnerability. [22]

Term in English	Term in Ukrainian	Definition in English
Extreme Heat Events (EHE) [22]	Екстремальні теплові події (ЕТП) [22]	Sustained periods of abnormally and uncomfortably hot, and often humid, weather. In the meaning of public health, EHE health effects include heat cramps, heat exhaustion, heat syncope, and heatstroke. In the meaning of the meteorology, EHE definitions can be classified into the following core criteria: 1. Daily heat metric: Daily maximum temperature, daily apparent temperature (heat index), and diurnal temperature difference are used as metrics in studies exploring EHE definitions. 2. Duration: Number of consecutive days of extreme heat needed to constitute an EHE. The minimum duration in existing definitions varies from two to four days.
Extreme weather events [23]	Екстремальні погодні явища	or Extreme Weather, the occurrence of a value of a weather variable above (or below) a threshold value near the upper (or lower) ends of the range of its observed values in a specific region. Range from very small scale (tornadoes, hailstorms) to large scale (drought, heat waves). An event that is rare at a particular place and time of year. Definitions of rare vary, but an extreme weather event would normally be as rare as or rarer than the 10th or 90th percentile of a probability density function estimated from observations. By definition, the characteristics of what is called extreme weather may vary from place to place in an absolute sense. When a pattern of extreme weather persists for some time, such as a season, it may be classed as an extreme climate event, especially if it yields an average or total that is itself extreme (e.g., drought or heavy rainfall over a season). [38]
Feedback loop [39]	Цикл зворотного зв'язку	In a feedback loop, rising temperatures on earth change the environment in ways that affect the rate of warming. Feedback loops can be positive (adding to the rate of warming), or negative (reducing it) For example, as the Arctic sea-ice melts, the surface changes from being a bright reflective white to a darker blue or green which allows more of the sun’s rays to be absorbed. So less ice means more warming and more melting. [39]

Term in English	Term in Ukrainian	Definition in English
Food losses and waste [22]	Продовольчі втрати та харчові відходи	The decrease in edible food mass throughout the part of the supply chain that specifically leads to edible food for human consumption. Per definition, food losses or waste are the masses of food lost or wasted in the part of food chains leading to "edible products going to human consumption". [22]
Forest carbon stocks [23]	Запаси вуглецю в лісі	The amount of carbon that has been sequestered from the atmosphere and is now stored within the forest ecosystem, mainly within living biomass and soil, and to a lesser extent also in dead wood and litter. [22]
Forest conservation [23]	Збереження лісів	The practice of planning and maintaining forested areas for the benefit and sustainability of future generations. Forest conservation involves the upkeep of the natural resources within a forest that are beneficial to both humans and the ecosystem. Forest conservation acts to maintain, plan, and improve forested areas. [22]
Forest degradation [23]	Деградація лісів	The long-term reduction of the overall supply of benefits from forest, which includes wood, biodiversity and other products or service. [23]
Fossil fuels [22]	Викопні види палива	Non-renewable fuels made from the fossilized remains of animal and plant matter that have decomposed over millions of years. Fuels that fall under this category are natural gas, coal, gasoline, diesel, and fuel oils (the last three being refined versions of crude oil). Though they are the preferred form of energy and heat, fossil fuels have a huge environmental impact. As they are burned, fossil fuels release pollutants that include carbon monoxide, carbon dioxide, sulphur dioxide, nitrogen oxides, and volatile organic compounds. These pollutants contribute to some different environmental issues such as smog, acid rain, and Climate Change. [22]
Fugitive fuel emissions [40]	Викиди при видобутку і транспортуванні палива	Greenhouse-gas emissions as by-products or waste or loss in the process of fuel production, storage, or transport, such as methane given off during oil and gas drilling and refining, or leakage of natural gas from pipelines. [40]
Geo-engineering [41]	Геоінженерія	Any technology that could be used to halt or even reverse climate change. [39]

Term in English	Term in Ukrainian	Definition in English
Global mean surface temperature (GMST) [22]	Глобальна середня температура поверхні (ГСТП)	Estimated global average of near-surface air temperatures over land and sea ice, and sea surface temperatures over ice-free ocean regions, with changes normally expressed as departures from a value over a specified reference period. When estimating changes in GMST, near-surface air temperature over both land and oceans are also used. [22]
Global warming [22]	Глобальне потепління	The estimated increase in GMST averaged over a 30-year period, or the 30-year period centred on a particular year or decade, expressed relative to pre-industrial levels unless otherwise specified. For 30-year periods that span past and future years, the current multi-decadal warming trend is assumed to continue. [22]
Global Warming Potential (GWP) [22]	Потенціал глобального потепління (ПГП)	An index representing the combined effect of the differing times greenhouse gases remain in the atmosphere and their relative effectiveness in absorbing outgoing infrared radiation.[22]
Grazing management [43]	Управління луками та пасовищами	Grazing management is the total process of organising livestock to make the best use of the pastures grown, or managing the frequency and intensity with which livestock graze pasture. Pastures respond differently to grazing, and by understanding the growth characteristics of a particular pasture, grazing can be used to encourage plant growth and maintain productivity. Grazing management is also an important factor in the management of soil, water and nutrients. If not managed well, grazing can lead to severe natural resource degradation. Some pastures may naturally become less productive as they mature or at different stages of their production cycle. It is important to recognise this and adjust stocking rates accordingly. Overstocking at critical stages may result in irreversible damage to pastures and the need for resowing. [44]
Green Climate Fund (GCF) [42]	Зелений кліматичний фонд	A fund established within the framework of the UNFCCC as an operating entity of the Financial Mechanism to assist developing countries in adaptation and mitigation practices to counter climate change. The GCF is based in Incheon, South Korea. GCF was established to limit or reduce greenhouse gas (GHG) emissions in developing countries, and to help vulnerable societies adapt to the unavoidable impacts of climate change. [42]

Term in English	Term in Ukrainian	Definition in English
Greenhouse gas emissions [23]	Викиди парникових газів/Емісія парникових газів	The release of greenhouse gases and/or their precursors into the atmosphere over a specified area and period of time. [23]
Greenhouse gases (GHGs) [23]	Парникові гази (ПГ)	The atmospheric gases responsible for causing global warming and climate change. The major GHGs are carbon dioxide (CO2), methane (CH4) and nitrous oxide (N2O). Less prevalent – but very powerful – GHGs are hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF6) and nitrogen trifluoride (NF3). [23]
Groundwater [45]	Підземні води	Water that occurs below the surface of Earth, where it occupies all or part of the void spaces in soils or geologic strata. It is also called subsurface water to distinguish it from surface water, which is found in large bodies like the oceans or lakes or which flows overland in streams. Both surface and subsurface water are related through the hydrologic cycle (the continuous circulation of water in the Earth-atmosphere system). [45]
Heatwave [22]	Теплова хвиля	A period of abnormally hot weather. Heatwaves and warm spells have various and, in some cases, overlapping definitions. However, there exist no universal definitions for a heat wave as it is relative to a specific area and to a certain time of year. In fact, average temperatures in one region may be considered heat wave conditions in another. For instance, an average day in the Mediterranean would be regarded as heat wave conditions in Northern Europe. [22]
Heavy precipitation events [22]	Явища, що супроводжуються випаданням значної кількості опадів	Heavy precipitation is defined as the maximum annual five-day consecutive precipitation. Trends are calculated for the period between 1960 and 2015. Projected changes in heavy precipitation are defined as changes in the 95th percentile of daily precipitation (only days with precipitation >1 mm/day are considered). [22]
High Carbon Stock (HCS) Approach [46]	Підхід для формування значних запасів вуглецю	A methodology that distinguishes forest areas for protection from degraded lands with low carbon and biodiversity values that may be developed. The methodology was developed with the aim to ensure a practical, transparent, robust, and scientifically credible approach that is widely accepted to implement commitments to halt deforestation in the tropics, while ensuring the rights and livelihoods of local people are respected. [46]

