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**GREEN TRANSITION AS A FRAMEWORK FOR RECOVERY:
REALIGNING LABOR DEMAND AND SKILLS
IN WARTIME RURAL UKRAINE****ЗЕЛЕНИЙ ПЕРЕХІД ЯК ОСНОВА ВІДНОВЛЕННЯ:
УЗГОДЖЕННЯ ПОПИТУ НА РОБОЧУ СИЛУ ТА КВАЛІФІКАЦІЇ
В СІЛЬСЬКІЙ МІСЦЕВОСТІ УКРАЇНИ В УМОВАХ ВІЙНИ**

Summary. This article examines the challenge of aligning the goals of the “green transition” with the urgent needs for the reconstruction of rural areas in Ukraine amid full-scale armed aggression. Based on an analysis of international and domestic sources, the authors have established that green and post-war recovery priorities are largely synergistic – primarily in the sectors of decentralized renewable energy, sustainable agriculture, and green construction – while simultaneously creating a conflict over resources in the areas of financing and workforce training. A list of in-demand “green” professions for the rural labor market has been identified, and the scale of the skills gap caused by demographic losses, internal and external population displacement, and the destruction of educational infrastructure has been calculated. Institutional actors – the state, local government, business, and international donors – have been systematized, and their roles in forming a unified system for matching the supply and demand of skills have been characterized. Measures for a just transition have been proposed, aimed at minimizing social tensions among unskilled workers in traditional rural sectors.

Keywords: green transition, sustainable development, rural revitalization, labor market, skills gap, green jobs, just transition, Build Back Better, war economy, decentralized energy, internally displaced persons.

Анотація. У статті досліджено проблему узгодження попиту на робочу силу та кваліфікації в сільській місцевості України в умовах поєднання зеленого переходу та повоєнного відновлення. Актуальність зумовлена безпрецедентним демографічним та освітнім колапсом (зовнішня міграція ~6,9 млн осіб, руйнування понад 4 000 закладів освіти, кадровий дефіцит в агросекторі на тлі мінного забруднення ~5 млн га ріллі) та імперативом декарбонізації згідно з Угодою про асоціацію з ЄС. Метою дослідження є розробка концептуально-аналітичної моделі синхронізації зелених компетенцій із воєнно-відновлювальними потребами сільських територій. Завдання включають верифікацію синергії/конфлікту цілей, концептуалізацію принципу Build Back Better, ідентифікацію затребуваних зелених професій, оцінку кваліфікаційного розриву та систематизацію інституційних механізмів. Методологія базується на компаративному аналізі (порівняльна матриця цілей), секторальному форсайті (кластери зелених посад) та інституційному дизайні (матриця суб'єктів узгодження). Результати дослідження демонструють, що переважна більшість галузевих векторів (децентралізована ВДЕ, розмінування, рекультивация) мають синергетичний характер, тоді як ресурсний конфлікт виникає у площині фінансування та темпів підготовки кадрів. Визначено шість кластерів зелених професій для села (ВДЕ, зелене будівництво, сталі агросистеми, розмінування/рекультивация, циркулярна економіка, водне господарство) із прогнозними створеннями ~1,5 млн робочих місць до 2035 року. Кваліфікаційний розрив має структурну та воєнну складові; пропонується подолання через дуальну освіту, мікросертифікати та таргетовану підтримку вразливих груп. Сформовані висновки стверджують необхідність створення міжсекторальної платформи Green Skills Hub замість фрагментарних дій окремих інституцій. Практична цінність дослідження полягає у формуванні доказової бази для стандартизації зелених кваліфікацій, масштабуванні моделі справедливого переходу (just transition) на сільські громади Півдня та Сходу, а також інтеграції освітніх ваучерів у механізми Ukraine Facility Plan 2024–2027.

Ключові слова: екологічний перехід, сталий розвиток, відродження сільських територій, ринок праці, дефіцит кваліфікованих кадрів, «зелені» робочі місця, справедливий перехід, ініціатива «Відбудувати краще», військова економіка, децентралізована енергетика, внутрішньо переміщені особи.

