

# Infrastructure Sector Strategy 2025-29

*As approved by the Board of Directors on 11 December 2024*



**European Bank**  
for Reconstruction and Development



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# Building tomorrow: boosting sustainable and inclusive infrastructure for a connected, resilient and low-carbon future

The Infrastructure Sector Strategy (ISS) will enable the European Bank for Reconstruction and Development (EBRD) to:

- deliver high-quality infrastructure
- integrate investments across the transport and municipal sectors (featuring our flagship Green Cities programme)
- plan and connect regions, countries and urban areas to capture synergies across all of infrastructure, and
- pursue ambition on climate and infrastructure resilience.

To accomplish this, the ISS will foster sustainable infrastructure investments for both the public and private sectors. It will also provide coordinated policy, reform, project preparation and advisory services, and enhance human capital and good economic governance in pursuit of these goals.



# Executive summary

•The central theme of the ISS is to support the economies in the EBRD regions with **sustainable, resilient, high-quality and inclusive infrastructure networks and associated services that allow them to achieve full economic and social development.**

•Building on the previous Municipal and Environmental Infrastructure Sector and Transport Sector Strategies, this single integrated ISS captures synergies between both the municipal and transport sectors, enabling a coordinated and flexible approach for clients. This combined strategy aligns with the EBRD's already well-established and integrated approach to all of the infrastructure delivered by the Bank's Sustainable Infrastructure Group (SIG).

•The ISS fits firmly within the EBRD's approach of **leveraging investment, policy engagement and capacity building to deliver deep impact for the EBRD's countries of operation.** It is consistent with the EBRD's commitment to aligning its activities with the goals of the Paris Agreement. It also aligns with the Bank's Strategic and Capital Framework (SCF), supporting the transition to a green, inclusive and digital future for the EBRD regions, while promoting good economic governance by leveraging investments to foster policy reforms and enhance private-sector participation.

•A host of global drivers shape the type and magnitude of infrastructure needed in the EBRD regions. The drivers include changes in demographics, urbanisation, climate change causing stresses and risks to infrastructure assets, demand for improved mobility, connectivity and services, and a global infrastructure gap that cannot be closed by public-sector investment alone. These factors have shaped the Bank's **strategic directions** in this regard: **1) improve connectivity, 2) enhance climate and nature action and 3) strengthen resilience.** In accordance with G20 Principles for Quality Infrastructure Investment (QII), these must be delivered with a mix of public- (including sub-sovereign) and private-sector investment, while upholding and promoting high environmental and social standards.

•The EBRD will provide critical **connectivity solutions** across all major transport modes and develop **integrated solutions** for regional approaches to other sectors, such as water. The Bank will **drive climate action** on sustainable infrastructure with strong donor support, as well as know-how in strategic sectors such as e-mobility, water resource management, district energy (heating and cooling) and solid waste management (prioritising practices according to the

waste hierarchy) and energy efficiency in buildings. In addition, the Bank will **act on climate resilience** through enhanced design, planning and policy advice. It will also offer wider resilience through the deployment of “grey”, “blue” and “green” infrastructure solutions, coupled with human capital development. The strategy **addresses certain “hard-to-abate” subsectors** – such as aviation, roads, shipping and district heating – **in a balanced manner that addresses ambition on climate action** while respecting the realities of transitioning away from fossil-fuel dependence in the medium to long term. The Bank will use its **deep knowledge of project preparation** for both national and municipal clients (delivered, among other things, through our **Green Cities** programme), government advisory services for public-private partnerships (PPPs), policy reform dialogue at the national and sectoral level, and capacity building for clients, including on gender equality and human capital development. The EBRD will also **offer a full range of financial instruments** tailored to public client needs and to support sectoral reform, with a well-established network in all EBRD investee economies that ensures close government relationships to achieve lasting policy outcomes.

•These actions will be delivered through a range of **financing instruments** –

- both **sovereign and sub-sovereign structures**
- direct financing of the **private-sector** where possible and justified
- debt and equity** (including refinancing and acquisition finance)
- guarantees and blended finance** to address affordability and accelerate the decarbonisation of hard-to-abate sectors – alongside the extensive use of **policy dialogue and technical assistance.**

The EBRD will **respond to private-sector financing** needs with corporate, project finance and PPP transactions. It will also participate as a significant investor, with a high degree of time-critical capital, in market transactions with robust financial and non-financial additionality.

•Lastly, the EBRD can facilitate greater **coordination and complementarity between development partners to deliver on these strategic directions.**

•The ISS creates a platform for the EBRD to support the diverse range of economies in which it operates, positioning them to meet these major challenges by the end of the 2025-29 period.

# ISS snapshot:

## A comprehensive and ambitious approach

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### Aim

The EBRD will promote efficient, safe, reliable and sustainable infrastructure through a transition to market-oriented, resilient and inclusive infrastructure systems, with a focus on the green development of economies.

**Three strategic directions: a focus on sustainable infrastructure to improve connectivity, climate action and resilience across the EBRD regions**

Deliver a range of financing structures by promoting commercialised approaches with the public sector, while mobilising the private sector in collaboration with other multilateral development banks and external partners on policy, and investments to achieve systemic impact

1

#### Improve connectivity

1. Enable better-connected, safer and more integrated infrastructure
2. Broaden access to high-standard, affordable and inclusive services

2

#### Enhance climate and nature action

3. Promote low-carbon/zero-carbon transportation, heating and water systems
4. Scale up and deepen climate action in cities
5. Explore the potential for nature financing in infrastructure

3

#### Strengthen resilience

6. Increase the resilience of infrastructure and associated services; promote good economic governance
7. Develop human capital and encourage full participation in infrastructure sectors

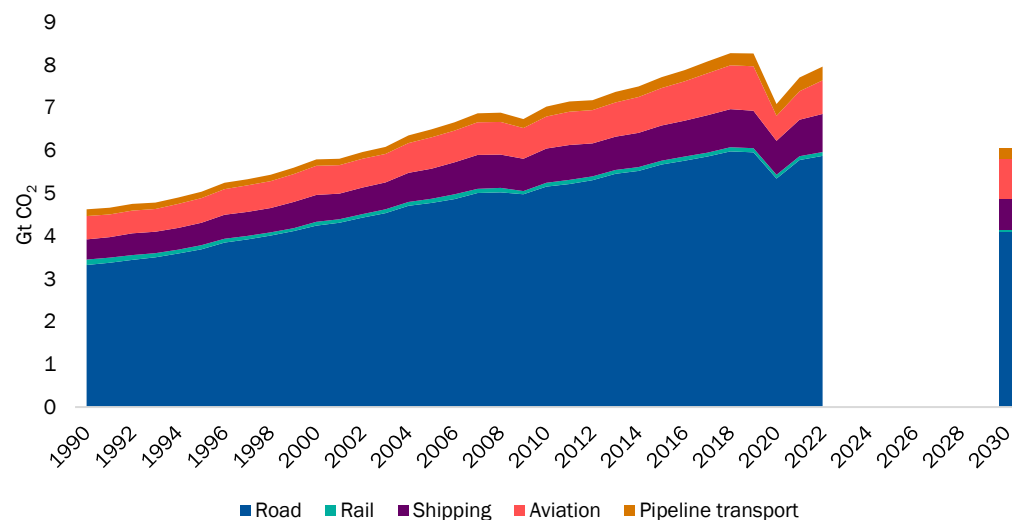
Interface with Bank-wide approaches, initiatives and policies, other sector strategies and country-specific considerations