Term in English	Term in Ukrainian	Definition in English
Impact Assessment [20]	Оцінка впливу	The practice of identifying and evaluating, in monetary and/or non-monetary terms, the effects of climate change on natural and human systems. [20]
Implementation [22]	Впровадження	Actions (legislation or regulations, judicial decrees, or other actions) that governments take to translate international accords into domestic law and policy. [22]
Improved feed conversion ratios [6]	Покращення конверсії корму	Feed production technologies reducing the amount of feed required per unit of animal product. [6]
Improved livestock waste management [6]	Покращене управління відходами тваринництва	An approach to dispose of the livestock waste in the way to mitigate GHG emission and reduce the production of other pollutants such as harmful pathogens, and odor, in order to protect the environment. [71]. Greenhouse gas mitigation option including the capture of methane by using biogas collectors or covering manure storage facilities [3]. [6]
Industrial agriculture [22]	Індустріальне сільське господарство	See definition "Conventional farming [22]".
Industrial Revolution [23]	Промислова революція	A period of rapid industrial growth with far-reaching social and economic consequences, beginning in England during the second half of the 18th century and spreading to Europe and later to other countries including the United States. The invention of the steam engine was an important trigger of this development. The industrial revolution marks the beginning of a strong increase in the use of fossil fuels and emissions of, in particular, fossil carbon dioxide. In the AR4 and AR5, the term pre-industrial and industrial refer, somewhat arbitrarily, to the periods before and after 1750, respectively. [20]

[3] Also, slurry separation can help to reduce dry matter content and increase the content of readily available nitrogen in the manure before it is applied as fertilizer.

Term in English	Term in Ukrainian	Definition in English
Integrated pest management [47]	Інтегрований захист рослин (ІЗР)	Technique for agricultural disease- and pest-control in which as many pest-control methods as possible are used in an ecologically harmonious manner to keep infestation within manageable limits. Integrated pest management addresses the serious ecological problems created by the extensive use of powerful chemical pesticides. It minimizes their use and combines them with biological methods of pest control, including the breeding of pest-resistant crop varieties, the development of crop culture methods that inhibit pest proliferation, the release of predators or parasites of the pest species, and the placement of traps baited with the pest's own sex attractants (pheromones). [47]
Integrated soil fertility management (ISFM) [21]	Інтегроване управління родючістю ґрунту	The adoption of practices that enhance soil coverage and reduce soil disturbance are critical to strengthening the resilience of production systems. Practices such as green manure legumes, N-fixing agro-forestry trees, compost and animal manure serve this purpose. [21]
Intergovernmental Panel on Climate Change (IPCC) [22]	Міжурядова група експертів з питань зміни клімату (МГЕЗК)	Established in 1988 by the World Meteorological Organization and the United Nations Environment Programme, the IPCC surveys worldwide scientific and technical literature and publishes assessment reports that are widely recognized as the most credible existing sources of information on climate change. The IPCC also works on methodologies and responds to specific requests from the Convention on Climate Change 's subsidiary bodies. The IPCC is independent of the Convention. [22]
International assessment and review (IAR) [22]	Міжнародна оцінка та огляд	A process under the Convention on Climate Change, whereby the biennial reports from developed country Parties are considered, through a technical review of information and a multilateral assessment of the implementation of quantified economy-wide emission reduction targets. The process is conducted in rigorous, robust and transparent manner to promote comparability and build confidence. [22]
International consultation and analysis (ICA) [22]	Міжнародна консультація та розгляд (МКР)	A process under the Convention of Climate Change, whereby the biennial update reports from developing country Parties are considered, through a technical analysis and a facilitative sharing of views, in a manner that is non-intrusive, non-punitive and respectful of national sovereignty. It aims to increase transparency of mitigation actions and their effects. [22]

Term in English	Term in Ukrainian	Definition in English
Internationally transferred mitigation outcomes [23]	Результати запобігання зміні клімату, що передаються на міжнародному рівнію	Units from the new mechanism for the international emissions trading between Parties of the Paris Agreement. [23]
Joint mitigation and adaptation [23]	Спільні підходи щодо запобігання та адаптації до зміни клімату	Approaches designed to effectively advance non-market based approaches considering mitigation and adaptation co-benefits to climate change through the integral and sustainable management of forests and other natural systems. [22]
Land conversion [22]	Перепрофілювання земельних угідь	The activity through which natural landscapes are developed and transformed by people into less natural and more managed states. This process of conversion is driven primarily by land rents, the net returns from land to landowners and land users. [22]
Land degradation [22]	Деградація земель	Negative trend in land condition, caused by direct or indirect human induced processes, including anthropogenic climate change, expressed as long-term reduction and as loss of at least one of the following: biological productivity, ecological integrity, or value to humans. [22]
Land surface albedo [48]	Альбедо земної поверхні	Land surface albedo, or the ratio of the radiant flux reflected from the Earth's surface to the incident flux, is a key land physical parameter controlling the planetary radiative energy budget. Variations in the extent of snow cover and flooding, and in the phenology of natural vegetation and agricultural crops are all accompanied by significant changes in land albedo. Therefore, long-term surface albedos with absolute accuracies of 0.02-0.05 are required by climate, biogeochemical, hydrological and weather forecast models at a range of resolutions, both spatial (from a few hundred meters to 5 to 30 km) and temporal (from daily to monthly). [48]
Land use [22]	Землекористування	Total arrangements, activities and inputs undertaken in a certain land cover type (a set of human actions). The term land use is also used in the sense of the social and economic purposes for which land is managed (e.g., grazing, timber extraction and conservation). [22]
Land use, land-use change, and forestry (LULUCF) [22]	Землекористування, зміни у землекористуванні та лісове господарство (ЗЗЗЛГ)	A greenhouse gas inventory sector that covers emissions and removals of greenhouse gases resulting from direct human-induced land use, land-use change and forestry activities. [22]