Problem statement. The full-scale armed aggression by the Russian Federation against Ukraine, which began on February 24, 2022, has radically altered the socioeconomic reality of the country's rural areas. At the same time, the global climate policy agenda and the requirements of the Association Agreement with the European Union oblige Ukraine to pursue decarbonization and the "green transition." Researchers and policymakers face a fundamental question: how to reconcile these two vectors – the reconstruction of what has been destroyed and the development of a sustainable, climate-neutral economy – amid acute resource shortages, human casualties, and the destruction of educational infrastructure?

Rural areas are particularly vulnerable. The agricultural sector is the first victim of mine contamination – according to experts' estimates, over 5 million hectares of arable land (more than 10% of the total) have become inaccessible for cultivation [17]. The destruction of agricultural holdings, farms, and grain elevators (losses in the agricultural sector reached \$12.1 billion as of December 2025) is compounded by a massive exodus of skilled labor: approximately 6.9 million people have left the country, and mobilization has removed a significant portion of working-age men from production processes [2]. Meanwhile, the green transition requires new skills – from installing solar panels to managing digital agricultural systems – which are largely absent from the current agricultural labor market [4].

Consequently, research into the alignment of labor demand and skills in rural areas of Ukraine takes on not only theoretical but also practical significance – given the need to develop sound public policies on employment and workforce training in the context of postwar reconstruction.

Analysis of recent research and publications.

The issues surrounding the "green transition" and the labor market have been explored in the works of a wide range of scholars and international institutions [1; 4; 8; 10; 11; 18]. The concept of a just transition was developed in documents by the International Labour Organization (ILO) and the Global Commission on the Future of Work [16]; in particular, the definition of "green" jobs through the lens of decent work and environmental sustainability became the methodological basis for sectoral assessments. In the EU context, key documents include the European Green Deal (2019) and REPowerEU, which established decarbonization targets that are mandatory for candidate countries, including Ukraine [4; 15].

Among domestic and related studies, we can identify several areas of focus. For instance, the impact of the war on the agricultural sector has been analyzed in the works of scholars such as O. Shebanina et al. [13], which demonstrate the systemic nature

of the destruction of agricultural productive forces. The issue of demographic losses and their impact on economic recovery was examined by analysts at the Razumkov Analytical Center (O. Pishchulina et al.) [19] and the Kyiv School of Economics (N. Shapoval et al.) [12]. An assessment of the potential of "green" jobs in reconstruction was conducted by H. Weser and G. Poluschkin [12] and O. Petrovska, A. Nechaev [10], who investigated the specifics of the green labor market in a transitional economy. Institutional mechanisms for a just transition in Ukraine's coal-mining regions are analyzed in a thematic report by I. Khomenko, K. Tamm, and V. Tool of the Stockholm Environment Institute [5].

Despite the growing body of literature, the intersection of three specific issues remains under-explored in the academic literature: (1) the specific characteristics of the rural labor market (as opposed to urban and industrial markets), (2) the skills gap in the context of war-related demographic losses, (3) the institutional design for matching the supply and demand of green skills at the local community level. It is precisely this gap that the proposed research aims to fill.

The purpose of this article is to develop a conceptual and analytical model for aligning labor demand and skills in rural areas of Ukraine in the context of the green transition and post-war recovery. To achieve this goal, the following tasks have been identified: (1) to determine the nature of the interaction between the goals of the green transition and the urgent needs of wartime – synergy or conflict of resources; (2) to conceptualize the notion of "recovery" in the context of the Build Back Better principle and EU standards; (3) identify the list of in-demand "green" professions for the rural labor market; (4) assess the impact of the war on the structure of labor demand and the scale of the skills gap; (5) systematize institutional coordination mechanisms; (6) propose measures to minimize social tensions during the transition.

