

PREAMBLE

National University of Life and Environmental Sciences of Ukraine (hereinafter **the University, NUBiP of Ukraine**) is a leading higher education institution in the fields of environmental sciences, agronomy, and natural resource management. The University Kyiv campus, comprising 17 academic and administrative buildings, 13 student dormitories, research laboratories, a veterinary clinic, experimental research farms, and the Botanical Garden, is a significant consumer of water resources and, at the same time, a platform for demonstrating responsible and sustainable practices in their use.

Water is a finite and strategically important natural resource. Its responsible use, protection from pollution, and rational management are obligations that NUBiP of Ukraine recognises both as an institution operating under Ukrainian environmental legislation and as a university committed to international sustainability standards. The campus water supply and wastewater disposal system operates within the centralised infrastructure of Kyiv: drinking and technical water is supplied by Kyivvodokanal, and all wastewater generated on campus is discharged into the centralised sewage network for treatment at Kyivvodokanal's facilities in accordance with applicable requirements.

This Policy has been developed in accordance with the Sustainable Development Strategy of NUBiP of Ukraine, the United Nations Sustainable Development Goals, in particular SDG 6 ("Clean Water and Sanitation"), SDG 12 ("Responsible Consumption and Production"), and SDG 15 ("Life on Land"), as well as the Erasmus+ Programme requirements for the green transition of partner universities and the European Green Deal. It establishes the principles and strategic directions for water conservation, the promotion of water-efficient practices, the prevention of water pollution on campus, and the responsible use of treated water across all University facilities and activities.

SECTION I. GENERAL PROVISIONS

1.1. The Sustainable Water Use Policy of the National University of Life and Environmental Sciences of Ukraine (hereinafter **the Policy**) defines the basic principles, target groups, strategic goals, and measures for the responsible use, conservation, and protection of water resources across all areas of University activity.

1.2. The purpose of this Policy is to reduce the overall consumption of water across all 17 academic and administrative buildings, 13 student dormitories, research laboratories, the veterinary clinic, experimental research farms, and outdoor campus areas of NUBiP of Ukraine; to promote water-efficient practices and, where feasible, water recycling solutions in the University's educational, research, and operational activities; to prevent water pollution within the campus area and ensure the responsible discharge of wastewater in compliance with applicable requirements; to ensure that all members of the University community have access to safe treated water in accordance with Ukrainian sanitary and hygiene standards.

1.3. The normative and legal basis of this Policy comprises the Water Code of Ukraine (No. 213/95-VR); the Law of Ukraine "On Drinking Water, Drinking Water Supply and Wastewater" (No. 2918-III); the Law of Ukraine "On Environmental Protection" (No. 1264-XII); the Presidential Decree "On the Sustainable Development Goals of Ukraine for the period up to 2030" (2019); the UN Sustainable Development Goals, in particular SDG 6 ("Clean Water and Sanitation"), SDG 12 ("Responsible Consumption and Production"), and SDG 15 ("Life on Land"); the European Green Deal; the Erasmus+ Programme Guide (green transition requirements); the Sustainable Development Strategy of NUBiP of Ukraine; and the Statute of NUBiP of Ukraine.

1.4. For the purposes of this Policy, the following terms are used.

Water conservation – a set of measures aimed at reducing the volume of water consumed in the course of educational, research, residential, and operational activities of the University, without compromising the quality of services provided to the University community.

Water recycling – the treatment and reuse of water that has already been used in a given process, enabling its repeated application and thereby reducing the total volume of fresh water withdrawn from the centralised supply network.

Water-efficient appliances – plumbing fixtures, irrigation equipment, and other water-using devices that deliver the required function while consuming a reduced volume of water compared to standard equivalents, including low-flow taps, dual-flush toilets, sensor-operated faucets, and drip irrigation systems.

Treated water – water that has undergone purification and meets the standards established by Ukrainian legislation for drinking and domestic use, supplied to the NUBiP campus through the centralised water supply system of Kyivvodokanal.

Wastewater – water that has been used in domestic, educational, research, or operational activities and discharged from campus facilities into the centralised sewage network for treatment at the facilities of Kyivvodokanal in accordance with applicable technical and environmental requirements.