# Boosting economies through sustainable infrastructure investment: worldwide (1/6)

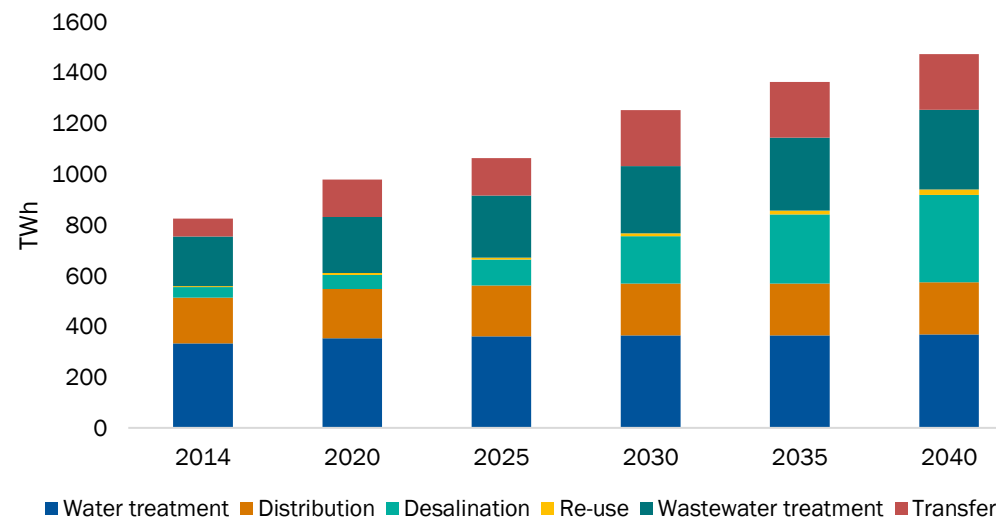
The global infrastructure gap prevents economies from reaching their full development potential. While this gap is closing in the EBRD regions, they continue to need low-carbon, resilient and integrated investments.

- The global cumulative infrastructure (roads, rail, port, aviation and water) investment gap is estimated to reach US\$ 8.3 trillion (approximately €7.5 trillion) by 2040.<sup>1</sup>
- To achieve a 2030 net zero scenario:
  - The transport sector's carbon dioxide equivalent (CO<sub>2</sub>e) emissions, having grown 70 per cent since 1990, need to fall by 7 per cent annually from 2030 to 2050.<sup>2</sup>
  - Primarily due to projected demand for desalination, overall electricity demand from the water industry is expected to grow by 40 per cent by 2040 from current levels.

Global CO<sub>2</sub> emissions from transport by sub-sector under a net zero scenario, 2000-30<sup>3</sup>



Global annual energy consumption in the water sector by process<sup>3</sup>



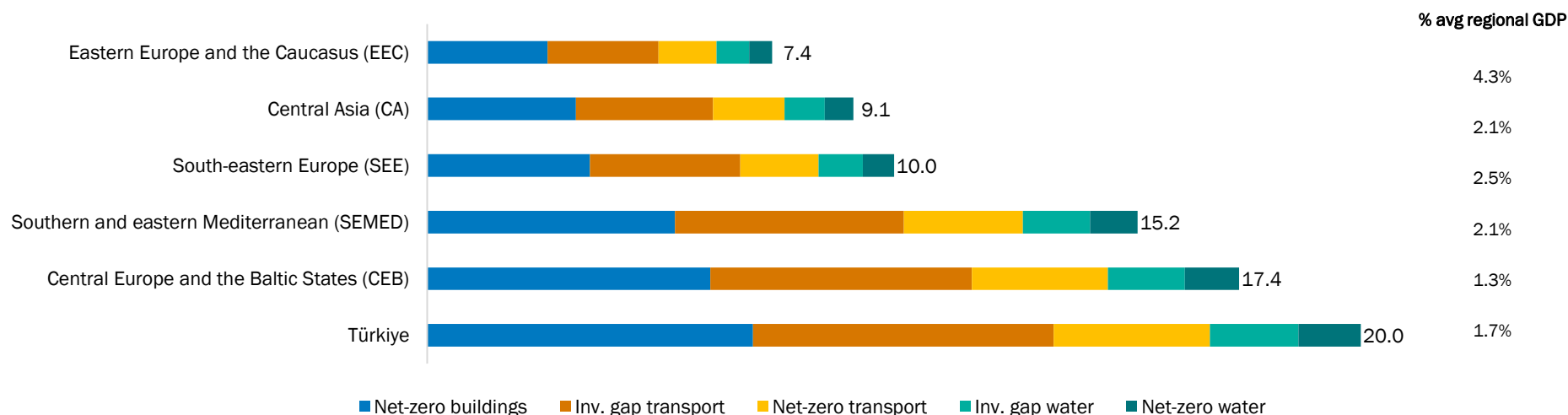


# Boosting economies through sustainable infrastructure investment: the EBRD regions (2/6)

## Annual investment in infrastructure in the EBRD regions requires a step-change in both quantity and quality

- Between 2019 and 2023, the EBRD committed €10.5 billion of financing to 318 infrastructure (municipal and transport) projects. Of these, 218 were municipal projects (69 per cent of total), with EBRD Green Cities investments totalling 74 projects, bringing about a total annual CO<sub>2</sub> equivalent emissions reduction of approximately 4.6 million tonnes of CO<sub>2</sub> e.
- While progress is being made, **some of the EBRD regions still suffer from poor-quality infrastructure**. To meet this challenge will require **greater electrification of various infrastructure services**, the **integration of renewable energy** into municipal utilities, social infrastructure and transport operations, and the scale-up of **alternative low-emission fuels (particularly in maritime and aviation)**, all backed by comprehensive, **supportive policy measures**. This will require the scaling up of both public- and private-sector investments, as well as PPPs.
- The EBRD regions will require significant annual investment in infrastructure, ranging from 1.7 per cent to 4.3 per cent of gross domestic product (GDP) between 2026 and 2030.

Total estimated annual investment gaps and net-zero investment needs between 2026 and 2030 in the EBRD regions (US\$ billion)<sup>1,2</sup>



NOTE 1: An investment gap is defined as the difference between investment needs (that is, how much spending on infrastructure is needed given anticipated economic and demographic change) and what would be spent on current trends. Net-zero investment needs are defined as the capital investment needed to achieve a net-zero economy.

NOTE 2: Data on the investment gap for the buildings sector are not available.

