

Звіт у розрізі завдань WP2 / Report in terms of WP2 tasks

KHNAHU (Kharkiv National Automobile and Highway University)

Diagnostics

Завдання: Провести всебічну оцінку поточного стану, досвіду та потреб у викладанні в галузі науки про сталий розвиток в університетах-партнерах в Україні

Conduct a comprehensive assessment of the current state, experiences, and needs of teaching in the field of sustainability science at partner universities in Ukraine

Коротка
інформація про
університет /
Brief information
about the
university

Kharkiv National Automobile and Highway University

Yaroslav the Wise str. 25, 61002 Kharkiv, Ukraine

Represented by the Rector, Prof. Dr. Viktor Bohomolov

Project responsibility: Prof. Dr. Nataliia Vnukova

Kharkiv National Automobile and Highway University was founded in July 23, 1930 and now is one of Ukrainian's leading HEIs in the sphere of training of specialists of the road-transport industry. It is one of the largest high-skilled specialists training centers in transport field in Ukraine with its 7 internationally approved scientific schools.

KhNAHU now consists of 7 faculties, 36 departments, majoring in 36 specialties. 36 departments of the university is qualified teaching staff - 875 people. Among them, 7 Honored science and technology and education workers Ukraine, 11 laureates of the State Prize of Ukraine, 2 Honoured Worker of Education of Ukraine, 25 academicians and 32 members - correspondents Transport Academy of Ukraine and other academies of Ukraine, Commander of the Order of Yaroslav the Wise V Class, 2 chevalier "For Merit", 6 lords sign "For scientific achievements", 4 ruler mark "Petro Mohyla", 55 Excellence in Education of Ukraine.

Since 1993, the University awarded IV (highest) level of accreditation and in 2001 it acquired the status of national. It employs up to 800 faculty and research staff, including more than 250 PhDs and full professors.

The University has always paid close attention to the development and implementation of innovative approaches to student learning, as well as the expansion and adaptation of study programs to meet the international and domestic labor markets. International experience: Erasmus+ KA2, Erasmus+ KA1, TEMPUS, DAAD, Horizon 2020 and over projects.

Development of KhNAHU as a higher education institution of a new type, training a competitive generation of specialists in the field of road transport and road management with creative thinking, capable of creating new knowledge; forms a comprehensive solution to the problems of the automobile and road industry by combining education, science and innovation, integration into the world educational and scientific space. Creating an atmosphere for self-improvement of teachers, employees and students, taking into account personal vocation and respect for people, changes in the surrounding world.

Strategic directions of the university's development.

1. Compliance of educational activities with modern global quality standards, provision of a powerful practical component and, thanks to this, successful employment of graduates in modern labor markets.
2. Leadership in the Ukrainian scientific space in fundamental and applied research of road transport and road industry problems; formation of potential for commercialization of results on the national and world markets of scientific and technical developments.
3. Formation and development of university management based on modern information and computer technologies based on the principles of flexibility, debureaucratization, and project orientation.
4. Improvement of the image and improvement of the KhNAHU brand using marketing communications. Development of material and technical, financial and resource support of the educational and scientific process in university. The development of ecologically oriented higher technical education, including in the direction of ensuring low-carbon development of technologies, is one of the priority directions of the university's scientific and educational work.

Since 2020, it has been implemented at the KhNAHU at the Department of Ecology Erasmus+ project "Synergy of educational, scientific, management and industrial components for climate management and climate change prevention" 619119-EPP-1-2020-1-NL-EPPKA2-CBHE-JP. The aim of the project is to help the universities of Georgia and Ukraine to become centers for the development of research of climate management to accelerate integration into the global climate market and to meet global climate regulation requirements by acquiring best European practices in the field of climate change prevention, adaptation and mitigation.

The specific objectives of the project are as follows:

1. Update the existing master degree programs by developing an interdisciplinary training module "Climate Management".
2. Establish consulting Climate Management Centers at partner universities and ensure their sustainable development.
3. Facilitate the development and strengthening of institutional capacity of partner universities aiming to develop recommendations for the industrial, transport, energy, tourism sectors and local authorities in the sphere of climate change prevention, adaptation and mitigation.