Term in English	Term in Ukrainian	Definition in English
Land's potential net primary production (NPP) [22]	Потенціал первинної продуктивності землі	The amount of carbon accumulated through photosynthesis minus the amount lost by plant respiration over a specified time period that would prevail in the absence of land use. [22]
Land-based mitigation measures [49]	Наземні заходи для запобігання зміні клімату	A complementary portfolio in which various land-based measures are paired with the unique natural and socio-economic conditions of particular regions. Such an approach is analogous to the one employed in finance where a robust portfolio can perform well overall, even when some of its elements underperform or fail. Land-based mitigation outlines four categories of land-based mitigation measures with large global potential: (1) bioenergy with carbon capture and storage (BECCS); (2) reforestation and forest restoration; (3) afforestation; and (4) biochar addition to soil. All these measures enhance land-based carbon sinks and can be done on a large-scale and in different climate zones and ecological conditions, although their effectiveness and cost will vary. [50]
Landless livestock systems [6]	Безземельні системи у тваринництві	Systems where livestock is raised on a minimum amount of land, or generally on land that is not dedicated to the purpose of keeping livestock. They are in this module restricted to smallholder production in the urban and peri-urban setting, i.e. backyard farming [6]
Land-use change [22]	Зміни у землекористуванні	Greenhouse gas emissions from human activities which either change the way land is used (e.g., clearing of forests for agricultural use) or has an effect on the amount of biomass in existing biomass stocks (e.g., forests, village trees, woody savannas, etc. [22]
Long-term temperature goal [23]	Довгострокова глобальна температурна мета	Limit to hold the increase in the global average temperature to well below 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5°C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change. This long-term global goal was agreed by the COP in December 2015. [31]
Low Carbon Development Strategy [22]	Стратегія низьковуглецевого розвитку (СНВР)	An integrated strategy which encompasses each of the three pillars of Sustainable Development (SD). It aims to mainstream SD initiatives, including efforts to address climate change, reduce climate related risk and propel implementation of measures to adapt to climate change. [51]

Term in English	Term in Ukrainian	Definition in English
Low-carbon development [20]	Низьковуглецевий розвиток	Means investing in infrastructure of low-carbon economy, increasing input of the capital and human resources to low-carbon economy sectors, realizing sustainable development of forestry-based economic sectors, and improving human capital. [20]
Low-carbon economy (LCE) [22]	Низьковуглецева економіка	A system that aims to minimize its output of greenhouse gasses while functioning as a typical economic program. This structure has become the long-term goal of countries who are trying to reduce the effects of Global Warming. The move toward low-carbon economies began with signing of the Kyoto Protocol, which called on nations to reduce their carbon emissions, and has continued with the Paris Agreement in 2015. LCE is an economy based on low carbon power sources that therefore has a minimal output of greenhouse gas (GHG) emissions into the biosphere, but specifically refers to the greenhouse gas carbon dioxide. [22]
Low-carbon technology [20]	Низьковуглецеві технології	Technologies aimed at reducing GHG emissions. A sector is hard to define as it spans many different aspects of business and culture. For example businesses involved in: Energy Sources and Fuels (renewable energy, waste to energy,alternative fuels); Environmental Goods and Services (recycling, water treatment, air pollution); Low Carbon Activities (carbon capture and storage, alternative fuel vehicles, building technologies); Climate-Smart Agriculture and etc. [20]
Low-emission feed [6]	Корми з низьким рівнем викидів	Feed resources with a low-carbon footprint to reduce emissions, especially for geographically concentrated pig and poultry production systems. Examples of low-emission feeds include feed crops that have been produced through conservation agriculture or that have been grown in areas that have not been recently extended into forested land or natural pastures. Crop by-products and co-products from the agrifood industry are examples of low-emission feeds. [6]
Low-fossil-fuel economy (LFFE) [52]	Економіка з низьким рівнем викопного палива	See "Low-carbon economy".
Mainstreaming [53]	Інтеграція/ врахування кліматичних аспектів	The incorporation of climate change considerations into established or on-going development programs, policies or management strategies, rather than developing adaptation and mitigation initiatives separately. [53]

Term in English	Term in Ukrainian	Definition in English
Man-made hazards [38]	Антропогенні небезпеки	Complex emergency/conflicts, famine, displaced populations, industrial accidents and transport accidents) are events that are caused by humans and occuring in or close to human settlements. This can include environmental degradation, pollution and accidents. [38]
Measures [20]	Заходи	Technologies, processes, and practices that contribute to mitigation and adaptation, for example renewable energy technologies, waste minimization processes and public transport commuting practices. [20]
Minimum tillage (min-till) [29]	Система мінімального обробітку ґрунту (Mini-till)	The practice of restricting the amount of general tillage of the soil to the minimum possible to establish a new crop and/or effect weed control or fertilization. The practice lies somewhere between no-tillage and conventional tillage. Modern practice emphasizes the amount of surface residue retention as an important aim of minimum or reduced tillage. [29]
Mitigation action [23]	Діяльність із запобігання зміні клімату	Actions to limit the magnitude or rate of long-term global warming and its related effects. Climate change mitigation generally involves reductions in human (anthropogenic) emissions of greenhouse gases (GHGs). [23]
Mitigation co-benefits [22]	Додаткові вигоди запобіганню зміні клімату	Positive benefits related to the reduction of greenhouse gases. Examples of such climate mitigation policies include improved energy efficiency of plants, renewable energy uptake and fuel switching which might enable a range of co-benefits such as air-pollution impacts, technological innovation, energy-supply security through increased energy diversity, reduced fuel cost and employment possibilities. [54]
Mitigation measures [22]	Заходи щодо запобігання зміні клімату	Means to prevent, reduce or control adverse environmental effects, and include restitution for any damage to the environment caused by those effects through replacement, restoration, compensation or any other means. In the context of climate change, mitigation measures mainly refer to GHG reduction measures. [22]
Mitigation outcomes	Результати запобігання зміні клімату	Units denominated as carbon dioxide that is held within the Nationally Determined Contribution and represent greenhouse gas emission, reduction or removal activities. [55]

Term in English	Term in Ukrainian	Definition in English
Nationally Determined Contribution (NDC) [23]	Національно-визначений внесок (НВВ)	Nationally determined GHG reduction target based on Article 4 of the Paris Agreement and mitigation efforts to achieve the target. Parties submit the Intended Nationally Determined Contribution (INDC) to the secretariat of the United Nations Framework Convention on Climate Change (UNFCCC) as a draft of the NDC before the ratification of the Paris Agreement. The INDC is officially registered to the United Nations as the NDC upon ratification of the Paris Agreement and each Party is required to implement the NDC[4]. [22]
Natural hazards [38]	Стихійні лиха	Naturally occurring physical phenomena caused either by rapid or slow onset events which can be geophysical (earthquakes, landslides, tsunamis and volcanic activity), hydrological (avalanches and floods), climatological (extreme temperatures, drought and wildfires), meteorological (cyclones and storms/wave surges) or biological (disease epidemics and insect/animal plagues). [38]
Net anthropogenic flux of CO2 [20]	Чистий антропогенний потік двоокису вуглецю	Occurs when as a result of human activity, more carbon dioxide enters the atmosphere than is generally remove and reduced as a result of such activity. [20]
Net negative emissions [20]	Чисті від'ємні викиди	A situation of net negative emissions is achieved when, as result of human activities, more greenhouse gases are removed from the atmosphere than are emitted into it. Where multiple greenhouse gases are involved, the quantification of negative emissions depends on the climate metric chosen to compare emissions of different gases (such as Global warming potential, Global temperature change potential, and others, as well as the chosen time horizon). [20]
Net zero CO2 emissions [20]	Чисті нульові викиди CO2	Can be achieved when anthropogenic CO2 emissions are balanced globally by anthropogenic CO2 removals over a specified period. [20]
Nitrogen deposition [22]	Осадження азоту	The input of reactive nitrogen from the atmosphere to the biosphere both as gases, dry deposition and in precipitation as wet deposition. Enhanced reactive nitrogen deposition is a consequence of global emissions of oxidised nitrogen (NO, HNO3 and NO2 – often referred to as NOy) from fossil fuel combustion and reduced N (NHx) from agricultural sources. [57]

[4] Cabinet of Ministers of Ukraine approved first NDC of Ukraine on 16th of September 2015, which was later submitted to the secretariat of the UNFCCC. It is expected that second NDC of Ukraine will be developed in 2020.