Summary of the main research material. The debate over the compatibility of climate and post-war reconstruction goals is conceptually central to this study. The argument that these goals are incompatible typically asserts that Ukraine cannot afford the "luxury of going green" when it faces the challenges of survival and rebuilding what has been destroyed. This position is flawed in its methodological foundation: it pits goals against each other that are, in fact, largely synergistic.

First, decentralized renewable energy – solar and wind microgrids, energy storage systems – is both a "green" and a secure solution. Massive missile strikes on thermal and hydroelectric power plants since mid-2022 have reduced dispatchable capacity from 37 GW to less than 10 GW during critical periods in 2024 – 2025. According to OECD estimates (2025), total losses to Ukraine's energy sector by the end

of 2024 amounted to \$20.5 billion, while the cost of full restoration in line with modern standards is \$68 billion [9]. In this situation, decentralized renewable generation not only reduces the carbon footprint but also increases resilience to attacks, as distributed infrastructure is harder to destroy with a single targeted strike. Therefore, the green transition in the energy sector and military energy security do not contradict but rather reinforce one another.

Second, the recovery of the agricultural sector and green standards for agricultural production are linked by a common prerequisite: demining and the reclamation of contaminated land. Approximately 142,000 km² of Ukrainian territory is contaminated with mines and explosive remnants of war, and about 5 million hectares of arable land have become inaccessible for cultivation. Demined and reclaimed land is a “clean slate” on which organic or precision farming systems can be established, rather than replicating extensive farming with heavy chemical inputs. Thus, demining is a necessary but not contradictory prerequisite for green agriculture [2; 7; 14; 17].

The real resource conflict arises in the areas of funding and workforce training. Urgent budgetary support and humanitarian aid are directed primarily toward defense and immediate social needs, whereas EU climate financing requires the fulfillment of certain conditions and involves lengthy procedures. Similarly, the accelerated training of construction workers to rebuild destroyed infrastructure competes with the lengthy training of certified specialists in “green” construction. These contradictions are

not insurmountable, but they require deliberate institutional planning (Table 1).

The results of the comparative matrix indicate that the relationship between the green transition and military reconstruction is predominantly synergistic or neutral at the sectoral level, but gives rise to resource conflicts regarding funding and the pace of workforce training. This means that the contradiction is not structural – it is overcome through a rational combination of funding sources and flexible educational pathways.

The concept of “Build Back Better” (BBB) entered the international discourse following the adoption of the Sendai Framework for Disaster Risk Reduction (2015) and was adapted in the context of post-war reconstruction [1; 4]. In the Ukrainian context, it refers not to a simple restoration of assets to their pre-war state – “adaptation” – but to accelerated modernization incorporating EU green standards. According to OECD (2025), as of the end of 2024, over 8,700 planned or proposed reconstruction projects had been registered in the DREAM (Digital Restoration EcoSystem for Accountable Management) system, where compliance with BBB principles was declared through the use of green technologies and alignment with EU accession goals.

The Ukraine Facility Plan 2024–2027 [15], developed in cooperation with the European Union, explicitly links recovery efforts to EU integration requirements in the areas of agricultural reform, digitalization, and the green transition. This means that access to EU funding is de facto contingent on progress in decarbonization. In November 2024, the