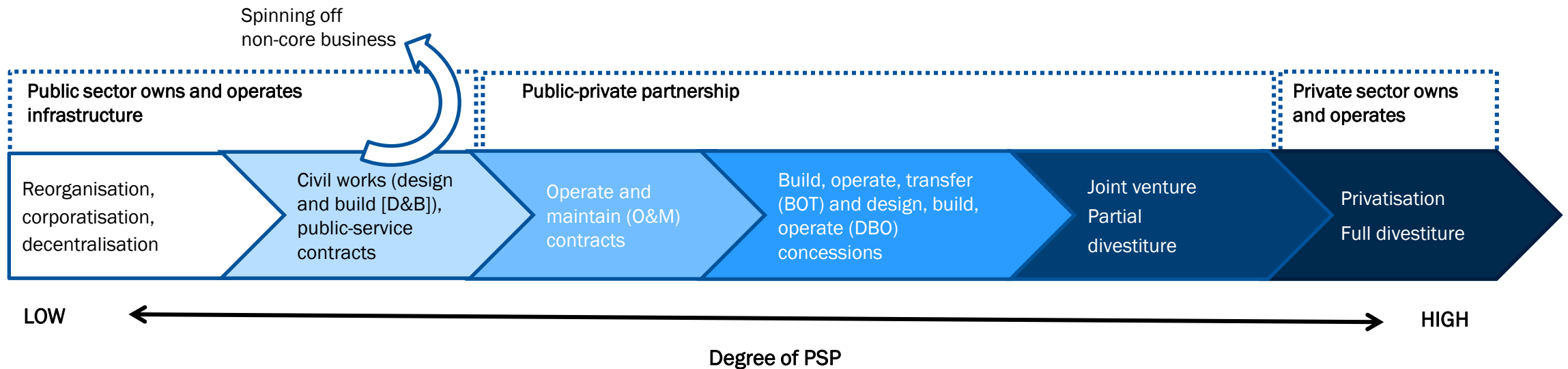
[1] Systemiq (2023). *Financing the Transition: How to Make the Money Flow for a Net-Zero Economy*. <https://www.energy-transitions.org/publications/financing-the-transition-etc/>

[2] World Bank. *GDP (constant 2015 US\$)*. <https://data.worldbank.org/indicator/NY.GDP.MKTP.KD>

# Boosting economies through sustainable infrastructure investment: closing the financing gap with commercialised public-sector investments (3/6)

The EBRD will continue to facilitate the creation of commercialised, well-governed public-sector investments in line with the objective of promoting good economic governance, to improve the quality and reliability of services and establish the foundations for deeper private-sector participation (PSP)

- Public-sector projects account for 80 per cent of the EBRD's infrastructure investments, delivered with consistently high impact (see Annex B).
- Creating well-functioning public-sector entities**, including support for corporate, regulatory and legislative reforms (including laws on anti-corruption and revenue generation) that bring about improved service quality, efficiencies, and stable conditions (including financial sustainability) that, over time, allow for an increase in private-sector involvement once commercialisation takes root.
- The Bank invests on average in 50-60 state-owned enterprises (SOEs) (including municipal utilities) per year.** The combination of investment and policy reform is a powerful vehicle for driving transition towards better-governed and more competitive economies – the core objectives in fostering good economic governance. The EBRD achieves systemic impact, working with public-sector and SOE clients through the SOE Management Assistance Reform and Transformation (SMART) Programme.<sup>1</sup> Moving from the left (full public involvement) to the right (towards full privatisation) below can only occur by nurturing these types of reform.



[1] SMART pools the EBRD's expertise on SOEs and leverages public-sector investments to fast-track the launch and delivery of programmatic interventions to support upstream and sectoral reforms, as well as governance and operational improvements of SOEs. This entails three levels of intervention: 1) upstream reform of governance of SOEs; 2) sector reforms – including sector regulation and capacity building; and 3) company reforms – corporate development programmes and corporate governance action plans.

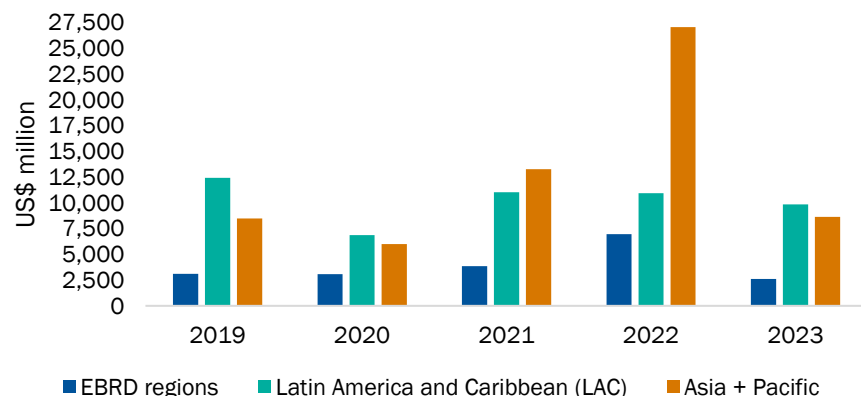




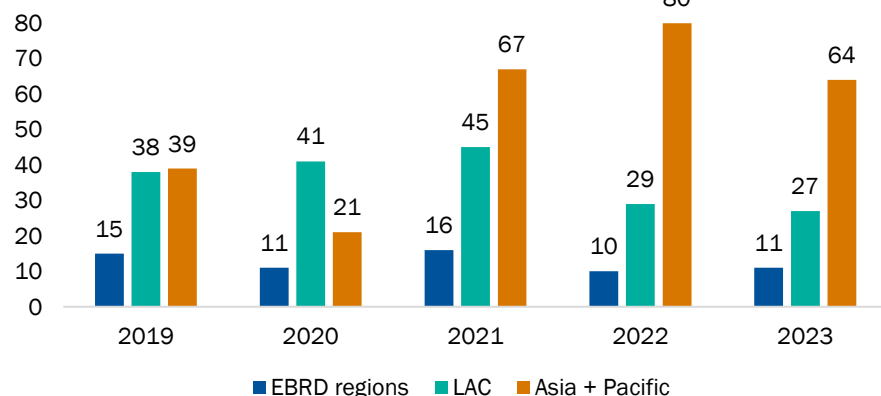
# Boosting economies through sustainable infrastructure investment: closing the financing gap with private-sector mobilisation (4/6)

## Addressing the truly sizeable infrastructure investment gap requires greater involvement of the private sector where this creates positive value for money

Amount of investment made via PPPs, 2019-23<sup>1</sup>



Number of investments made via PPPs, 2019-23<sup>2</sup>



- **Importance of the private sector:** Private capital is vital to addressing the massive annual need of more than US\$ 50 billion (approximately €45 billion, or 2.4 per cent of total regional GDP) across the EBRD economies.
- **Support for the private sector:** It is critical that the private sector receive sustainable financing. Over the 2019-23 period, the EBRD provided €2.1 billion in financing to private-sector clients.<sup>1</sup>
- **Public-private partnerships:** PPPs are a significant strategic opportunity, with EBRD economies currently underweighted compared with other global regions. However, PPPs are not suitable for all types of project and should be used where they provide value for money compared with traditional public-sector procurement.
- **Private-sector innovation:** The private sector employs technological and efficiency advancements to improve the functionality and sustainability of infrastructure, for example, through digitalisation.

## Accelerating private-sector involvement

Given the importance of private sector mobilisation the Bank will emphasise the following areas of support provide through PPPs:

- **Upstream policy** and capacity building to prioritise investment choices; **midstream project preparation/PPP advisory** and **downstream private-sector financing** in coordination with other MDBs.
- **PPP advisory** to governments in the EBRD regions to improve pipeline building, bankability aspects, assurance of high standards and institutional capacity building. Since 2016, the EBRD has provided PPP advisory services to about 30 PPPs with a total project value (TPV) of around €6 billion.
- **Risk allocation to create pipelines** of balanced, market-tested, bankable and durable PPP contracts.
- **A clear and transparent legal and regulatory framework.**
- **International tenders that apply innovation** and low-carbon/zero-carbon solutions in line with the Paris Agreement.
- **Development of local capital markets and use of local-currency financing** where affordable.
- Use of O&M services by the private sector with **outcome-based contracting.**
- Promote **asset recycling** through PPPs under a facilities management approach including in the social infrastructure sector.