Сертифікати,
які
стосуються
сталого
менеджменту
університету /
Certificates
related to the
sustainable
management
of the
university

Пріоритетні
напрями у
розрахунку
сталого
розвитку/
Priority
directions in
the
perspective of
sustainable
development

KhNAHU takes an active part in the activities of the World Organization of Universities (UNESCO) and the European University Association (EAU). The management and staff of the university are successfully implementing the University's Progressive Growth Strategy, promoting the Roadmap developed by the Association of Universities as a standard for KhNAHU to be the base center for realizing long-term growth in green development.

Research & innovation

*Develop case studies of how interdisciplinary research can contribute to the interconnected realization of the SDGs, bringing together economy, politics, environment and society.

Implementation of four main directions in KHNAHU:

1.1 The UNESCO Chair in Environmentally Friendly Technologies was established in 2000 and is now in operation - 409. Work towards two UNESCO Major Programmes: education and natural sciences
<https://rcf.khadi.kharkov.ua/kafedri/ekologiji/kafedra-junesko-ekologichno-chist-tekhnologiji/>

1.2 A large European project "Synergy of educational, scientific, managerial and industrial components for climate management and mitigation" is being implemented 619119-EPP-1-2020-1-NL-EPPKA2-CBHE-JP CLIMAN Priority Modernization of the curriculum through the development of new and innovative courses and methodologies, Interdisciplinary priority on climate change
<https://www.khadi.kharkov.ua/erasmus/ka-2/sinergija-osvitnikh-naukovikh-upravlinskikh-ta-promislovikh-komponentiv-dlja-upravlinnja-klimatom-ta-zapobigannja-zmini-klimatu-climan/>

1.3. Climate Management Centre was established (with EU support and funding) Mission - assistance to communities, managerial, administrative and scientific communities in coordination of activities in the field of climate management and mitigation. <https://rcf.khadi.kharkov.ua/kafedri/ekologiji/centr-klimatichno/>

[menedzhmentu-ckm](#)

1.4. High Speed Vehicle Laboratory - National Heritage status. Funded by the government. Mission-Scientific innovation in the field of eco-technologies transport technologies. <https://af.khadi.kharkov.ua/chairs/avtomobiliv-im-zagredeskula/laboratoriya-shvidkisnikh-avtomobiliv>

Education and students

*Introduce the necessary changes in curricula, identifying topics of community interest in the green transition and how to develop them as learning objectives.

<https://rcf.khadi.kharkov.ua/kafedri/ekologiji/mizhnarodna-dijalnist/ka1-akademichna-mobilnist/>

<https://www.khadi.kharkov.ua/mizhnarodna-dijalnist/>

*Identifying institutional leaders who will lead the management of sustainable development programmes. <https://rcf.khadi.kharkov.ua/kafedri/ekologiji/skl/kafedri/vnukova/>

*Fostering international cooperation, identifying educational programmes that can be jointly implemented by partners in different countries.

Staff & operations

Innovative activity/in the stage of development and adoption at all stages

*Establish sustainability committees and green offices in universities to address sustainable operations in synergy with the Equality, Diversity, Inclusion and Belonging (EDIB) commitments in the Institutional Strategy. The Strategy should address issues relating to the management of buildings and surrounding green spaces, food supply and canteens, procurement, etc.

Examples such as the Green Office movement also show that direct student involvement in the management of the strategy can facilitate and enrich the university's transition to a green lifestyle.

1. Part in the global green university rankings «UI GreenMetric World University Rankings» <https://nida.ac.th/ui-green-metric-world-university-rankings-2023/>

2. University development strategy https://www.khadi.kharkov.ua/fileadmin/P_Standart/pologeniya/strategichnii_p_n_2020-2027.pdf

3 .Erasmus+ Activity Program - KA220-HED - a partnership in pre-implementation. Within the framework of the funding program "Erasmus+ KA220-HED Partnership in Higher Education", project: Entry-level transformation

sustainability - Helping Ukrainian citizens to finance sustainable and reliable reconstruction of (war-era) Ukraine (TransLearnN), Project number NA DA/2023-1-DE01-KA220-HED-000157119. TransLer

<https://www.khadi.kharkov.ua/erasmus/ka-2/sinergija-osvitnikh-naukovikh-upravlinskikh-ta-promislovikh-komponentiv-dlja-upravlinnja-klimatom-ta-zapobigannja-zmini-klimatu-climan/translearnn-transformational-learning-network-for-resilience/>

Public engagement & societal impact

*Collaboration in the development of case studies of interconnected SI implementation, involving economic, political, environmental and social stakeholders.