Water pollution – the introduction of substances, compounds, or contaminants into water bodies or the sewage network in quantities or concentrations that exceed established standards and adversely affect water quality or the functioning of wastewater treatment infrastructure.

Green Campus – a university campus that implements a systematic approach to reducing the environmental impact of its activities through the integration of sustainable development standards into all aspects of campus management, including water use, waste handling, energy consumption, procurement, and community engagement.

SECTION II. TARGET GROUPS AND SCOPE OF IMPLEMENTATION

2.1. The implementation of this Policy is directed at the following target groups within NUBiP of Ukraine. Students and other learners (bachelor's and master's degree students, PhD candidates, postdoctoral researchers, and other persons pursuing education at NUBiP of Ukraine under any form or mode of study) constitute the primary target group, as their daily behaviour in dormitories, canteens, laboratories, and common areas directly determines a significant share of the water consumed across the campus. Academic and teaching staff (professors, associate professors, lecturers, researchers, and other scientific and pedagogical personnel) contribute to responsible water use both through their own professional conduct and through the content of academic disciplines that address water conservation and sustainable resource management. Administrative and technical staff, as employees of all administrative, operational, and support units of the University, bear direct responsibility for the day-to-day technical implementation of water-efficient practices, the maintenance of plumbing and irrigation infrastructure across campus facilities, and the timely reporting of leaks, malfunctions, and non-compliance. Contractors and partners (organisations and individuals carrying out construction, maintenance, catering, landscaping, or other activities on University premises under agreements with NUBiP of Ukraine) are equally bound by the requirements of this Policy within the scope of their on-campus operations.

2.2. This Policy applies to all structural units of NUBiP of Ukraine and covers all areas of the University community activity in which water is consumed, discharged, or may be subject to pollution. Its scope encompasses the 17 academic and administrative buildings and 13 student dormitories of the NUBiP campus, research laboratories and scientific centres, the University veterinary clinic, experimental research farms, the Botanical Garden and its irrigation infrastructure, outdoor campus areas and green spaces maintained by the University's operational services, and all canteens, cafés, and food preparation facilities operating on campus premises. Given that the University's water supply and wastewater disposal operate within the centralised infrastructure of Kyiv, with

drinking and technical water supplied by Kyivvodokanal and all campus wastewater discharged into the centralised sewage network, the requirements of this Policy are to be understood in the context of NUBiP of Ukraine's obligations as a responsible user of that shared municipal infrastructure.

2.3. All persons belonging to the target groups defined in clause 2.1 are expected to adhere to the principles and requirements of this Policy within the areas defined in clause 2.2, regardless of their form of participation in University life. Responsible water use is considered an integral element of conduct on the NUBiP campus and is consistent with the University's broader commitments to environmental stewardship, sustainable development, and the responsible management of shared public resources.

SECTION III. STRATEGIC GOALS FOR WATER USE

Goal 1. Water Conservation Program

Water conservation is the primary strategic direction of NUBiP of Ukraine in sustainable water use. The University recognises that meaningful reduction in water consumption requires systematic action across all categories of campus facilities, from the 17 academic and administrative buildings and 13 student dormitories to research laboratories, the veterinary clinic, experimental research farms, and the Botanical Garden and that this action must be embedded in both technical decisions and the daily habits of all members of the University community.

In the area of plumbing infrastructure, the University conducts a systematic assessment of all water-using fixtures and fittings across campus facilities to identify and eliminate sources of water loss. Leaking taps, pipes, and toilet cisterns are subject to prompt repair upon identification, and the timely reporting of plumbing malfunctions is established as a standard obligation for all administrative and technical staff responsible for building maintenance. As plumbing fixtures reach the end of their service life and require replacement, preference is given to water-efficient alternatives, including low-flow taps, dual-flush toilet systems, and sensor-operated faucets, thereby progressively reducing the baseline water consumption of campus facilities without requiring large-scale simultaneous investment.