[1] See Annex B (II) for further details.

[2] Infralogic (2024). Inframation, New York. <https://infralogic.inframationnews.com/>.



# Boosting economies through sustainable infrastructure investment: perspective on carbon-intensive infrastructure (5/6)

## Supporting the transition of carbon-intensive infrastructure

- The provision of infrastructure services is a critical enabler for development.
- The EBRD helps in the transition from carbon-intensive infrastructure; this requires increased engagement and investment in challenging sectors (rather than disengaging and divestment).
- Infrastructure service provision can be carbon intensive, with long-distance road-based transport, aviation, shipping and heating all traditionally relying on fossil fuels. Cooling and sea-water desalination are simply energy intensive.
- This strategy will apply the Bank's Paris Agreement alignment methodology, Environmental and Social Policy (ESP), approach to climate-related financial risk management and consideration of fossil fuels in its Energy Sector Strategy (ESS) to any engagement in carbon-intensive infrastructure, recognising infrastructure's reliance on the decarbonisation of other sectors and associated uncertainty.
- The Bank will continue to support clients in going beyond minimum requirements, in line with the Bank's Green Economy Transition (GET) 2.1 approach, to accelerate the transition from carbon-intensive infrastructure.

## Examples of how the EBRD can contribute to transitioning carbon-intensive infrastructure

### Roads



- Infrastructure provisions for electric and alternative fuel vehicles (in line with the Alternative Fuels Infrastructure Regulation), the repurposing of fuel stations with electric vehicle (EV) chargers and changes to the physical road network to facilitate automated driving
- Use of low(er)-carbon pavements, asphalt recycling, reuse of waste streams in roads construction
- Apply 'avoid-shift-improve' principle to promote sustainable mobility and reduce GHG emissions, including in the urban context

### Sea-water desalination



- Demand-side interventions (such as saving water, saving energy)
- Reduce energy intensity, deploy renewable energy systems, apply energy efficiency/recovery and energy management; integrate renewables into desalination projects

### Ports, shipping and maritime



- Decarbonising quayside and landside operations through the electrification of port equipment and use of low-carbon/zero-carbon fuels
- Support port projects that facilitate a modal shift to reduce greenhouse gas (GHG) emissions
- Support in deployment of shore-to-ship power
- Support fleet renewal and upgrades to align with International Maritime Organisation (IMO) and European Union (EU) strategies

### District energy



- Apply demand-side measures
- Modernise network infrastructure
- Low- or zero-carbon forms of space heating/cooling, such as large electric heat pumps, centralised solar thermal, geothermal, power-to-heat technology, sustainable biomass or biogas and urban waste heat

### Aviation



- Whilst focusing on meeting high safety standards and efficient aviation practices which balance the need for capacity expansion only where necessary, the Bank shall fully align investments with the Paris Agreement. In so doing:
- Improve the energy efficiency of airport terminals (green building designation) and ancillary infrastructure
  - Support the development of net-zero, carbon-aligned strategies for airports and airlines
  - Support the development of the nascent sustainable aviation fuels (SAF) industry and airlines' SAF utilisation
  - Support initiatives to advance zero-tailpipe aviation technologies (such as electrification, green hydrogen etc.)



Supported by inclusive and digital activities as enablers and accelerators of decarbonisation, for example, the introduction of training programmes to develop required technical skills





# Boosting economies through sustainable infrastructure investment: the need for high-quality infrastructure standards (6/6)

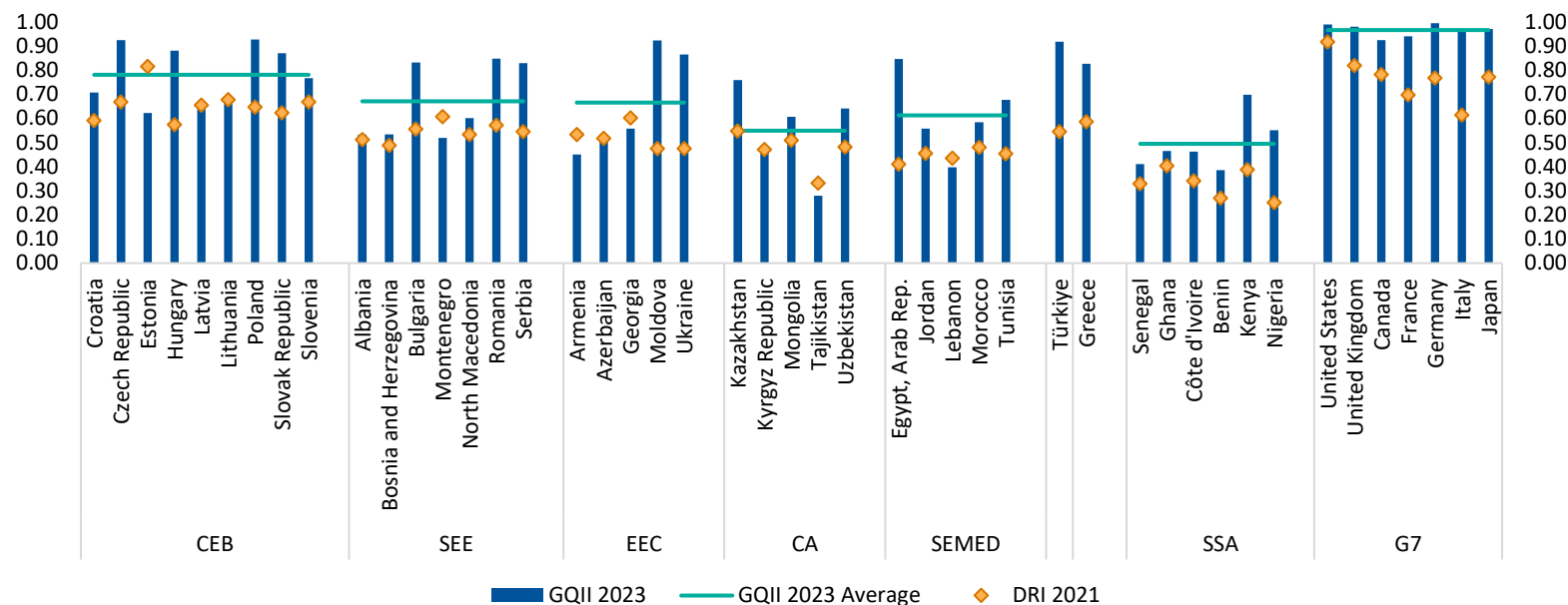
**There are many different approaches, guidelines, principles and frameworks to promote sustainable infrastructure development ...**

- Infrastructure is sustainable when provides it delivers social, economic and environmental benefits, throughout its lifecycle (that is, from planning, construction and commissioning to maintenance and its decommissioning).
- Higher-quality infrastructure, as embodied in the G20 Principles for Quality Infrastructure Investment (QII)<sup>1</sup>, the G7 Partnership for Global Infrastructure and Investment (PGII) and the EU Global Gateway, is associated with emphasis on the quality of infrastructure investment, the need to tackle infrastructure investment shortfalls to promote growth, job creation and productivity, and the mobilisation of a diverse set of financing instruments and investors.
- Project teams, public officials, MDBs/development finance institutions (DFIs), commercial financiers and investors can be guided to choose the relevant sustainable infrastructure standards using initiatives such as the SOURCE platform.<sup>2</sup>
- Other tools aimed at standardising the certification of sustainable infrastructure investments and crowding in the private sector use project labelling and third-party certifiers, such as the FAST-Infra Sustainable Infrastructure® Label<sup>3</sup> and the Blue-Dot Network hosted by the Organisation for Economic Co-operation and Development (OECD).<sup>4</sup>



**... and the Bank will continue to leverage its position as a leading MDB to promote high international standards across the full breadth of its policy, project preparation and financing activities**

The Global Quality Infrastructure Index (GQII)<sup>5</sup> offers the opportunity to do more by ranking countries according to their development along a Quality Infrastructure scale based on an assessment of adoption of standards and accreditation. The G7 countries, with an average score of 0.97, are higher than all the EBRD regions and significantly above Central Asia and sub-Saharan Africa. For most regions there is clearly a close correlation between the GQII and Cisco's Digital Readiness Index (DRI).<sup>6</sup> Quality infrastructure means going beyond the consistency, safety, efficiency and environmental sustainability in the design, construction and operation of infrastructure systems and applying best practices in whole-life costing, security of supply, fair competition at procurement, labour rights, cybersecurity and so on.