1. Work in the National Commission of Ukraine in UNESCO Affairs (Professor Natalia VNUKOVA). <https://mfa.gov.ua/mizhnarodvidnosini/yunesko/nacionalna-komisiya-ukrayini-u-spravah-yunesko>

2. Participation of the working group in the implementation of approaches within the framework of the work of the National Commission of Ukraine at the right UNESCO for the Kharkiv Municipal Church (Professor Natalia VNUKOV <https://www.city.kharkiv.ua/uk/gorodskaya-vlast/ispolnitelnye-organyi/departamentyi/departament-mezhdunarodnogo-sotrudnichestva.html>

3. Joint participation of university experts and employees of relevant departments of Kharkov in programs NetZeroCities <https://netzerocities.app/social>

* Collective research in the fields of social and human sciences and technology, engineering and mathematics.

Work as part of the international foundation REUNITE: Participation in building the national independence of Ukraine through education. KHNAHU-REUNITE is an ongoing collaboration formed at the intersection of academia, the public and private sectors with the common goal of addressing the challenges of Ukrainian post-war reconstruction through mutually beneficial activities with leadership spanning educational, government and corporate perspectives. (Expert, Associate Professor Anton KHOLODOV <https://www.rebukr.com/reunite/>

Курси, що
вже
читаються і
відображають
аспекти
сталого
розвитку/
Courses that
are already
being read
and reflect
aspects of
sustainable
development

For masters in the educational program:

1. Environmental management and audit
2. System analysis of environmental quality
3. Climate engineering technologies
4. Geo- information systems in ecology resource and energy saving

Selective disciplines for all educational programs:

1. Environmental management and audit
2. System analysis of environmental quality
3. Climate engineering technologies
4. Geo- information systems in ecology resource and energy saving
5. Basics of ecology
6. Landscape ecology
7. Environmental legislation
8. Sustainable development
9. Physical and chemical methods of environmental analysis

PEST-аналіз

Завдання: Оцінити **поточний стан розробки стратегій управління сталим розвитком університетів в ЄС та Україні**, щоб забезпечити хорошу базу знань для університетів-партнерів і робочих груп у WP3

Assess the current state of the **development of strategies for sustainability management of universities in EU and Ukraine**, in order to provide a good knowledge basis to the partner universities and working groups

Політичні / Political	Економічні / Economical
<p>1. The war in Ukraine has brought about profound challenges to the stability and functioning of the country's higher education system. The KHNAHU, renowned for their academic excellence and social impact, have been negatively affected by the persistent state of war. The effects of the war have been felt in various aspects, encompassing infrastructure, technological advancements, human resources, and educational opportunities.</p> <p>2. Normative base. There is a need to develop a state incentive system for universities that, in difficult conditions, promote the values and principles of sustainable development to the public.</p>	<p>As wartime violence continues, it is important to understand and address the immediate needs of HNAKHU to ensure continuity of teaching, research, and stable and sustainable growth.</p> <p>Reality KHNAKHU: As of May 2024, educational complexes were damaged due to shelling and bombing caused by Russian armed aggression against Ukraine. Of these, 2 were destroyed and reconstructed.</p>
Соціальні / Social	Технологічні/ Technological
<p>Despite the serious problems facing KHNAHU, such as pressure on the educational process, destroyed campus infrastructure, and the constant threat of a missile attack, deep psychological exhaustion and lack of funding, the academic community of the university continues to fulfill its responsibilities with full dedication.</p>	<p>1. Educational process. The university staff has a fully functioning university educational website with a variety of technological opportunities for training both students and for providing services for advanced training or education throughout life. There is an electronic library with free access. The university management is working to provide employees with the necessary technical equipment for the quality provision of educational services.</p> <p>2. Ensuring the functioning of the university. There is a need for technical assistance to ensure sustainable development (generators, solar panels, computer equipment)</p>

SWOT-аналіз Завдання. Провести оцінку стану, досвіду та потреб викладання в галузі науки сталого розвитку в університетах-партнерах в Україні з метою **виявлення сильних, слабких сторін, можливостей та загроз.**

SWOT – analysis Task. To assess the state, experience and needs of teaching in the field of sustainable development science at partner universities in Ukraine in order **to identify strengths, weaknesses, opportunities and threats.**