Table 1 – Comparative Matrix of Green Transition Goals and Wartime Priorities

Comparison Criteria	Green Transition Goals	Urgent Wartime Needs
Energy	Climate neutrality, renewable energy generation, reduction of CO ₂ emissions	Energy security, decentralization, autonomous microgrids, protection against missile strikes
Nature of Synergy	Distributed solar and wind generation simultaneously promotes decarbonization and infrastructure resilience	SYNERGY: Decentralization is both a “green” and a secure strategy
Land Use	Agroforestry, biodiversity, reduction of chemical fertilizers, organic farming	Demining, restoration of agricultural production, food security
Nature of Synergy	Demined land is the first prerequisite for any restoration; green standards can be integrated into land reclamation	PARTIAL SYNERGY: Demining precedes “green” use but does not conflict with it
Labor Force	Retraining for “green” professions, new educational programs, green skills	Labor shortages due to mobilization and migration; an immediate need for construction workers and agricultural workers
Nature of Synergy	Retraining programs for internally displaced persons and veterans can combine traditional and environmental skills	RESOURCE CONFLICT: lack of time and funds for long-term training amid wartime labor shortages
Financing	Long-term green bonds, EU climate finance, Green Deal investments	Humanitarian aid, emergency budget support, military spending
Nature of Synergy	The Ukraine Facility Plan 2024 – 2027 seeks to combine both streams	CONFLICT OF PRIORITIES: resources for reconstruction vs. decarbonization

Source: compiled by the author based on [2; 5; 9; 15]

Cabinet of Ministers of Ukraine approved the Strategy for the Development of Agriculture and Rural Areas until 2030, in which sustainable development is defined as a cross-cutting principle. Thus, the BBB in rural Ukraine does not involve a choice between “returning to the way things were” and “going green,” but rather a path toward a green standard – the only questions are the pace and the tools for achieving it.

An important aspect is that the green renovation of rural infrastructure – energy-efficient social housing, renewable sources of heat and electricity for schools and medical facilities, and the organic reclamation of demined land – generates local jobs with a higher level of added value than traditional construction, and is therefore strategically sound even from a purely economic perspective. The UNIDO project “Green Industrial Reconstruction of Ukraine 2024–2028” is directly aimed at restoring the livelihoods of the war-affected population through “green” technological solutions, confirming the alignment of social and climate goals [4].

Forecasting demand for “green” jobs in rural areas requires an analysis of the sectoral profile of the recovery. A study by the German Economic Team (2024) [18] predicts that under a “green reconstruction” scenario, approximately 1.5 million new “green” jobs will be created in Ukraine between 2025 and 2035 – primarily in the energy, transportation, water supply, education, and healthcare sectors. For rural areas, the six most relevant clusters are (Table 2).

The data presented in Table 2 show that most “green” jobs in rural areas require practical skills at an intermediate skill level – such as installation,

maintenance, and agronomy – rather than exclusively university-level training. This is of fundamental importance for developing realistic retraining programs for the rural population, where education from vocational and technical schools or informal learning traditionally predominates. Therefore, accelerated modular courses, micro-certificates, and dual education should become the primary training tools, rather than lengthy university programs.

It is telling that among the most in-demand “green” jobs, specialists in demining and land reclamation hold a special place. According to Mine Action Monitor (2024) [7], Ukraine is one of the most mine-contaminated countries in the world – about 30% of its territory is covered with explosive remnants of war. This specific “green” profile – a demining technician who transitions to land reclamation after demining – is a unique phenomenon that is virtually unanalyzed in any other system.

The transformation of the labor market in rural Ukraine as a result of the armed conflict is multifaceted and can be described through four interrelated processes: demographic losses, migration, the collapse of employers, and the restructuring of demand for skills.

Demographic losses and mobilization are the most pressing short-term challenges. According to IOM Ukraine (2024) [3], as of August 2024, the employment rate among working-age individuals (18 – 60 years old) stood at 67%, which is 6 percentage points lower than in February 2022. Particularly striking is the fact that 77% of businesses in 2024 hired workers over the age of 50 – not by choice, but due to a lack of

Table 2 – In-demand “green” professions in rural areas of Ukraine: a sectoral analysis