Outdoor water use represents a significant area for improvement on the NUBiP campus. The existing sprinkler-based irrigation system covering campus green areas, the Botanical Garden, and experimental research farms consumes considerably more water than drip irrigation alternatives. The University, therefore, identifies the gradual transition from sprinkler to drip irrigation as a medium-term priority to be implemented progressively as part of the routine maintenance and upgrade of outdoor infrastructure. In the interim, irrigation scheduling is optimised to avoid peak evaporation periods, with watering conducted in the early morning or evening hours, and irrigation volumes are

adjusted in accordance with seasonal conditions and actual soil moisture levels rather than fixed schedules.

In research and laboratory activities, water consumption is addressed by optimising experimental protocols at the Faculty of Chemistry, the Faculty of Ecology and Environmental Protection, and other research-active units. Where laboratory procedures involve continuous water flow, such as cooling systems and washing cycles, the introduction of recirculating systems or flow-restricting devices is encouraged as a practical means of reducing water consumption without compromising research outcomes. Water use in the veterinary clinic is subject to the same conservation principles, with staff expected to apply water-efficient practices in all routine clinical and sanitary procedures.

In canteens and food preparation facilities across the campus, water-efficient dishwashing practices are being introduced, and staff are expected to operate dishwashing equipment at full capacity rather than on partial loads. The installation of aerators on kitchen taps is identified as a low-cost measure with a meaningful impact on daily water consumption in catering units.

Goal 2. Water Recycling Program

Water recycling at the institutional level encompasses a broad range of practices from the capture and reuse of rainwater to the recirculation of water within laboratory and technical processes, and NUBiP of Ukraine approaches this goal progressively, prioritising measures that are technically feasible within the existing campus infrastructure and do not require large-scale capital investment as a precondition for implementation.

In research and laboratory activities, the recirculation of water used in cooling systems and washing cycles is promoted across the Faculty of Chemistry, the Faculty of Ecology and Environmental Protection, and other research-active units as a practical means of reducing the volume of fresh water drawn from the centralised supply network. Where laboratory equipment is subject to replacement or upgrade, preference is given to

models with built-in water recirculation functions, thereby embedding water recycling capacity into the campus infrastructure over time through the routine procurement cycle rather than through dedicated investment programmes.

In the area of outdoor water management, the University explores the feasibility of collecting and utilising rainwater and surface runoff from the roofs and paved areas of campus buildings for irrigating green spaces, the Botanical Garden, and experimental research farms. Given the scale of the campus, comprising 17 academic and administrative buildings and 13 student dormitories, even partial implementation of rainwater harvesting at selected facilities would yield a measurable reduction in the volume of treated drinking water currently used for irrigation purposes. The University identifies the assessment of rainwater harvesting potential across campus facilities as a medium-term priority to be undertaken as part of broader campus infrastructure planning.

In canteens and food preparation facilities, the reuse of water from food washing and preparation for non-potable purposes, including the watering of outdoor plants in adjacent campus areas, is encouraged where sanitary conditions permit. Catering unit staff are expected to adopt water-conscious practices in daily operations, including avoiding continuous running water for tasks that do not require it and using water-efficient dishwashing cycles.

The University acknowledges that the full implementation of a campus-wide water recycling system is a long-term objective that requires both technical assessment and phased investment. For this reason, this Goal is understood as a framework for progressive action rather than a fixed set of immediate measures, with the scope and pace of implementation to be determined in accordance with the findings of ongoing campus infrastructure reviews and the availability of institutional and project-based funding, including within the framework of Erasmus+ green transition initiatives.

Goal 3. Use of Water-Efficient Appliances

The transition to water-efficient appliances across the University campus is understood as a gradual, infrastructure-driven process rather than a single-stage

replacement initiative. Given the scale of the NUBiP campus, the University adopts a phased approach in which water-efficient fixtures and fittings are introduced systematically as existing equipment reaches the end of its service life or undergoes scheduled maintenance and replacement.

In the area of indoor plumbing, the University establishes water efficiency as a mandatory criterion in the procurement of all new plumbing fixtures. Dual-flush toilet systems, low-flow taps, and aerators for kitchen and bathroom faucets are specified as the standard for all renovation and refurbishment works carried out across campus buildings, including dormitories, academic buildings, canteens, and laboratory facilities. Sensor-operated or push-button taps are prioritised for installation in high-traffic areas such as shared bathrooms in student dormitories, canteen washrooms, and communal facilities in academic buildings, where uncontrolled water flow represents the most significant source of preventable consumption.