Сильні сторони / Strength	Слабкі сторони / Weakness
<ol style="list-style-type: none"> 1. Development of multidisciplinary and interdisciplinary studies Multidisciplinary faculties. Availability of unique educational programmes. 2. Engaging with society. Different formats of enegagement with society in all universities.Engagement at different scales, local, regional, global. 3. Specialist research centers on sustainability topics. Leader in diverse renewable technologies. 	<ol style="list-style-type: none"> 1. Few explicit incentives and organisational mechanisms to encourage interdisciplinary work. Not too many examples of interdisciplinary projects. 2. The variety of interactions and meanings of interaction in terms of sustainable development can become ambiguity.The main goal of “engaging with society” and “influencing society” becomes interaction with bureaucratic structures, rather than more diverse communities.Vague definitions of what or who “society” is are in strategies.The roles assigned to social actors may be too restrictive. 3. Strategie are in early stages, under-staffed and under-funded.Many strategies and statements, little implementation. Mostly tech-driven solutions.
Можливості/ Opportunity	Загрози/ Threats
<ol style="list-style-type: none"> 1. Opportunities to develop pioneering academic programmes and courses that integrate several disciplines. The EU and other research funders are increasingly encouraging interdisciplinary collaboration between universities. Having options for studying organizational structures to facilitate interdisciplinary research. 2. The KhNAHU university community is ready and able to contribute to the formation of sustainable cooperation between universities with an emphasis on specific technical and natural fields. This can contribute to a stronger sense of Europeanness. Opportunities to increase impact synergies by focusing on specific sectors of society, including at university and local government levels. 3. Students are very committed to sustainability. They lead many initiatives. Collaborations in other national university networks. Universities can learn from each other. 	<ol style="list-style-type: none"> 1. Contradictions between expectations of introducing the principles of sustainable development into educational programs and the lack of incentives for scientists and specialists who ensure the sustainable development of the university. There is insufficient understanding that efforts to develop and implement sustainable development approaches and principles take time. The ability to implement sustainable development of a university depends on the capabilities that the university has, including institutional structures (relevant ministry). It is very changeable and vulnerable. 2. Red tape can threaten engagement as an exercise rather than an attempt to democratize knowledge, genuine technology and innovation.Quite a limited focus on the privileged sections of society. Limiting the decision-making power of the academic community. 3. The university may be limited in its actions by strategic partners in unstable sectors, and also requires additional partner assistance due to force majeure circumstances (combat region) . Technological solutions are overshadowing other possible answers. Overemphasis on market-based environmental solutions.

Завдання. Виявлення обізнаності та розуміння концепції сталого розвитку серед відповідальних співробітників університетів-партнерів, досліджуючи їх сприйняття концепції та того, як вона відображається в освітньому процесі та управлінні університетом.

Task. Identifying awareness and understanding of the concept of sustainable development among responsible staff of partner universities by exploring their perception of the concept and how it is reflected in the educational process and university management.

Are implemented:

Кроки, що вже прийняті і в подальшому передбачаються зважаючи на напрям програми /
Crops that have already been accepted and will be transferred in the future directly to the program

1. A Development Strategy until 2027 has been developed.
2. All educational programs are accredited, including those programs that train specialists in the field of sustainable development.
3. Participation in international projects that support the concept of sustainable development.
4. A plan has been developed for the university's participation in all events at the state and international level, the purpose of which is to discuss issues of sustainable development.
5. Annual participation in the Green Metrics ranking of world universities.
6. Ensuring the sustainable functioning of green centers: Center for Climate Management, UNESCO Chair "Environmentally friendly technologies".
7. Functioning of student government.
8. Use of energy-saving technologies (solar panels).
9. Work on budget topics towards the development of sustainable technological solutions.
10. Strengthening the skills of employees towards the goals of sustainable development and dissemination of knowledge in all sectors of society.

Planned activities:

1. Implementation of the provisions on sustainable development of the European University Association.
2. Improvement of the Sustainable Development Strategy until 2030.
3. Development of a Strategic Plan for the implementation of the Sustainable Development Strategy in two parts: during the war and post-war periods.
4. Intensifying international cooperation with European universities in the field of sustainable development and technology exchange.
5. Participation in support and cooperation programs in the field of sustainable development.
6. Improvement of educational programs in accordance with the European Qualifications Framework.

Viktor Bohomolov

Name

Kharkiv , 2024

Location & date

Kharkiv National Automobile and Highway University

Institution

Signature