[1] As endorsed at the G20 Osaka Summit, June 2019 [https://www.mofa.go.jp/mofaj/gaiko/g20/osaka19/pdf/documents/en/annex\\_01.pdf](https://www.mofa.go.jp/mofaj/gaiko/g20/osaka19/pdf/documents/en/annex_01.pdf) [2] SOURCE - Source ([sif-source.org](https://source.sif-source.org)) [3] FAST-Infra Sustainable Infrastructure® Label - CPI ([climatepolicyinitiative.org](https://climatepolicyinitiative.org)) [4] Blue Dot Network ([bluedot-network.org](https://bluedot-network.org)) [5] Global Quality Infrastructure Index (GQII) Program. <https://gqii.org/gqii-2023/> [6] Cisco Digital Readiness Index 2021. [https://www.cisco.com/c/m/en\\_us/about/our-impact-social-responsibility/research-resources/digital-readiness-index.html#/](https://www.cisco.com/c/m/en_us/about/our-impact-social-responsibility/research-resources/digital-readiness-index.html#/)



# ISS scope and sectoral coverage

## Cross-cutting features



**Electrification and decarbonisation**  
(such as RLCF)



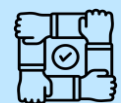
**Quality Infrastructure<sup>1</sup>**



**Green infrastructure**



**Digital solutions**



**Gender and human capital**



**Public and private Investment**



**Waste minimisation to waste stream utilisation**

## Water



- Water production (including desalination), storage and distribution
- Wastewater collection and treatment
- Urban/storm water drainage
- Irrigation infrastructure
- Water resources management
- “Blue” infrastructure

## Roads



- Local, regional and national roads (including motorways)
- Road bridges and tunnels
- EV charging
- Tolling stations

## Urban transport



- City roads and streets
- Public transport fleet and infrastructure (metro, trams, bus rapid transit, buses, trolleybuses, stations and terminals)
- E-mobility
- Shared mobility
- Traffic management/parking/lighting

## Railways



- Rolling stock
- Track and infrastructure
- Signalling
- Stations

## Buildings



- Energy efficiency for residential housing, public and utility buildings, etc.
- Social infrastructure (for example, affordable housing, education and health)
- Facilities management

## Ports and maritime



- Ports and dry ports
- Inland waterways
- Shipyards
- Shipping fleets

## Solid waste and environmental clean-up



- Collection, separation, recycling, treatment and disposal of:
  - municipal solid waste
  - industrial and commercial waste
  - specific waste, such as construction and demolition waste, hazardous waste, electrical waste and plastic waste

## Aviation



- Airports and vertiports
- Air navigation
- Airlines and aircraft, including drones
- Dedicated SAF production facilities

## District energy



- District space heating and cooling systems
- Thermal energy storage
- Sector coupling

## Logistics



- Logistics and intermodal platforms/hubs
- Fleets (including drones)
- Multimodal hubs
- Postal services
- Border crossing points and related infrastructure

[1] a set of principles endorsed by G20 leaders to promote quality infrastructure investment. These principles aim to maximize the positive economic, environmental, social, and development impact of infrastructure projects





# Integration and complementarity

## An integrated ISS combines municipal and transport activities, enabling:

- **synergies between transport and municipal project investments to improve project impacts**, such as improvements in "last-mile" connections into urban areas for road/rail/logistics investments; connections of soft mobility, e-mobility and public transport projects that transcend local urban boundaries to regional/national networks; and the application of "systems thinking" to water resource management and solid waste management.
- **the application of the EBRD's already well-established and integrated approach** to both the municipal and transport sectors, as delivered by the Bank's SIG since 2019.
- **coverage of the Bank's activities from 2025 to 2029** for all EBRD economies.

## The ISS is shaped by the EBRD's commitments and interfaces with other strategies, approaches and policies, as well as its role as a critical member of the MDB system, including:

- its commitment to **aligning all of its activities with the Paris Agreement** from 2023, which guides the ISS's orientation towards low-carbon, net-zero investment<sup>1</sup>
- **the SCF**, which orientates the ISS in line with the cross-cutting strategic themes of green, gender and inclusion, and good economic governance, while also supporting the enablers of digital transition and private-sector mobilisation.

Interface with **Country Strategies** by outlining the ways in which the ISS and the Bank will achieve transition impact and reflect remaining sectoral challenges

**Thematic strategies, approaches and frameworks**, such as the GET approach, the Strategy for the Promotion of Gender Equality, the Equality of Opportunity Strategy, the Digital Approach

**Relevance of other sector strategies**, including energy (green energy into infrastructure services, mining (upstream supply chain), technology, media and telecoms, (digitalisation), agribusiness (irrigation infrastructure and water management), real estate (urban development), and financial institutions (local capital markets/ local currency lending)

Aligns with **other key EBRD policies**, including the ESP, Procurement Policies and Rules, and the Access to Information Policy

**Key regional/international strategies on decarbonisation**, such as the United Nations Economic Commission for Europe's (UNECE) Strategy on Reducing Greenhouse Gas Emissions from Inland Transport

**Relevant international and national norms on infrastructure**, such as the EU's Waste Framework Directive and the application of the 'waste hierarchy' for waste management

**Other MDBs' strategies for the municipal and transport sectors**, including lessons learned, use of agreed procurement frameworks for "mutual reliance", joint PPP advisory, donor priorities and co-financing

**The MDB evolution agenda**, through which the EBRD aims to:

1. scale up financing capacity
2. boost joint action on climate
3. enhance country-level collaboration
4. strengthen co-financing
5. catalyse private-sector engagement

Contribution to the operationalisation of the **G20 Quality Infrastructure Principles**, the **G7 PGII** and the **EU Global Gateway** initiative, all of which seek to create well-prepared projects with high standards

[1] See "perspective on carbon-intensive infrastructure", Section 3.





# Section 1: Context





# Current context: global drivers

Certain global drivers influence and inform the level of attainable sustainable infrastructure development and, ultimately, the level of economic prosperity



## Climate change

As a result of unprecedented emissions from fossil-fuel-based industrialisation and despite global efforts to abate the impacts of climate change, the world now faces a growing nature and biodiversity crisis. As a result, the common expectation for many EBRD economies includes: (1) **sea-level rise and coastal erosion**, affecting coastal communities, damaging ports, disrupting transport and trade; (2) **extreme weather events**, including more frequent and intense rainfall, with flooding requiring infrastructure to be adapted, abandoned and/or relocated; and (3) **temperature extremes**, affecting the integrity of infrastructure and the comfort of people in buildings and during droughts.