In research and laboratory settings, the University identifies the replacement of continuous-flow cooling and washing systems with recirculating or flow-controlled alternatives as a medium-term priority across the Faculty of Chemistry, the Faculty of Ecology and Environmental Protection, and other research-active units. When laboratory equipment requiring a water supply, including autoclaves, condensers, and industrial washing units, is procured or replaced, water consumption parameters are included in the technical specifications evaluated during procurement.

In the area of outdoor irrigation, the existing sprinkler-based systems covering campus green areas, the Botanical Garden, and experimental research farms are identified as a priority area for technological upgrading. The University sets the gradual transition to drip irrigation as a strategic objective, to be implemented progressively across outdoor areas as part of the routine maintenance cycle of campus infrastructure. Smart irrigation controllers or timer-based systems that prevent unnecessary watering during and after rainfall are introduced as an interim measure applicable to the existing sprinkler infrastructure at minimal additional cost.

The University maintains an internal register of water-using equipment across all campus facilities, updated as part of the annual infrastructure review. This register serves as the primary planning instrument for the phased introduction of water-efficient appliances and enables the University to track progress and prioritise investments.

Goal 4. Consumption of Treated Water

All water consumed on the NUBiP of Ukraine campus for drinking and domestic purposes is supplied through Kyivvodokanal's centralised water supply network and meets the quality standards established by Ukrainian legislation for drinking water. The University does not operate independent water treatment facilities; accordingly, the quality of drinking water available to the University community across all 17 academic and administrative buildings and 13 student dormitories is determined by the standards and technical parameters set by Kyivvodokanal, the authorised supplier.

The University ensures that treated drinking water is available to all members of the University community in designated locations across campus facilities. Drinking water points are maintained in proper sanitary condition and are subject to regular inspection by administrative and technical staff as part of the routine maintenance cycle of campus buildings. Where the condition of internal water supply infrastructure, including pipes, taps, and connection points, is found to affect the quality or availability of drinking water, repairs are carried out on a priority basis.

The University discourages the purchase and use of single-use plastic bottled water for routine drinking purposes across campus facilities. Staff and students are encouraged to use reusable bottles and containers, and the provision of accessible drinking water points in academic buildings and dormitories is considered a prerequisite for this practice to be adopted effectively. In the context of University events, conferences, and seminars held on campus premises, the use of single-use plastic bottles is minimised in favour of reusable dispensing solutions.

In research and laboratory activities at the Faculty of Chemistry, the Faculty of Ecology and Environmental Protection, and other research-active units, technical water

used for laboratory processes, including washing, cooling, and equipment maintenance, is clearly distinguished from drinking water and handled in accordance with applicable sanitary and technical requirements. The mixing of laboratory-use water streams with the drinking water supply is strictly prohibited, and all connections between laboratory water systems and the campus supply network comply with the technical standards required by Ukrainian legislation and the centralised infrastructure of Kyivvodokanal.

The University regularly monitors the quality of drinking water available on campus and communicates relevant information to the University community through its official communication channels. Any deviations from established quality standards identified during internal inspections or reported by members of the University community are promptly communicated to the relevant technical services and, where necessary, to Kyivvodokanal for resolution.

Goal 5. Water Pollution Control in the Campus Area

The prevention of water pollution within the campus area is an integral component of the University's commitment to responsible environmental management and its obligations as a user of Kyivvodokanal's centralised water supply and wastewater infrastructure. All wastewater generated across the 17 academic and administrative buildings, 13 student dormitories, research laboratories, the veterinary clinic, experimental research farms, and other campus facilities is discharged exclusively into the centralised sewage network and is treated at Kyivvodokanal facilities in accordance with applicable Ukrainian technical and environmental standards. The University ensures that no untreated wastewater, chemical substances, or pollutants are discharged into the campus drainage system, storm water infrastructure, or the surrounding environment in violation of established norms.

