Policy Brief

June 2026

Build Back Better, Build Back Greener

Green and Circular Pathways for Ukraine's Municipal Recovery

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June 2026

As Russia's full-scale invasion of Ukraine enters its fifth year and the costs of the destruction continue to mount, the principle of "building back better" has become a central pillar of Ukraine's recovery agenda. Yet for municipalities responsible for rebuilding infrastructure, housing, and public services, this principle often remains difficult to translate into practice. Local governments face pressure to reconstruct quickly while simultaneously aligning investments with EU accession requirements, donor expectations, and long-term sustainability objectives. Limited technical and financial capacity, combined with the absence of practical implementation frameworks, risks locking cities into outdated infrastructure systems that will become increasingly costly to maintain and upgrade in the future.

Addressing these challenges effectively will require Ukraine's reconstruction efforts to align with the European Green Deal, the Circular Economy Action Plan, and relevant provisions of the EU acquis. Decisions made over the next decade will shape the long-term performance of Ukraine's cities. At the same time, investments that prioritize short-term replacement over modernization risk creating infrastructure that is costly to operate, environmentally inefficient, and difficult to align with emerging EU regulatory requirements.

This policy brief argues that green and circular urban development provides a practical framework for aligning municipal recovery, economic modernization, and EU accession objectives. It examines the institutional, financial, and regulatory mechanisms required to support this transition, with particular attention to Public Investment Management (PIM) reform, the (Digital Restoration Ecosystem for Accountable Management) DREAM ecosystem, and the implementation of key EU environmental and energy standards. It concludes with practical recommendations for international donors, the Ukrainian government, and city governments.

Energy, Waste, and Reconstruction as Entry Points for Green Recovery

Many small and mid-sized Ukrainian municipalities face a similar set of structural constraints. District heating systems often rely on aging infrastructure associated with significant energy losses and high operating costs, while municipal waste management remains heavily dependent on landfilling, limiting material recovery and generating environmental externalities. Local governments operate under severe fiscal pressures and must balance immediate reconstruction needs against longer-term modernization objectives. Korosten, a city of approximately 60,000 residents in Zhytomyr Oblast and a pilot municipality of the Ukraine Cities Partnership, illustrates many of these challenges. The city has identified deteriorated energy, water, wastewater, and waste-management infrastructure among its most pressing needs, while also highlighting limited technical capacity for project preparation and project development as a major obstacle to infrastructure renewal. These conditions often make investments in sustainability and circularity difficult to prioritize despite their potential long-term economic and operational benefits.

At the same time, these constraints underscore the importance of prioritization. Given limited resources and competing demands, municipalities are unlikely to achieve comprehensive transformation across all sectors simultaneously. A phased and sector-specific approach therefore offers the most realistic pathway for integrating green and circular principles into local recovery efforts. Priority should be given to sectors where municipal influence is strongest and where modernization will simultaneously improve service delivery, reduce operating costs, and support alignment with emerging EU standards.

The energy sector illustrates the scale of both the challenge and the opportunity. Across Ukraine, district heating networks and public buildings often suffer from decades of underinvestment, resulting in significant heat losses and high operating costs. In Korosten, the modernization of district heating and related utility infrastructure is among the municipality's priority investment needs. Improving building performance, introducing energy-

management systems, and upgrading heating networks can reduce consumption while improving preparedness for future disruptions. Renewable technologies and sustainable biomass solutions may complement these efforts where local conditions, feedstock availability, and environmental safeguards support their long-term viability.

Municipal waste management represents another area where circular-economy principles can be translated into practical investment priorities. Many Ukrainian municipalities continue to rely predominantly on landfilling, limiting material recovery and increasing long-term environmental and financial costs. Expanding waste separation, recycling, material recovery, and secondary-material markets would reduce disposal costs while creating new economic opportunities and supporting compliance with evolving EU environmental requirements.

The reconstruction process itself presents additional opportunities for circular resource management. Russia's invasion has generated millions of tons of construction and demolition waste across Ukraine. Traditional disposal methods place additional pressure on municipal budgets and landfill capacity. Recycling concrete, brick, steel, and other materials for reuse in reconstruction projects reduces procurement costs, lowers demand for virgin materials, and retains more economic value within local economies. At the same time, greater use of modular construction systems and materials designed for future reuse or disassembly can improve resource efficiency while supporting the development of local supply chains and innovative construction industries.

Closing the Project Preparation and Financing Gap

Identifying priority sectors is only the first step. The ability of municipalities to translate recovery needs into implementable projects depends on access to financing, project preparation capacity, and effective investment planning mechanisms. For many local governments, these factors remain among the most significant constraints to modernization efforts.