## Population change and growth

As populations grow, so does the demand for transport and municipal services to: (1) **meet society's basic needs** for critical services (such as water, sanitation, solid waste management, the heating and/or cooling of residential, commercial and industrial buildings); (2) provide for **increased, efficient mobility**, whether for work or leisure; (3) **support economic development** through trade; (4) **respond to shifting demographics** and societal aspirations while taking into account **flexibility and inclusivity** in the design of these services to ensure they remain fit for purpose; and (5) **address skills mismatches and human capital gaps**.



## Urbanisation

**By 2050, almost 7 out of 10 people will live in cities**, a more than 50 per cent increase on 2020. Urban centres are a hub of social and economic dynamism, but also account for 80 per cent of all global emissions. **Ensuring cities remain sustainable as they grow** requires a holistic approach that includes the development of sustainable and inclusive infrastructure solutions. It must also include good governance, integrated urban/social planning and sound financial management. **Investing with purpose and at pace** in transport and municipal infrastructure and policy reform is crucial to efforts to realise all social, economic and environmental advantages of urbanisation.



## Mobility

**Greater mobility is a catalyst for social and economic development**, allowing the free exchange of people, goods and ideas within and between countries. There is a strong correlation between rising economic development and increased mobility demand (that is, trips per capita). In turn, this requires higher levels of transport investment. **Trade itself is a powerful driver of economic development, but can be constrained by infrastructure and logistics shortfalls**. For development benefits and equal opportunity, there must be a strong focus on **inclusion, connectivity and human capital development** in both investment and policy decision-making.



## Infrastructure gap

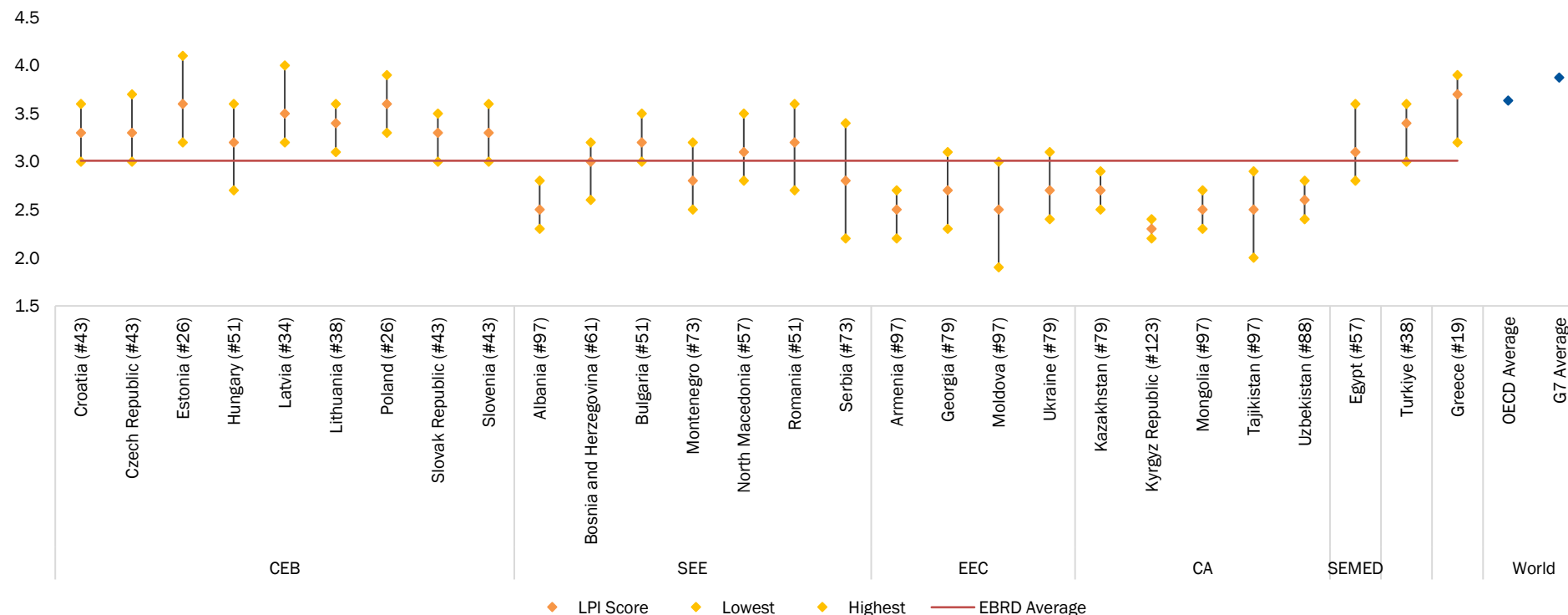
There is a **large unmet need for global infrastructure investment** (estimated at over US\$ 3.0 trillion per annum by the G20 Global Infrastructure [GI] Hub) to lift countries up to a level of infrastructure development sufficient to allow for full economic and social development. **The EBRD economies have large unmet needs**. While these needs are well established, it is also clear that the public sector is unable to close the gap alone. Within the public sector, there will be a need for more decentralisation to respond to the immense requirements. As such, **the EBRD regions need a step-change in infrastructure investment from both the public and private sectors**.



# Current context: EBRD regions

## The EBRD regions need significant public and private investment and sector reforms to improve competitiveness

logistics performance index (LPI) 2023<sup>1</sup>



- Logistics is a broad measure of economic competitiveness across all transport modes; the EBRD countries exhibit a significant gap, hindering trade between the EBRD economies.
- While central Europe and the Baltic states (CEB) have made significant progress since joining the EU, eastern Europe and the Caucasus (EEC) and Central Asia (CA) have significant room for improvement.

**Notes: 1.** The LPI score is calculated by taking the average of six areas: customs, infrastructure, international shipments, logistics competence, tracking and tracing, and timeliness. The lowest and highest scores for each country are taken from one of the six areas.

**2.** Data for Azerbaijan, Jordan, Kosovo, Lebanon, Morocco, Tunisia, Turkmenistan, and the West Bank and Gaza are not available.

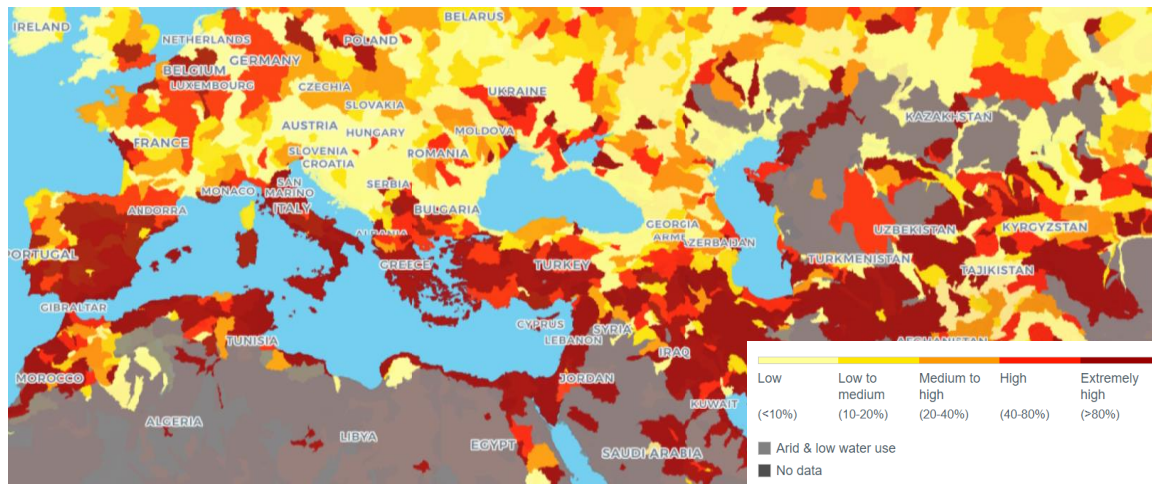


# Current context: the criticality of water

Water is critical, increasingly fragile and scarce in many countries in the EBRD regions, requiring better overall management, protection and production

- **Water stress** is a significant issue in many of the economies in which the EBRD operates, especially in the southern and eastern Mediterranean (SEMED) and CA regions.