Term in English	Term in Ukrainian	Definition in English
No tillage/No till [22]	Система нульового обробітку грунту	A soil cultivation system in which seeds are deposited directly into untilled soil. It is defined "as a system of planting (seeding) crops into untilled soil by opening a narrow slot trench or band only of sufficient width and depth to obtain proper seed coverage. No other soil tillage is done." Conventional tillage completely inverts the soil, while no-till causes only negligible soil disturbance and the residues from previous crops remain largely undisturbed on the soil surface as a mulch. Seeding systems that till and mix more than 50% of the soil surface while seeding cannot be classified as no-tillage. [29]
Non-carbon benefits [23]	Невуглецеві вигоди	Positive outcomes resulting from REDD+ activities beyond those associated with carbon storage and/or sequestration. Non-carbon benefits are often broken down into three main types: social, environmental and governance benefits. [56]
Non-market-based ("soft") technologies [12]	Неринкові ("м'які") технології	Activities in the field of capacity building, behavioral change, building information networks, training and research to control, reduce or prevent anthropogenic emissions of greenhouse gases in the energy, transportation, forestry, agriculture, industry and waste management sectors, to enhance removals by sinks and to facilitate adaptation. [12]
Ozone [20]	Озон	The triatomic form of oxygen (O3), a gaseous atmospheric constituent. In the troposphere, it is created both naturally and by photochemical reactions involving gases resulting from human activities (smog). Tropospheric ozone acts as a greenhouse gas. In the stratosphere, ozone is created by the interaction between solar ultraviolet radiation and molecular oxygen (O2). Stratospheric ozone plays a dominant role in the stratospheric radiative balance. Its concentration is highest in the ozone layer. [20]
Ozone hole [28]	Озонова діра	See "Ozone Layer".

Term in English	Term in Ukrainian	Definition in English
Ozone layer [28]	Озоновий шар	The stratosphere contains a layer in which the concentration of ozone is greatest, the so-called ozone layer. The layer extends from about 12 to 40 km above the earth's surface. The ozone concentration reaches a maximum between about 20 and 25 km. This layer has been depleted by human emissions of chlorine and bromine compounds. Every year, during the Southern Hemisphere spring, a very strong depletion of the ozone layer takes place over the Antarctic, caused by anthropogenic chlorine and bromine compounds in combination with the specific meteorological conditions of that region. This phenomenon is called the ozone hole. [28]
Paris Agreement [23]	Паризька угода [5]	An agreement within the United Nations Framework Convention on Climate Change (UNFCCC), dealing with greenhouse-gas-emissions mitigation, adaptation, and finance. [23]
Particulate matter (PM) [20]	Зважені частинки (ЗЧ)	Very small solid particles emitted during the combustion of biomass and fossil fuels. PM may consist of a wide variety of substances. Of greatest concern for health are particulates of diameter less than or equal to 10 nanometers, usually designated as PM10. [20]
Party [23]	Сторона	A state (or regional economic integration organization such as the European Union) that agrees to be bound by a treaty and for which the treaty has entered into force. [23]
Pasture management measures [6]	Заходи з управління пасовищами	Involve the sowing of improved varieties of pasture, typically replacing native grasses with higher yielding and more digestible forages, including perennial fodders, pastures and legumes. [6]
Peatlands [6] [22]	Торфовища [7]	An area with a naturally accumulated peat layer at the surface (with or without surface vegetation). According to different definitions, this layer needs to be at least 30 cm thick for a soil to be classified as a peat. [58]

[5] Паризька угода - основний діючий документ, що визначає міжнародну політику у сфері запобіганню зміні клімату та адаптації до неї на міжнародному рівні. Станом на 26 липня 2016 року, угоду підписали 177 країн та Європейський Союз. 22 з цих країн ратифікували угоду.Україна підписала Угоду 22 квітня 2016 року в м. Нью-Йорк. Верховна Рада України її ратифікувала 14 липня 2016 року. Закон «Про ратифікацію Паризької угоди» прийнятий 1 серпня 2016 року. https://unfccc.int/sites/default/files/english_paris_agreement.pdf

[6] Due to their formation, peatlands store a high amount of carbon and thus are effective carbon sinks.

[7] Відповідно до їх походження, торфовища є великими сховищами вуглецю. Таким чином торфовища відіграють значну роль в уловленні та утримані вуглецю.

Term in English	Term in Ukrainian	Definition in English
Permafrost (thaw) [22]	Вічна мерзлота (танення)	Permanently frozen soil that is at risk of melting due to climate change, causing the release of even more powerful heat-trapping gases, carbon and methane, into the air. [22]
Phenology [20]	Фенологія	The relationship between biological phenomena that recur periodically (e.g., development stages, migration) and climate and seasonal changes. [20]
Policies and measures (PaMs) [60]	Політики та заходи (ПЗ)	A concrete action by a government to implement a policy decision. According to the national communication reporting guidelines, implemented PaMs are those for which one or more of the following conditions applies: (1) national legislation is in force; (2) one or more voluntary agreements have been established; (3) financial resources have been allocated; and (4) human resources have been mobilized. Adopted PaMs are those for which an official government decision and a clear commitment to proceed with implementation have been made. Planned PaMs are options that are under discussion and that have a realistic chance of being adopted and implemented in the future. [61]
Post-harvest losses [59]	Втрати після збору врожаю (післяжнивні втрати)	The loss from the stage of harvesting to the stage of consumption which occurs as a result of qualitative loss, quantitative loss and the food waste (by the consumers) altogether. It is one of the biggest problems which affects economic growth globally. The FAO (Food and Agriculture Organization) estimates that 1/3rd of food products is lost every year. [59]
Precipitation [20]	Атмосферні опади	All liquid and solid water particles that fall from clouds and reach the ground. These particles include drizzle, rain, snow, snow pellets, ice crystals, and hail. [20]
Pre-industrial (levels of temperature) [23]	Доіндустріалізація (рівня температури)	The multi-century period prior to the onset of large-scale industrial activity around 1750. The reference period 1850–1900 is used to approximate pre-industrial GMST. For more details see definition "Industrial Revolution". [31]