Ukraine's ongoing Public Investment Management (PIM) reform offers an important framework for addressing this challenge. By replacing fragmented project selection and ad hoc budgeting practices with a more structured approach to investment planning, the reform seeks to improve project appraisal, prioritization, and long-term capital allocation. Through the Single Project Pipeline (SPP), cities are increasingly encouraged to align local investment proposals with strategic development priorities, medium-term budget frameworks, and broader national recovery objectives.

For municipalities pursuing green and circular development, this approach creates new opportunities. Energy-efficiency upgrades, district heating modernization, circular waste-management systems, sustainable mobility projects, and resilient public infrastructure often require significant upfront investment while generating benefits over longer time horizons. Incorporating lifecycle costs, operational savings, environmental performance, and resilience considerations into project appraisal can help demonstrate the long-term value of these investments and improve their competitiveness for public and external financing.

A key component of this evolving framework is the DREAM ecosystem, which provides a digital platform for project preparation, monitoring, and transparency. By creating a standardized environment for presenting and tracking recovery projects, DREAM improves project visibility and facilitates engagement among municipalities, state institutions, international financial institutions (IFIs), and donors. Together, PIM reform and DREAM have the potential to create stronger incentives for cities to move beyond simple asset replacement and incorporate resource efficiency, sustainability, and resilience considerations into recovery planning.

At the same time, these reforms do not automatically resolve one of the most persistent challenges facing smaller municipalities: limited implementation capacity. The introduction of more sophisticated project appraisal,

planning, and reporting requirements increases the demand for technical, financial, environmental, and regulatory expertise at the local level. While this may improve the quality of investment decisions, it can also create barriers for cities that lack sufficient staffing and project preparation resources.

Korosten illustrates this challenge. Although the municipality has developed multiple strategic and recovery planning documents and possesses relatively strong institutional foundations, it continues to face constraints related to staffing capacity, project preparation, and the coordination of planning processes across sectors. As in many Ukrainian municipalities, strategic priorities are often easier to identify than to translate into mature, investment-ready projects capable of attracting external financing and progressing through increasingly demanding project preparation and approval processes. Similar constraints are likely to affect many smaller cities across Ukraine as they seek to navigate the requirements associated with the PIM reform and the DREAM ecosystem.

The principal bottleneck is therefore increasingly shifting from project identification to project preparation. Ensuring that municipalities fully benefit from the opportunities created by the PIM reform and DREAM will require sustained investment in local technical capacity, project development support, and advisory services. Without such support, there is a risk that the cities with the greatest recovery needs will be the least able to compete successfully for available financing and investment opportunities.

If implemented effectively and accompanied by targeted capacity-building measures, PIM reform and DREAM can help shift municipal reconstruction from a reactive response to wartime destruction to a more strategic process of urban modernization.

Aligning With EU Standards

Ukraine's recovery and European integration agendas are increasingly interconnected. Many of the investments required to rebuild municipal infrastructure, housing, public services, and local economies are also necessary for compliance with EU environmental, energy, and internal market regulations. As a result, cities are becoming one of the principal arenas through which Ukraine's accession commitments will be implemented in practice.

The implications are particularly significant in the areas of energy, waste management, water services, air quality, and construction. Aligning municipal investments with EU standards in these sectors can help avoid costly future retrofits while accelerating regulatory convergence with the EU. By contrast, reconstruction projects that prioritize short-term replacement over modernization risk creating infrastructure that may require substantial upgrades in the years ahead.

The challenge is ensuring that reconstruction investments contribute not only to immediate recovery needs but also to Ukraine's accession objectives. In this regard, the PIM reform provides an important governance framework and creates opportunities to incorporate energy-efficiency, environmental, and resource-efficiency considerations into municipal investment planning. The DREAM ecosystem can further support this process by improving transparency and helping municipalities demonstrate how proposed investments contribute both to local recovery and to compliance with evolving EU standards. Together, these mechanisms ensure that reconstruction funding supports the gradual alignment of municipal infrastructure with European norms.

Two regulatory frameworks are particularly relevant for municipal recovery. The Energy Performance of Buildings Directive (EPBD) establishes increasingly ambitious standards for energy efficiency in residential and

public buildings. For Ukraine, integrating these standards into reconstruction efforts offers an opportunity to reduce long-term energy consumption, lower operating costs, and strengthen energy security.