In research and laboratory settings, the prevention of water pollution begins at the point of waste generation. Chemical waste, used reagents, and laboratory effluents produced at the Faculty of Chemistry, the Faculty of Ecology and Environmental Protection, and other research-active units are subject to mandatory pre-treatment or

neutralisation before discharge, in accordance with the requirements of Ukrainian legislation on hazardous waste and water protection. Laboratory staff are responsible for ensuring that no substances classified as hazardous to aquatic environments enter the campus sewage network without appropriate prior treatment, and all laboratories maintain documented procedures for the handling and disposal of liquid chemical waste.

Wastewater generated by the University veterinary clinic, including rinse water, disinfectant solutions, and biological waste streams, is handled in strict accordance with applicable Ukrainian sanitary and veterinary legislation. Dedicated collection and neutralisation procedures are applied to clinical effluents prior to discharge into the centralised sewage network, ensuring compliance with Kyivvodokanal's technical requirements and protecting downstream treatment infrastructure.

In outdoor campus areas, the University implements measures to prevent the contamination of surface water and soil through the improper use or storage of fertilisers, pesticides, and other agrochemicals on experimental research farms and in the Botanical Garden. The application of chemical treatments is conducted in accordance with established agrotechnical norms, and storage facilities for agrochemicals are maintained in a condition that prevents leaching or accidental spillage into the campus drainage system or adjacent water bodies. Waste generated during landscaping and farm maintenance activities is collected separately and disposed of through appropriate waste management channels rather than being discarded on open ground.

The University maintains an internal monitoring system to identify and respond to potential sources of water pollution on campus. Incidents involving spills, leaks, or other situations with a risk of water contamination are subject to immediate reporting and remediation by the responsible administrative or technical staff. The University cooperates with Kyivvodokanal and relevant Ukrainian environmental authorities in matters relating to wastewater quality and compliance with discharge standards, and reflects the outcomes of this cooperation in its annual reporting on Policy implementation.

SECTION IV. MONITORING AND EVALUATION OF POLICY IMPLEMENTATION

4.1. Responsibility for the implementation of this Policy at the faculty and institute level is assigned to the Vice-Deans for Educational and Student Affairs of each faculty and educational and research institute of NUBiP of Ukraine. At the level of student dormitories, responsibility for compliance with water use requirements is assigned to the heads of dormitory administrations, in coordination with student self-governance bodies. Responsibility for the technical condition of water supply and plumbing infrastructure across all academic-administrative buildings and student dormitories rests with the University's administrative and technical services, whose personnel are expected to respond promptly to identified malfunctions, leaks, and other situations involving uncontrolled water consumption or risk of water pollution.

4.2. Responsible persons at the faculty and institute level ensure compliance with the Policy requirements within their respective structural units, conduct primary briefings for new students and staff on water use practices applicable on campus, collect and consolidate data on water consumption and any water-related incidents within their unit on a semester basis, and submit an annual report on Policy implementation to the University administration. Data collected at the faculty and institute level covers, at a minimum, identified sources of water loss or inefficiency, the functioning of water-using equipment and plumbing fixtures, and any incidents involving water pollution or non-compliant discharge within the unit's area of responsibility.

4.3. The results of Policy implementation are discussed at meetings of the Academic Councils of faculties and educational and research institutes and subsequently at the Academic Council of NUBiP of Ukraine. This ensures that water use performance is subject to institutional oversight at the highest level of University governance and that systemic issues are identified and addressed in a timely and coordinated manner.

4.4. This Policy is subject to regular review in accordance with changes in Ukrainian legislation, international standards, and the evolving needs and infrastructure

of the University campus. It constitutes an integral part of the strategic development of NUBiP of Ukraine and is updated as necessary to reflect new institutional priorities, regulatory requirements, the findings of the annual monitoring process, and lessons learned from the phased implementation of water conservation and efficiency measures across campus facilities.



Sustainable Water Use policy

NUBiP of Ukraine

2030

This document sets out the Sustainable Water Use Policy of the National University of Life and Environmental Sciences of Ukraine, which integrates responsible water management practices into the University's educational, research, and administrative activities to reduce water consumption and protect water resources across all campus facilities. Preference is given to approaches that prevent unnecessary water use at source and ensure the responsible discharge of wastewater through the centralised infrastructure of Kyivvodokanal. The Policy calls for awareness-raising to evolving institutional requirements, with implementation overseen by designated responsible persons at the faculty, institute, and dormitory levels.

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