Term in English	Term in Ukrainian	Definition in English
Quantified economy-wide emission reduction target [62]	Кількісні цільові показники скорочення викидів у масштабах усієї економіки	Most Parties – 157 in total – have communicated an economy-wide greenhouse gas emission reduction target within their NDCs. These are high-level targets communicated on a national level without being assigned to a specific sector. They help countries to ensure that sectoral targets and policies add up to the necessary action. Meanwhile, less than a third – just 57 countries and the EU – have quantified economy-wide targets within domestic laws or policies – leaving 139 countries with no targets of this nature at all. Further, only 17 countries have economy-wide targets in national laws or policies that are at least as ambitious as their NDC target. While this group does include a few large greenhouse gas emitters – Japan, Canada and Indonesia – the majority are not significant emitters. Another problem is that different types of targets are often found between the NDCs and national laws and policies – for example, an absolute emissions target versus percentage reduction target. [62]
Reduced tillage [22]	Обмежений обробіток ґрунту	See ”Minimum-tillage”.
Reference [20]	Базовий (рівень/рік/ сценарій)	See "Baseline".
Regenerative agriculture [22]	Відновлювальне землеробство (регенеративне сільське господарство)	A system of farming principles and practices that increases biodiversity, enriches soils, improves watersheds, and enhances ecosystem services. Regenerative Agriculture aims to capture carbon in soil and aboveground biomass, reversing current global trends of atmospheric accumulation. [22]
Regional climate [3]	Регіональний клімат	Patterns of weather that affect a significant geographical area, much greater than that influenced by local climatic effects such as sea breezes, but much smaller than the global climate of the whole Earth. Sometimes, regional climates may be identified on account of special features which distinguish them from other patterns of climate. [3]
Remaining carbon budget [20]	Залишок вуглецевого бюджету	See “Total carbon budget”.
Renewable energy [20]	Енергія з відновлювальних джерел	Energy produced from sources that do not deplete or can be replenished within a human’s lifetime. The most common examples include wind, solar, geothermal, biomass, and hydropower. This is in contrast to non-renewable sources such as fossil fuels. [20]

Term in English	Term in Ukrainian	Definition in English
Representative Concentration Pathways (RCPs) [22]	Репрезентативні траєкторії концентрації (РТК)	Scenarios that include time series of emissions and concentrations of the full suite of greenhouse gases (GHGs) and aerosols and chemically active gases, as well as land use/land cover. The word representative signifies that each RCP provides only one of many possible scenarios that would lead to the specific radiative forcing characteristics. The term pathway emphasises that not only the long-term concentration levels are of interest, but also the trajectory taken over time to reach that outcome. Which imply different levels of mitigation, with implications for adaptation. [22]
Reservoirs [3]	Накопичувачі (вуглецю)	The total amount of carbon that is present in a component of the Earth that participates in the carbon cycle. These reservoirs are conveniently measured in the units of Gigatons of carbon, or GtC, which means a billion tons of carbon. [3]
Residue farming [36]	Сільськогосподарська система збереження рештків	A cropping system in which less tillage is used in order to keep crop residue on the surface of a field [72]
Resilience [3]	Стійкість	The capacity of interconnected social, economic and ecological systems to cope with a hazardous event, trend or disturbance, responding or reorganizing in ways that maintain their essential function, identity and structure. Resilience is a positive attribute when it maintains capacity for adaptation, learning and/or transformation. [3]
Resource efficiency [3]	Ресурсоефективність	Maximising the supply of money, materials, staff, and other assets that can be drawn on by a person or organization in order to function effectively, with minimum wasted (natural) resource expenses. It means using the earth's limited resources in a sustainable manner while minimising environmental impact. [3]
Results-Based Payments [42]	Виплати за отриманими результатами	The final phase in 'reducing emissions from deforestation and degradation' that provides financial incentives to developing countries that have proved through rigorous UN-backed technical evaluation they have halted deforestation during a period of time. [42]

Term in English	Term in Ukrainian	Definition in English
Risk [38]	Ризик	The potential for adverse consequences from a climate-related hazard for human and natural systems, resulting from the interactions between the hazard and the vulnerability and exposure of the affected system. Risk integrates the likelihood of exposure to a hazard and the magnitude of its impact. Risk also can describe the potential for adverse consequences of adaptation or mitigation responses to climate change. [38]
Risk assessment [38]	Оцінка ризиків	The overall process or method where you: 1) Identify hazards and risk factors that have the potential to cause harm (hazard identification); 2) Analyze and evaluate the risk associated with that hazard (risk analysis, and risk evaluation). [38]
Runaway climate change [39]	Стрімкі темпи зміни клімату	Describes how climate change may suddenly get worse after passing a 'tipping point', making it even harder to stop or reverse. [39]
Runoff [38]	Стік	In hydrology: quantity of water discharged in surface streams. Runoff includes not only the waters that travel over the land surface and through channels to reach a stream but also interflow, the water that infiltrates the soil surface and travels by means of gravity toward a stream channel (always above the main groundwater level) and eventually empties into the channel. Runoff also includes groundwater that is discharged into a stream; streamflow that is composed entirely of groundwater is termed base flow, or fair-weather runoff, and it occurs where a stream channel intersects the water table. [38]
Scenario [20]	Сценарії	A plausible description of how the future may develop based on a coherent and internally consistent set of assumptions about key driving forces (e.g., rate of technological change, prices) and relationships. Note that scenarios are neither predictions nor forecasts, but are useful to provide a view of the implications of developments and actions. [20]
Sensitivity [20]	Чутливість	The degree to which a system or species is affected, either adversely or beneficially, by climate variability or change. The effect may be direct (e.g. a change in crop yield in response to a change in the mean, range or variability of temperature) or indirect (e.g. damages caused by an increase in the frequency of coastal flooding due to sea-level rise). [20]

Term in English	Term in Ukrainian	Definition in English
Shared Socioeconomic Pathway (SSP)1 [22]	Сценарій спільного соціально-економічного розвитку (СССЕР) 1[22]	Includes a peak and decline in population (~7 billion in 2100), high income and reduced inequalities, effective land-use regulation, less resource intensive consumption, including food produced in low-GHG emission systems and lower food waste, free trade and environmentally-friendly technologies and lifestyles. Relative to other pathways, SSP1 has low challenges to mitigation and low challenges to adaptation (i.e., high adaptive capacity).
Shared Socioeconomic Pathway (SSP)2	Сценарій спільного соціально-економічного розвитку (СССЕР) 2	Includes medium population growth (~9 billion in 2100), medium income; technological progress, production and consumption patterns are a continuation of past trends, and only gradual reduction in inequality occurs. Relative to other pathways, SSP2 has medium challenges to mitigation and medium challenges to adaptation (i.e., medium adaptive capacity).
Shared Socioeconomic Pathway (SSP)3	Сценарій спільного соціально-економічного розвитку (СССЕР) 3	Includes high population (~13 billion in 2100), low income and continued inequalities, material-intensive consumption and production, barriers to trade, and slow rates of technological change. Relative to other pathways, SSP3 has high challenges to mitigation and high challenges to adaptation (i.e., low adaptive capacity).
Shared Socioeconomic Pathway (SSP)4	Сценарій спільного соціально-економічного розвитку (СССЕР) 4	Includes medium population growth (~9 billion in 2100), medium income, but significant inequality within and across regions. Relative to other pathways, SSP4 has low challenges to mitigation, but high challenges to adaptation (i.e., low adaptive capacity).
Shared Socioeconomic Pathway (SSP)5	Сценарій спільного соціально-економічного розвитку (СССЕР)5	Includes a peak and decline in population (~7 billion in 2100), high income, reduced inequalities, and free trade. This pathway includes resource-intensive production, consumption and lifestyles. Relative to other pathways, SSP5 has high challenges to mitigation, but low challenges to adaptation (i.e., high adaptive capacity).