The recently adopted Construction Products Regulation (EU 2024/3110) introduces new requirements related to sustainability, environmental performance, and product transparency within the construction sector. Among other measures, the regulation expands the role of environmental indicators and digital product information throughout the lifecycle of construction materials. For Ukraine, early alignment with these requirements will ensure that reconstruction investments support future access to the European market while discouraging the use of low-quality and resource-intensive materials.

Construction and demolition waste management provides a practical example of how recovery and accession objectives increasingly overlap. Russia's invasion has generated millions of tons of debris across Ukraine. Recycling and reusing construction materials reduces demand for virgin resources, lowers transportation and disposal costs, and supports compliance with emerging European approaches to circular construction and resource efficiency. More broadly, integrating circular-economy principles into reconstruction can help municipalities meet both recovery needs and longer-term EU environmental objectives, including those reflected in the EU Construction and Demolition Waste Management Protocol and broader circular-economy policies.

Viewed from this perspective, municipal recovery is not only a reconstruction challenge but also a process of regulatory and economic integration. Decisions made by local governments regarding infrastructure, buildings, energy systems, and construction materials will influence the pace and cost of Ukraine's accession to the EU.

Recommendations

The effectiveness of Ukraine's recovery will depend largely on the ability of municipalities to prepare, prioritize, and implement projects that deliver long-term economic, environmental, and social value. While recent reforms have established important frameworks for investment planning and transparency, significant capacity gaps remain at the local level. Addressing these constraints will be essential if cities are to fully benefit from available financing opportunities and translate recovery ambitions into tangible results.

The following recommendations are organized around three groups of actors whose coordinated engagement will be essential to closing the capacity gaps identified in this article.

For international donors and IFIs

- **Fund project preparation, not only capital works.** Donors and international financial institutions should expand support for pre-feasibility studies, technical designs, cost-benefit analyses, lifecycle-cost assessments, and environmental documentation for small and medium-sized municipalities. Without this support, many local priorities will remain too underdeveloped to attract financing.
- **Support embedded technical assistance in cities.** Short-term advisory missions are often insufficient. Donors should finance embedded specialists or pooled advisory teams that work directly with municipal staff on live projects, including project scoping, sequencing, budgeting, procurement preparation, and coordination with external funders.
- **Establish dedicated project-preparation support mechanisms for small and medium-sized municipalities.** Support should focus on developing investment-ready projects in priority sectors including energy efficiency, district heating, water infrastructure, waste management, and circular construction.

For the Ukrainian government

- **Align national construction and energy legislation with the latest EPBD and Construction Products Regulation 3110** to boost green and circular innovations in the built environment.
- **Incorporate lifecycle cost considerations into national guidance for municipal infrastructure planning.** Investment decisions should take into account not only initial construction costs, but also future energy consumption, maintenance requirements, and operating expenses. This shift would help municipalities identify projects that deliver greater value over time.
- **Expand technical training and professional development in sectors critical to municipal recovery and modernization.** Priority should be given to skills required for energy-efficiency upgrades, district heating modernization, waste-management systems, sustainable construction, and project management, where shortages of qualified personnel may constrain project implementation and long-term infrastructure operation.
- **Adapt PIM reform and DREAM support to the capacity of small and mid-sized municipalities.** National guidance should include simplified templates, model project structures, and step-by-step instructions for common municipal investments. The goal should be to help smaller cities meet new investment planning requirements without overburdening limited staff.

For municipalities

- **Limit project pipelines to a small number of mature projects.** Cities should avoid long lists of unfunded concepts and instead focus on a smaller portfolio of projects with clear ownership, location, scope, estimated costs, operating implications, and potential funding pathways.
- **Treat building renovation as an investment program.** Public building retrofits should be bundled where possible, sequenced over several years, and assessed through energy savings, maintenance costs, and service-quality improvements rather than treated as isolated repairs.
- **Prepare waste-management projects as phased systems, not single facilities.** Municipalities should sequence waste separation, collection logistics, material recovery, tariff assumptions, private-sector roles, and public communication before seeking investment in major facilities.

Conclusions

Ukraine's recovery presents a unique opportunity to modernize municipal infrastructure while advancing the country's long-term economic, environmental, and European integration objectives. The choices made by national and local authorities over the coming years will determine whether reconstruction merely restores prewar systems or creates more resilient, resource-efficient, and competitive communities. By embedding green and circular economic principles into investment planning, strengthening project preparation capacity, and aligning recovery efforts with evolving EU standards, Ukraine can ensure that reconstruction delivers lasting benefits for municipalities, citizens, and future generations.

The views expressed herein are those solely of the author(s). GMF as an institution does not take positions.