Global water stress<sup>1</sup>

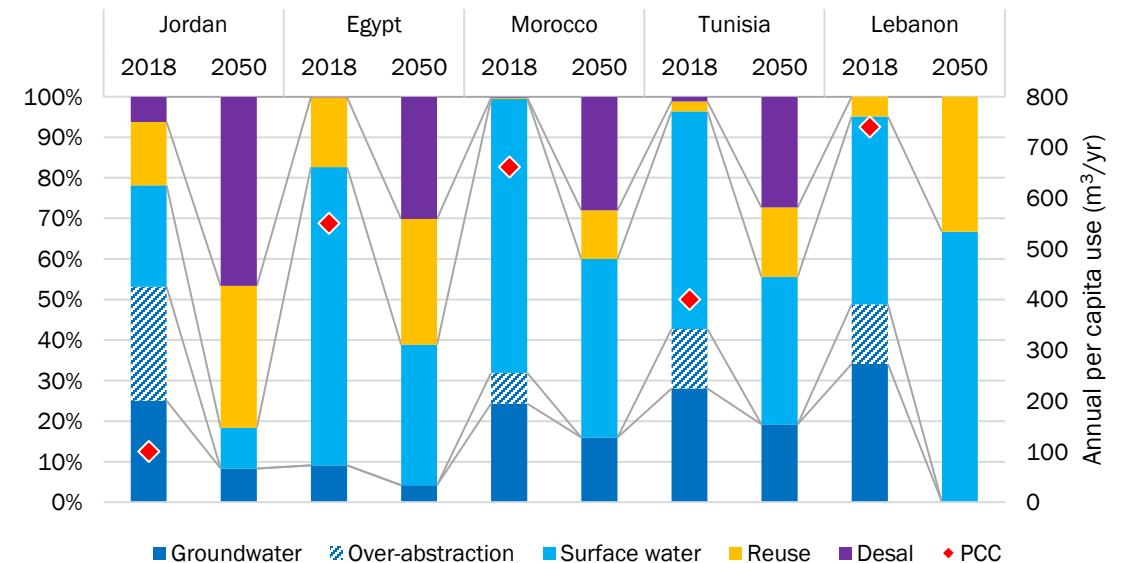


- Many of the EBRD regions often experience high physical network (and commercial) losses; non-revenue water can be more than 80 per cent of the water put into supply.
- **Demand-side strategies** should be employed to promote water conservation and efficiency, such as water loss reduction, metering, pricing, water-saving appliances and rainwater harvesting.

(Note: The Bank is developing an approach to capture the full value of water for various uses through an updated shadow water pricing methodology. This will comprehensively assess the socioeconomic and environmental value of water and better incentivise the right interventions).

- Supply-side measures for water-stressed countries include **desalination and water reuse**.
- On desalination, the ISS will seek to require high production efficiency to decrease energy intensity and overall lifecycle cost. **PPPs are a viable delivery mode for desalination**, with strong potential in countries such as Egypt, Jordan, Morocco and Tunisia.
- In parallel, **adopt a holistic approach to managing finite water resources** by applying integrated water resources management principles.

Proportion of fresh water by source type<sup>2</sup>



PCC = Per capita consumption (a measure of annual individual water use)

[1] Based on a pessimistic outlook by 2030. See: Aqueduct (2024), Water Risk Atlas, Washington, DC, World Resources Institute. <https://www.wri.org/applications/aqueduct/water-risk-atlas/>.

[2] Artelia (2019), Assessment of desalination investment opportunities in the SEMED region, London, EBRD.



# Current context: transition challenges in the EBRD regions<sup>1</sup>

Green	<ul style="list-style-type: none"> <li>• <b>Climate change:</b> In certain infrastructure sectors with deep structural and historical connections to fossil fuels (such as surface transport fleets, aviation and district heating), the transition away from fossil fuels is raising costs for infrastructure services. Climate resilience is needed to avoid severe physical damage, revenue losses and service disruptions.</li> <li>• <b>Pollution, resource use and ecosystem degradation:</b> Coupled with scarce resources and land-use constraints, cities are facing additional environmental challenges including accelerated degradation of ecosystems and loss of biodiversity. They need cross-sectoral responses that bear green electrification, low-carbon/zero-carbon technologies, resource efficiency and nature restoration in mind.</li> </ul>
Well governed	<ul style="list-style-type: none"> <li>• <b>Corporatisation and contractual arrangements:</b> The legal and commercial separation of utilities and their public owners, as well as outcome-based service contracts, are needed.</li> <li>• <b>Corporate governance and regulation:</b> The public sector, including SOEs and utilities, requires better institutional setups and corporate governance to improve strategic planning, safety of assets and operations (such as road safety), reporting standards, and competent and independent regulation and supervision.</li> <li>• <b>Capacity development:</b> To drive change, project preparation that embraces high standards (technical, environmental and social [E&amp;S] and legal) is required to attract reputable private partners and investors.</li> </ul>
Competitive	<ul style="list-style-type: none"> <li>• <b>Efficiency:</b> Cost-efficient provision of municipal and transport infrastructure and related services is needed to boost competitiveness.</li> <li>• <b>PSP:</b> There is a need for infrastructure upgrades and operations that give value for money, as well as increased efforts to build capacity among public-sector employees.</li> </ul>
Inclusive	<ul style="list-style-type: none"> <li>• <b>Availability:</b> There is a need for high-quality municipal, digital and social infrastructure, transport services and public transport to improve citizens' well-being and to create economic opportunities for all, particularly in areas that are currently underserved.</li> <li>• <b>Accessibility:</b> Access to services, infrastructure and public goods is required through inclusive design and delivery models, along with the elimination of barriers to access on physical, social and/or gender grounds, including by addressing safety and gender-based violence and harassment (GBVH) risks.</li> <li>• <b>Participation:</b> Space needs to be made for underrepresented groups' participation as employees, leaders and entrepreneurs, also in the context of project planning.</li> <li>• <b>Market-relevant skills and training:</b> Education systems must produce the skills needed by the infrastructure sector.</li> <li>• <b>Just transition and crisis response:</b> Strategic approaches must anticipate and respond to large-scale changes at workforce level and facilitate access to alternative livelihoods.</li> </ul>
Resilient	<ul style="list-style-type: none"> <li>• <b>Sustainability:</b> Modernised, efficient infrastructure is required, with properly applied asset management practices and sustainable and resilient service provision.</li> <li>• <b>Tariffs:</b> There is a need to introduce cost-reflective tariffs, combined with targeted support for low-income households designed to bridge the affordability gap and ensure reliable and sustainable funding mechanisms.</li> <li>• <b>Financial instruments for greater resilience:</b> Increased access to different sources and forms of financing (direct utility financing, diversified capital market instruments and private financing) is crucial.</li> </ul>
Integrated	<ul style="list-style-type: none"> <li>• <b>Connectivity:</b> Gaps persist in the quantity and quality of municipal and transport infrastructure when it comes to fostering trade and integration between and within EBRD economies.</li> <li>• <b>Spatial and regional integration:</b> Integrated land and transport development, intercommunal development agencies with land-use policies, and building regulations are needed to help mobilise additional resources for city, regional and national development.</li> <li>• <b>Regional/cross-border investments:</b> Continued development of cross-border transport corridors, as well as the alignment of rules and regulations to facilitate trade, are crucial.</li> <li>• <b>Financial integration:</b> Changes in tariff policies and institutional settings would help attract foreign direct investment (FDI) and improve access to additional forms of cross-border financing.</li> </ul>