Term in English	Term in Ukrainian	Definition in English
Shared Socioeconomic Pathways (SSPs) [22]	Сценарії спільного соціально-економічного розвитку (СССЕР)[22]	Scenarios of projected socioeconomic global changes up to 2100. They are used to derive greenhouse gas emissions scenarios with different climate policies. Currently, the idea of shared socio-economic pathways (SSPs) is developed as a basis for new emissions and socio-economic scenarios. An SSP is one of a collection of pathways that describe alternative futures of socio-economic development in the absence of climate policy intervention. The combination of SSP-based socio-economic scenarios and Representative Concentration Pathway (RCP)-based climate projections should provide a useful integrative frame for climate impact and policy analysis.
Sink [22]	Поглинання	Any process, activity or mechanism which removes a greenhouse gas, an aerosol or a precursor of a greenhouse gas from the atmosphere. [22]
Socio-economic scenario [20]	Соціально-економічні сценарії	A scenario that describes a possible future in terms of population, gross domestic product (GDP), and other socio-economic factors relevant to understanding the implications of climate change. [20]
Soil carbon reservoirs [64]	Ґрунт як накопичувач вуглецю	Soils are the largest carbon reservoir of the terrestrial carbon cycle. The quantity of C stored in soils is highly significant; soils contain about three times more C than vegetation and twice as much as that which is present in the atmosphere. [64]
Soil erosion [22]	Ерозія ґрунтів	A naturally occurring process that affects all landforms. In agriculture, soil erosion refers to the wearing away of a field's topsoil by the natural physical forces of water and wind or through forces associated with farming activities such as tillage. [22]
Soil inorganic carbon [6]	Неорганічний вуглець ґрунту	Consists of mineral forms of carbon, either from weathering of parent material, or from reaction of soil minerals with atmospheric CO2. Carbonate minerals are the dominant form of soil carbon in desert climates. Soil organic carbon is present as soil organic matter. [6]
Soil organic carbon [6]	Органічний вуглець грунту	Part of the natural carbon cycle, and the world's soils holds around twice the amount of carbon that is present in the atmosphere and in vegetation. Soil organic carbon accounts for less than 5% on average of the mass of upper soil layers, and diminishes with depth. According to the CSIRO, in rainforests or good soils, soil organic carbon can be greater than 10%, while in poorer or heavily exploited soils, levels are likely to be less than 1%. [6]

Term in English	Term in Ukrainian	Definition in English
Soil organic carbon content [6]	Вміст органічного вуглецю в ґрунті	The amount of carbon in a soil sample relative to the total mineral content of the sample. Soil organic carbon content is expressed as a (mass) percentage. [6]
Soil organic carbon stocks [6]	Запас органічного вуглецю в ґрунті	The mass of carbon in a soil sample of known bulk density. Soil organic carbon stocks are generally expressed in tonnes or Mg per hectare for a nominated depth and commonly restricted to the fraction <2mm in size. [6]
Source [23]	Джерело	Any process or activity which releases a greenhouse gas, an aerosol or a precursor of a greenhouse gas into the atmosphere. [23]
Special Climate Change Fund (SCCF) [60]	Спеціальний фонд для боротьби зі зміною клімату	The SCCF was established to finance projects related to adaptation; technology transfer and capacity building; energy, transport, industry, agriculture, forestry and waste management; and economic diversification. This fund should complement other funding mechanisms for the implementation of the Convention on Climate Change (UNFCCC). The Global Environment Facility (GEF), as the entity that operates the financial mechanism of the Convention, has been entrusted to operate this fund. [60]
Spill-over effects [42]	Ефект переливу	Reverberations in developing countries caused by actions taken by developed countries to cut greenhouse gas emissions. For example, emissions reductions in developed countries could lower demand for oil and thus international oil prices, leading to more use of oil and greater emissions in developing nations, partially off-setting the original cuts. [62]
Strip tillage [29]	Смуговий обробіток ґрунту (Стріп-тіл або смугова оранка)	The practice of tilling a narrow strip ahead of (or with) the drill openers, so the seed is sown into a strip of tilled soil but the soil between the sown rows remains undisturbed. 'Strip tillage' also refers to the general tilling of much wider strips of land (100 or more metres wide) on the contour, separated by wide fallowed strips, as an erosion control measure based on tillage. [29]
Sustainability [52]	Сталість	State of the global system, including environmental, social and economic aspects, in which the needs of the present are met without compromising the ability of future generations to meet their own needs. The environmental, social and economic aspects interact, are interdependent and are often referred to as the three dimensions of sustainability. [52]

Term in English	Term in Ukrainian	Definition in English
Sustainable agriculture [65]	Стале сільське господарство	The management and conservation of the natural resource base, and the orientation of technological change in such a manner as to ensure the attainment of continued satisfaction of human needs for present and future generations. [65]
Sustainable Land Management [22]	Стале землекористування [8]	The stewardship and use of land resources, including soils, water, animals and plants, to meet changing human needs, while simultaneously ensuring the long-term productive potential of these resources and the maintenance of their environmental functions. [22]
Sustainable Management of Forests [22]	Стале управління лісами	Optimizing their benefits, including timber and contributions to food security, to meet society's needs in a way that conserves and maintains forest ecosystems for the benefit of present and future generations. [22]
Technological hazard [55]	Техногенні небезпеки	Hazards that stem from technological or industrial conditions. This includes accidents, dangerous procedures, infrastructure deficiencies, and specific human activities that can cause death, injury, disease, or other health impacts, as well as jeopardize property, livelihood, and services, provoke social or economic disorder, and cause environmental damage. Corresponding definitions are "Man-made hazard", "Anthropogenic hazard". [55]
Technologies for mitigation and adaptation [55]	Технології запобігання та адаптації до зміни клімату	All technologies that can be applied in the process of minimizing greenhouse gas emissions and adapting to climatic variability and climate change, respectively. [55]
Technology needs and needs assessment [55]	Технологічні потреби та оцінка потреб	A set of country-driven activities that identify and determine the mitigation and adaptation technology priorities of Parties other than developed country Parties, and other developed Parties not included in Annex II, particularly developing country Parties. They involve different stakeholders in a consultative process, and identify the barriers to technology transfer and measures to address these barriers through sectoral analyses. These activities may address soft and hard technologies, such as mitigation and adaptation technologies, identify regulatory options and develop fiscal and financial incentives and capacity building. [55]

[8] До практик сталого сільського господарства належать практики нульового та мінімального обробітку ґрунту, органічне землеробство та інші. Тривале землеробство із застосуванням традиційних практик обробітку ґрунту призводить до виснаження ресурсів та неефективного ведення сільського господарства.