Sector / Job Type	Examples of “green” jobs	Required skills	Employment Outlook 2025–2035
Renewable Energy	Solar/Wind Power Plant Installer, Microgrid Technician, Energy Storage Operator	Electrical Engineering, ICT, Safety at Height	~450,000 new jobs (German Economic Team, 2024)
Green construction and renovation	Building energy efficiency specialist, BREEAM/LEED certifier, eco-designer	EU building codes, thermal insulation, smart systems	~300,000 (ILO/UNIDO estimate, 2024)
Sustainable agricultural systems	Agricultural ecologist, precision farming specialist, agroforestry specialist	Digital agricultural technologies, agrochemistry, GIS systems	~250,000 (FAO Ukraine, 2025)
Demining and Land Reclamation	Demining Technician (Humanitarian Demining), Specialist in Contaminated Soil Remediation	Explosive Materials, Ecotoxicology, GIS Mapping	~50 000 (Mine Action Monitor, 2024)
Waste Management and the Circular Economy	Sorting Line Operator, Composting Specialist, WEEE Manager	Recycling Technology, Sanitary Standards, Logistics	~150 000 (UNEP, 2023)
Water Management	Hydrologist-ecologist, water treatment systems operator, irrigation specialist	Hydrology, water chemistry, automated monitoring systems	~100 000 (OECD, 2025)
Green Transportation	Electric Vehicle/Electric Bus Operator, Charging Station Technician	Electromechanics, Charging System Programming	~200 000 (IEA, 2025)

Source: compiled by the author based on [5; 8; 9; 11]

younger staff, a significant portion of whom have been mobilized or have left the country

External migration is the second-largest factor contributing to the labor shortage. Approximately 6.9 million people are living outside Ukraine, including a disproportionately high share of women and individuals with higher education – precisely those who could acquire new “green” skills. Internally displaced persons (IDPs) are concentrated in large cities and western regions, leaving rural areas in the south and east even more depopulated [3].

The collapse of employers is a specific problem in rural areas. Large agricultural holdings – the biggest employers for the rural population – have suffered losses due to the occupation of land, the destruction of equipment, and the disruption of supply chains. According to the KSE Institute (2024) [2], the agricultural sector suffered losses amounting to \$10.3 billion; over 130,000 units of agricultural equipment were lost, and 4 million tons of grain elevator capacity were destroyed. Small farmers focused on local markets suffered no less significantly – according to various estimates, over a third of rural households experienced a significant reduction in income. At the same time, the UNDP program to train female tractor drivers in Mykolaiv and other affected regions demonstrates that the breakdown of traditional gender roles in rural labor can be leveraged to accelerate the green transition by engaging new categories of workers (Table 3)

The analytical data summarized in Table 3 illustrate the scale of the structural shift: a simultaneous 6-percentage-point drop in employment, mass emigration, the destruction of more than 4,000 educational institutions, and losses in the agricultural sector exceeding \$10 billion are creating a

skills gap of unprecedented complexity. In summary, it can be argued that demand for green skills will potentially grow (recovery, reconstruction, European integration requirements), while the supply of skilled labor is shrinking due to demographic losses and the collapse of the education system.

The skills gap in the context of the green transition in rural Ukraine has two components: first, a structural gap between the existing skills of the rural workforce and the needs of the green economy (which existed even before 2022); second, a gap caused by the war due to the destruction of educational infrastructure and the exodus of teaching staff.

The structural gap is due to the dominance in rural areas of low-skilled labor – crop farming, livestock farming, and construction without specialized knowledge – and the near-total lack of training in fields critical to the green transition: renewable energy, precision agriculture, waste management, and environmental monitoring. According to an analysis of domestic vocational school programs, standardized “green” qualifications in the agricultural workforce training system were virtually nonexistent as of 2022.

The war has significantly exacerbated this problem. More than 4,000 educational institutions have been damaged or destroyed (including 229 schools, 110 kindergartens, and 97 universities), which has directly reduced access to formal education for a significant portion of the rural population. At the same time, distance learning, which has become a necessary solution, is effective for theoretical components but fundamentally unsuitable for practical skills – such as installation, maintenance, and field agronomic techniques.