Term in English	Term in Ukrainian	Definition in English
Technology transfer [55]	Передача технологій	The exchange of knowledge, hardware and associated software, money and goods among stakeholders, which leads to the spreading of technology for adaptation or mitigation. The term encompasses both diffusion of technologies and technological cooperation across and within countries. [55]
Temperature goal [23]	Температурний поріг	The long-term temperature goal, to limit global average temperature increase to "well below 2°C above preindustrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels". [23]
Temperature overshoot [20]	Температурний рекорд	The temporary exceedance of a specified level of global warming. [20]
Tipping point [13]	Переломний момент	A level of change in system properties beyond which a system reorganizes, often abruptly, and does not return to the initial state even if the drivers of the change are abated. For the climate system, it refers to a critical threshold when global or regional climate changes from one stable state to another stable state. The tipping point event may be irreversible.[13]
Total carbon budget [20]	Загальний вміст вуглецю	Estimated cumulative net global anthropogenic CO2 emissions from the pre-industrial period to the time that anthropogenic CO2 emissions reach net zero that would result, at some probability, in limiting global warming to a given level, accounting for the impact of other anthropogenic emissions. [20]
Total organic carbon (TOC) [66]	Загальний органічний вуглець (ЗОВ)	The amount of carbon found in an organic compound and often used as a non-specific indicator of water quality or cleanliness of pharmaceutical manufacturing equipment. TOC may also refer to the amount of organic carbon in soil, or in a geological formation, particularly the source rock for a petroleum play; 2% is a rough minimum. For marine surface sediments average TOC content is 0.5% in the deep ocean, and 2% along the eastern margins. [66]
Treeline [22]	Верхня межа деревної рослинності	The altitude above sea level or the distance south or north of the equator after which trees do not grow. [22]

Term in English	Term in Ukrainian	Definition in English
Troposphere [20]	Тропосфера	The lowest part of the atmosphere, from the surface to about 10 km in altitude at mid-latitudes (ranging from 9 km at high latitude to 16 km in the tropics on average), where clouds and weather phenomena occur. In the troposphere, temperatures generally decrease with height. [20]
Uncertainty [13]	Невизначеність	A state of incomplete knowledge that can result from a lack of information or from disagreement about what is known or even knowable. It may have many types of sources, from imprecision in the data to ambiguously defined concepts or terminology, or uncertain projections of human behaviour. Uncertainty can therefore be represented by quantitative measures (e.g. a probability density function) or by qualitative statements (e.g. reflecting the judgment of a team of experts). [13]
United Nations Framework Convention on Climate Change (UNFCCC) [23]	Рамкова конвенція Організації Об'єднаних Націй про зміну клімату (РКЗК ООН)	An international environmental treaty negotiated at the United Nations Conference on Environment and Development (UNCED), informally known as the Earth Summit, held in Rio de Janeiro from 3 to 14 June 1992. [23]
Unprecedented climatic conditions [22]	Безпрецедентні кліматичні умови	Climatic conditions not having occurred anywhere during the 20th century. They are characterized by high temperature with strong seasonality and shifts in precipitation. In the literature assessed, the effect of climatic variables other than temperature and precipitation were not considered. [22]
Vaccines against rumen archaea [6]	Вакцини проти шлункового метаболізму жуйних тварин	Vaccines against microorganisms that produce methane as a metabolic by-product in low-oxygen conditions (methanogens) in the rumen are a potentially useful mitigation option for ruminants in land-based grazing systems. [6]
Vegetation browning [22]	Вегетаційні потемніння	A decrease in photosynthetically active plant biomass, [for example caused by deforestation] which is inferred from satellite observations. [22]
Vegetation greening [22]	Вегетаційні озеленення	An increase in photosynthetically active plant biomass which is inferred from satellite observations. [22]
Vegetation loss [22]	Втрата рослинного покриву	An estimate of how much vegetation has been lost per unit area. [22]

Term in English	Term in Ukrainian	Definition in English
Volatile Organic Compounds (VOCs) [20]	Леткі органічні сполуки (ЛОС)	Important class of organic chemical air pollutants that are volatile at ambient air conditions. Other terms used to represent VOCs are hydrocarbons, reactive organic gases (ROGs) and non-methane volatile organic compounds (NMVOCs). NMVOCs are major contributors - together with nitrogen oxides (NOx), and carbon monoxide (CO) - to the formation of photochemical oxidants such as ozone (O3). [20]
Vulnerability to climate change [23]	Вразливість до зміни клімату	The degree to which a system is susceptible to, or unable to cope with, adverse effects of climate change, including climate variability and extremes. Vulnerability is a function of the character, magnitude, and rate of climate variation to which a system is exposed, its sensitivity and its adaptive capacity. [23]
Weather [22]	Погода	The state of the atmosphere at a particular place and time with regard to heat, cloudiness, dryness, sunshine, wind, rain, etc. [22]
Wildfire hazard [22]	Пожежна небезпека	A physical situation with potential for harm to persons or damage to resources and assets. Wildfire hazard can be described qualitatively as a fire environment—fuel, weather, topography, and ignitions—with potential for causing harm or damage. [22]
Zone tillage [29]	Зональний обробіток ґрунту	See definition "Minimum tillage".

References

1. International action on climate change . https://ec.europa.eu/clima/policies/international_en
2. Individual and political action on climate change. https://en.wikipedia.org/wiki/Individual_and_political_action_on_climate_change
3. Glossary IPCC SRCCL https://www.ipcc.ch/site/assets/uploads/2019/08/2a.-Glossary_FINAL.pdf
4. Dictionary of the English Language, Fifth Edition. Copyright © 2016 by Houghton Mifflin Harcourt Publishing Company. Published by Houghton Mifflin Harcourt Publishing Company https://www.thefreedictionary.com/Acclimitization
5. Source: IPCC Special Report. Glossary. p. 805. https://www.ipcc.ch/site/assets/uploads/sites/4/2019/11/11_Annex-I-Glossary.pdf
6. FAO. Climate-smart livestock production systems in practice. http://www.fao.org/climate-smart-agriculture-sourcebook/production-resources/module-b2-livestock/chapter-b2-3/en/
7. INSAM - The International Society for Agricultural Meteorology. http://www.agrometeorology.org
8. V. Murhty. Basic Principles on Agricultural Meteorology. 2015.
9. Introduction to Forestry and Natural Resources. 2013. https://www.sciencedirect.com/science/article/pii/B9780123869012000117
10. Afforestation. http://en.de.termwiki.com/search.jsp?ns=en&key=Afforestation
11. IPCC. https://archive.ipcc.ch/publications_and_data/ar4/wg2/en/annexessglossary-a-d.html
12. IPCC AR4.2007. https://www.ipcc.ch/site/assets/uploads/2018/02/ar4_syr_full_report.pdf
13. IPCC AR5 Climate Change 2014: Impacts, Adaptation, and Vulnerability. Glossary. https://www.ipcc.ch/site/assets/uploads/2018/02/WGIIAR5-AnnexII_FINAL.pdf
14. ICF background paper prepared for DfID.2011. Co Benefits of adaptation, mitigation and development. V1.1 14/02/2011. https://assets.publishing.service.gov.uk/media/57a08adee5274a31e0000806/DEW-Point_A0406_Jan2011_Co_Benefits_of_adaptation_v1-1.pdf
15. Adaptation to climate change: key terms. 2006. http://www.oecd.org/environment/cc/36736773.pdf
16. United Nations Framework Convention on Climate Change. https://unfccc.int/resource/ccsites/zimbab/conven/text/art01.htm
17. Productivity and Efficiency Measurement in Agriculture. FAO.2017. http://www.fao.org/3/ca6428en/ca6428en.pdf
18. Agricultural productivity. https://en.wikipedia.org/wiki/Agricultural_productivity
19. United Nation Climate Change. Parties & Observers. https://unfccc.int/parties-observers
20. Data Distribution Centre IPPC. Glossary. https://www.ipcc-data.org/guidelines/pages/glossary/index.html
21. Measuring and modelling soil carbon stocks and stock changes in livestock production systems. FAO. 2019. http://www.fao.org/3/CA2934EN/ca2934en.pdf

22. IPCC Special Report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems.

23. https://www.ipcc.ch/srccl/,

24. https://www.ipcc.ch/site/assets/uploads/2018/02/WGIIAR5-AnnexII_FINAL.pdf

25. Paris Agreement

26. https://unfccc.int/sites/default/files/english_paris_agreement.pdf

27. https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement

28. UNDP. 2016. Carbon Markets. https://www.undp.org/content/dam/sdfinance/doc/Carbon%20Markets%20_%20UNDP.pdf

29. World Bank. 2019. Carbon Pricing Dashboard. https://carbonpricingdashboard.worldbank.org/

30. Carbon Tax Center. https://www.carbontax.org

31. UN SDG. https://www.un.org/sustainabledevelopment/blog/2019/05/climate-justice/

32. FAO.2014. Building a common vision for sustainable food and agriculture http://www.fao.org/3/a-i3940e.pdf

33. FAO. Conservation Agriculture. 2017. http://www.fao.org/3/a-i7480e.pdf

34. The decoupling of economic growth from carbon emissions: UK evidence. Office for National Statistic. https://www.ons.gov.uk/economy/nationalaccounts/uksectoraccounts/compendium/economicreview/october2019/thedecouplingofeconomicgrowthfromcarbonemissionsukevidence

35. IPCC SR1.5. Global Warming of 1.5°C an IPCC special report on the impacts of global warming of 1.5 °C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty. Annex I: Glossary . 2019. https://www.ipcc.ch/site/assets/uploads/sites/2/2019/06/SR15_AnnexI_Glossary.pdf

36. UNISDR, 2015a. Global assessment report on disaster risk reduction 2015. https://www.unisdr.org/we/inform/publications/42809

37. Drought's Effect on the Economy and You. https://www.thebalance.com/drought-definition-effects-examples-and-solutions-4157896

38. UNDP. Early Warning System. 2018. https://www.undp.org/content/dam/rbec/docs/UNDP%20Brochure%20Early%20Warning%20Systems.pdf

39. Convention on Biological Diversity .2009. Ecosystem-based Approaches to Climate Change Adaptation. https://docs.google.com/document/d/11MVpU2QcPrl9-sfnIVzOVZJOGjixeVTu/edit

40. FAO, 2018: Climate–Smart Agriculture. Food and Agriculture Organization of the United Nations (FAO). Retrieved from: www.fao.org/climate–smart–agriculture

41. IPCC AR4. The Fourth Assessment Report (AR4). 2007. https://www.ipcc.ch/

42. IPCC, 2012a: Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation. A Special Report of Working Groups I and II of the Intergovernmental Panel on Climate Change (IPCC).

43. BBC Climate change dictionary. https://www.bbc.com/news/science-environment-48057733

44. IPCC Guidelines for National Greenhouse Gas Inventories.2006. https://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/2_Volume2/V2_4_Ch4_Fugitive_Emissions.pdf

45. IPCC, 2012b: Meeting Report of the Intergovernmental Panel on Climate Change Expert Meeting on Geoengineering

46. The Green Climate Fund. https://www.greenclimate.fund

47. Land Use, Land-Use Change and Forestry (LULUCF). https://unfccc.int/topics/land-use/workstreams/land-use--land-use-change-and-forestry-lulucf

48. Meat and Livestock Austria. Grazing Pasture. https://www.mla.com.au/research-and-development/Grazing-pasture-management/improved-pasture/grazing-management/

49. IPCC, 2011: Workshop Report of the Intergovernmental Panel on Climate Change Workshop on Impacts of Ocean Acidification on Marine Biology and Ecosystems.

50. The high carbon stock approach. http://highcarbonstock.org/the-high-carbon-stock-approach/

51. Integrated pest management of major pests and diseases in eastern Europe and the Caucasus. FAO.2017. http://www.fao.org/3/a-i5475e.pdf

52. The global Climate Observing System. Essential Climate Variables. https://gcos.wmo.int/en/essential-climate-variables/albedo

53. IPCC. AR5 Climate Change 2014: Impacts, Adaptation, and Vulnerability. https://www.ipcc.ch/report/ar5/wg2/

54. F. X. Johnson. Why land-based mitigation is key to net-zero emissions. Stockholm Environment Institute. https://www.sei.org/perspectives/why-land-based-mitigation-is-key-to-net-zero-emissions/

55. Sustainable Development Goals. UN. Low Carbon Development. https://sustainabledevelopment.un.org/index.php?menu=1448

56. ISO Guide 82:2014, 3.1. Guidelines for addressing sustainability in standards. 2014. https://iso26000.info/wp-content/uploads/2016/04/ISO_Guide_82_2014E_new_format.pdf

57. UNDP. Mainstreaming Climate Change in National Development Processes and UN Country Programming. https://www.undp.org/content/dam/undp/library/Environment%20and%20Energy/Climate%20Change/Adaptation/Guide%20Mainstreaming%20Climate%20Change%20Adaptation%202011.pdf

58. Sustainable Development Goals. The co-benefits of climate change mitigation. http://www.unece.org/fileadmin/DAM/Sustainable_Development_No._2__Final__Draft_OK_2.pdf

59. UNFCCC. 2010.Technology Needs Assessment for Climate Change. Handbook for conducting. https://unfccc.int/sites/default/files/1529e639caec4b53a4945ce009921053.pdf

60. Environment Defense Fund. Clarifying the Role of Non-Carbon Benefits in REDD+. http://blogs.edf.org/climatetalks/2013/08/19/clarifying-the-role-of-non-carbon-benefits-in-redd/

61. UK Air Pollution Information System (APIS). http://www.apis.ac.uk/

62. University of Leicester. https://www2.le.ac.uk/departments/geography/research/projects/tropical-peatland/what-are-peatlands

63. FAO, 2013: Food wastage footprint: Impacts on natural resources. Summary report. http://www.fao.org/3/i3347e/i3347e.pdf

64. UNFCCC – Glossary of climate change acronyms. https://unfccc.int/process-and-meetings/the-convention/glossary-of-climate-change-acronyms-and-terms#a

65. UNFCC . What is the United Nations Framework Convention on Climate Change? https://unfccc.int/process-and-meetings/the-convention/what-is-the-united-nations-framework-convention-on-climate-change

66. ISO, 2018: ISO 14044:2006. Environmental management – Life cycle assessment – Requirements and guidelines. International Standards Organisation (ISO). Retrieved from: www.iso.org/standard/38498.html

67. Pacific Climate Change Portal. Glossary. https://www.pacificclimatechange.net/glossary/letter_s

68. FAO. Carbon sequestration in dryland soils . http://www.fao.org/3/y5738e/y5738e05.htm

69. FAO. The FAO Strategic Programme articulates a policy vision for the contribution of food and agriculture to the 2030 Agenda for Sustainable Development. 2009. http://www.fao.org/docs/up/easypol/778/mainstream_clim_change_adaptation_agric_policies_slides_077en.pdf

70. FAO. Soil Organic Carbon Mapping Cookbook. 2018. http://www.fao.org/3/I8895EN/i8895en.pdf

71. Sorathiya L.M., Fulsoundar A.B., Tyagi K.K, Patel M.D., Singh R.R. Eco-friendly and modern methods of livestock waste recycling for enhancing farm profitability. 2014. International Journal of Recycling of Organic Waste in Agriculture. Vol.3. https://link.springer.com/article/10.1007/s40093-014-0050-6

72. High Residue Farming Under Irrigation. Washington State University. http://csanr.wsu.edu/high-residue-farming-under-irrigation/