From a methodological perspective, the German Economic Team (2024) [18] and SEI (2025) [5]

Table 3 – Key indicators of the transformation of Ukraine’s labor market during the war

Indicator	Before the full-scale invasion (2021)	As of 2024	Source
Employment rate (ages 18–60)	~73%	67%	IOM Ukraine, 2024
Unemployment rate among internally displaced persons	–	15%	IOM Ukraine, 2024
Number of externally displaced persons	–	~6.9 million people	OECD, 2025
Percentage of businesses hiring internally displaced persons	–	47%	Carnegie Endowment, 2026
Percentage of businesses hiring people aged 50 and older	~60%	77%	Carnegie Endowment, 2026
Damaged/destroyed educational institutions	–	more than 4,000	KSE Institute, 2024
Agricultural land contaminated with mines	–	~5 million hectares (>10% of arable land)	Kyiv Post / ACAPS, 2024
Losses in the agricultural sector (infrastructure)	–	\$10.3 billion	KSE Institute, 2024
Forecast for “green” jobs, 2025–2035	–	~1.5 million	German Economic Team, 2024

Source: compiled by the author based on [2–3; 6; 9; 14; 18]

recommend a combination of three tools to bridge this gap: (a) the large-scale rollout of dual education programs, in which companies compensate for the lack of classroom instruction with practical training; (b) the introduction of a micro-certificate system that provides rapid (2–6 months) training in specific “green” skills; (c) targeted support for women, veterans, and IDPs as priority groups to whom scholarship and voucher programs should be directed.

It is of fundamental importance that, in our view, the workforce training system should be based on the concept of “green” skills as both restorative and environmentally friendly. In other words, a specialist trained in the “solar panel installation” program is both a resource for the ongoing restoration of damaged energy infrastructure and a qualified “green” worker of the future. This dual functionality enhances the economic viability of investments in green education.

The key issue is not only identifying the list of necessary green skills, but also establishing a functional institutional framework capable of aligning employer demand with the offerings of educational institutions and the public’s willingness to retrain. An analysis of existing stakeholders and their tools is presented in Table 4.

The institutional matrix shows that none of the existing actors is capable, on its own, of ensuring systemic coordination: the state has regulatory authority but limited financial resources; local governments understand the local context but lack a fiscal base; business generates real demand but is unwilling to

invest in education amid uncertainty; donors have funds but often act in a fragmented manner; educational institutions are dilapidated and understaffed.

One solution could be the creation of a unified cross-sectoral platform – the “Green Skills Hub” for rural revitalization – that would bring together: a registry of “green” job openings from businesses; qualification standards from the Ministry of Economy; training programs from vocational schools; and funding from donors through a single “one-stop shop.” A conceptually similar example is the experience of Chervonograd (Chervonohrad) in Lviv Oblast, where, as part of the Concept for the Transformation of Coal Regions (2023), retraining programs for miners were launched and new specializations were introduced in vocational schools. This experience could be scaled up to rural communities in the South and East as they are de-occupied.

The “green transition” poses a real threat of marginalization for a segment of the traditional rural population – primarily unskilled workers in shrinking sectors [5; 8]. In the Ukrainian context, this threat affects three categories: (1) traditional livestock farmers in areas where large livestock complexes are closing due to destruction or repurposing; (2) those employed in the coal industry – in the Donetsk region and adjacent territories, where simultaneous deindustrialization and the need for decarbonization are evident; (3) seasonal agricultural workers, whose employment depends on large agricultural holdings facing difficulties.

Table 4 – Institutional Matrix for Matching Supply and Demand for “Green” Qualifications in Rural Ukraine

Entity	Role in the coordination system	Available tools	Key constraints	Recommended priority
Government (State Employment Service, Ministry of Economy)	Macro-regulation of the labor market, qualification standards, registration of unemployed persons	Training vouchers, active employment programs, National Qualifications Framework	Martial law, centralized decision-making, lack of funding	Standardization of green qualifications, digital competency registry
Local Self-Government (Municipalities)	Identifying local needs, coordinating with employers, supporting IDPs	Community Development Programs, Municipal Enterprises	Weak fiscal base, lack of qualified officials	Green municipal procurement, partnerships with vocational and technical institutions
Business (agricultural holdings, SMEs, homeowners' associations)	Creating demand for specific skills, corporate training	In-house training programs, participation in dual education	Uncertainty regarding business conditions, management turnover	Sector-specific agreements on green skills, dual education
International donors (EU, UNDP, USAID, ILO)	Funding for retraining programs, technical assistance, transfer of standards	Grants, TVET projects, platforms for sharing experiences	Fragmented projects, restrictive grant conditions, bureaucracy	Systematic coordination through a single Green Skills Hub platform
Educational institutions (universities, vocational schools)	Development of qualification offerings, research, trainer development	Educational programs, online courses, micro-certificates	Destruction of infrastructure (4,000+ institutions damaged), exodus of teachers	Distance green education, recognition of non-formal learning

Source: compiled by the author based on [4–6; 15]

To avoid social tensions, the principle of a just transition entails three essential components. First, active employment and retraining: programs targeting specific groups – miners, livestock farmers, unskilled construction workers – with concrete guarantees of future employment. The experience of coal mine restructuring in Poland, the Czech Republic, and Germany demonstrates that even prolonged transitions can be socially stable provided that: (a) there is prior consultation with trade unions; (b) there is a transparent restructuring timeline; (c) there are income guarantees for the transition period. Second, compensation mechanisms for individuals unable to retrain due to age or health conditions: expanded social insurance, adequate pensions, and accessible healthcare. Third, involving local communities in transition planning: decisions made “from above” without the participation of those directly affected typically provoke resistance and social tension, whereas participatory planning enhances the legitimacy and effectiveness of reforms [5–6; 8–10; 18].

An important point is that most “green” jobs in rural areas are local in nature: installing solar panels, maintaining microgrids, and agroecology – all of these require a physical presence on-site and therefore cannot be “relocated” to cities or outsourced. This significantly increases their value in retaining the population in rural areas and countering out-migration, which is already a critical consequence of the war [11–12; 18].

Conclusions. The green transition and post-war recovery are largely synergistic processes – particularly in the sectors of decentralized renewable energy, sustainable agriculture, and green construction. The real conflict arises not at the level of objectives, but at the level of resources and planning time horizons, which requires coordinated management of funding flows. The “Build Back Better” principle, enshrined in the Ukraine Facility Plan 2024–2027 and the Rural Development Strategy through 2030, is not merely a

declaration but an operational guideline that integrates recovery with European integration commitments. The projected demand for “green” jobs is substantial: the German Economic Team (2024) estimates a potential of 1.5 million new positions by 2035, a significant portion of which falls specifically within rural sectors – renewable energy, sustainable agricultural systems, demining and land reclamation, and green construction. Most of these positions require mid-level practical skills, making accelerated vocational education and training programs and micro-certificates a priority training tool. At the same time, the skills gap is critical and has two components: a structural shortage of green competencies (pre-war) and a wartime shortage of available personnel due to demographic losses, migration, and the destruction of educational infrastructure. Consequently, meeting the demand for “green” qualifications requires simultaneously addressing the challenges of training new specialists and returning migrants by creating attractive employment conditions in rural areas. As established, none of the existing institutional actors is capable, on its own, of ensuring systematic alignment of supply and demand for “green” qualifications. A cross-sectoral “Green Skills Hub” platform is needed to consolidate a job registry, qualification standards, educational programs, and funding through a single coordination mechanism.

Therefore, a just transition is an indispensable prerequisite for social stability during the green transformation of rural Ukraine. Unskilled workers in traditional sectors – livestock farming, the coal industry, and extensive agriculture – need targeted compensation mechanisms and realistic retraining pathways, not just declarative slogans.

Future research could focus on developing region-specific adjustment models (taking into account varying degrees of war damage), quantifying the cost of training a single “green” specialist in rural areas, and analyzing the effectiveness of specific pilot retraining programs.

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