[1] For further information on the EBRD's transition qualities, please visit: <http://www.ebrd.com/our-values/transition.html>.





Section 2: Strategic directions



# Strategic direction 1: improve connectivity

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1

## Improve connectivity

Targeted transition  
qualities

Green

Well governed

Competitive

Inclusive

Resilient

Integrated

### I. Enable better-connected, safer and more integrated infrastructure

- Improve the quality of networks and services, addressing bottlenecks and gaps in networks that enable trade (both within and between countries) and reduce regional inequalities while ensuring that maintenance systems are put in place to protect modern/new infrastructure assets
- Apply a "systems thinking" approach to determining good infrastructure solutions; for example, apply integrated river basin management practices to recognise the interdependency, interaction and impact of water in and across watersheds
- Support digital transformation by complementing infrastructure investment with digitalisation opportunities, appropriate capacity building and policy engagement whilst safeguarding against cyber-security threats, and maintaining data-protection and privacy.
- Support the construction of corridors and network plans for both road and rail which are critical to trade development, such as the Trans-European Transport Network (including extensions to the Western Balkans Core Network), the Central Asia Regional Economic Cooperation and the Transport Corridor Europe-Caucasus-Asia.
- Use common technical specifications for rail, roads, ports, logistics and airports to ensure interoperability, addressing bottlenecks and ensuring economies of scale.
- Improve both the efficiency and quality of networks, with better multimodal linkages, modal-shifts toward sustainable low-carbon/zero-carbon solutions such as active mobility, public transport and rail and "last-mile" connections into cities/urbanised areas.
- Help countries to reduce cross-border barriers by investing in physical regional integration and fostering policy dialogue for regulatory harmonisation.
- In national transport, promote cross-border digitalisation (for example, single window/electronic transport international routes/e-bill of lading/e-queue management systems) to facilitate the movement of goods and people. In urban transport, drive towards more integrated land use-transport planning and funding, with the promotion of the 'Avoid-Shift-Improve' principle.
- Support regional and national irrigation and water conveyance projects that improve food and water security
- Scale up and prepare projects in line with the G20 Principles for QII, the G7 PGII and the EU Global Gateway.

### II. Broaden access to high-standard, affordable services

- Design projects that broaden the availability and accessibility of services, considering the needs of underserved groups, to promote equal access to infrastructure and services, including through the application of universal design principles and local participatory planning approaches.
- Deepen policy engagement on and capacity building support for financial instruments and tariff reforms that focus on inclusive and affordable service provision, as required.
- Ensure safety aspects are integrated into design, construction, operations and maintenance across all infrastructure investment sectors, also to address GBVH risks.
- Use policy dialogue to develop inclusive, affordable and sustainable transport and municipal services in line with the Bank's Strategy for the Promotion of Gender and Economic Inclusion, as well as specific initiatives targeted in country strategies.

PUBLIC



# Strategic direction 2: enhance climate and nature action

PUBLIC

2

## Enhance climate and nature action

Targeted transition  
qualities

Green

Well governed

Competitive

Inclusive

Resilient

Integrated

### III. Promote a low-carbon/zero-carbon approach, with a focus on the decarbonisation of transportation, heating and water systems

- Scale up investments in projects targeting decarbonisation in hard-to-abate sectors, using donor support to address affordability constraints. Examples include transport fleets, district energy and desalination facilities (see "Perspective on carbon-intensive infrastructure").
  - Support low-carbon/zero-carbon infrastructure by pursuing improved energy efficiency, better energy management, electrified or renewable and waste heat-based energy solutions, where viable, and enabling policy frameworks.
  - Promote the electrification of fleets (such as light road vehicles, trains, public transport and the use of electricity by ships when in port), Paris Agreement-aligned low-carbon/zero-carbon fuels (such as aircraft, ships, heavy road vehicles, district heating) and the decarbonisation of port operations using both policy dialogue and investment
- Engage with key partners on decarbonisation strategies with international and regional governance bodies, such as the International Civil Aviation Organisation (ICAO), the IMO, the OECD International Transport Forum, UNECE, the MDBs, the EU and G20.
- Facilitate donor partnerships.
- Promote circular economy practices by closing energy and material loops in all sectors, where viable: encouraging sustainable waste management practices through the application of the 'waste hierarchy', minimising the quantities and the environmental impact of waste, developing new markets, including the sharing economy, promoting the recycling of products and materials, including the recovery and use of secondary materials.
- Develop the necessary human capital and skills to design, build and operate low-carbon/zero-carbon assets, as well as to decommission/repurpose carbon-intensive assets.

### IV. Explore the potential for nature-based solutions in infrastructure

- Build the evidence base for nature investments through technical cooperation, model development and pilot projects.
- Support policy dialogue to improve nature governance and the valuation of natural capital.
- Enhance partnerships with donors and leading knowledge partners to support nature-positive approaches.

### V. Scale and deepen climate action in cities

- Pursue infrastructure policy and investments across all infrastructure project types, prioritising climate action, as well as promoting good economic governance at the city / municipal level.
- Expand the reach of the EBRD Green Cities programme, with growth in follow-on Green Cities projects, knowledge and partnerships, extend the range of financial instruments deployed and sharpen programme monitoring and reporting
- Promote infrastructure projects, including urban projects, that support GET 2.1 and equality of opportunity, also with a focus on women and other underrepresented groups.

# Strategic direction 3: strengthen resilience

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3

## Strengthen resilience

Targeted transition  
qualities

Green

Well governed

Competitive

Inclusive

Resilient

Integrated

### VI. Increase the resilience of infrastructure and associated services

- Ensure climate resilience, with high-standard, risk-based project preparation that considers both current and future climate change impacts and vulnerabilities related to natural disasters and other physical hazards.
- Design infrastructure projects with sufficient flexibility and adaptive capacity.
- Consider solutions that utilise conventional hard-engineered ("grey") solutions combined with "green" and "blue" infrastructure alternatives, applying a whole-lifecycle-cost approach to help make resilience a cost-effective choice over time (see critical action area 6 in Section 3).
- Ensure well-governed infrastructure sectors, enhancing physical, financial and institutional resilience by:
  - developing and requiring fit-for-purpose building codes (for example, for social infrastructure assets), land-use regulations and zoning ordinances that promote resilience, covering areas such as floodplain management, earthquake-resistant construction and other emergency planning
  - undertake balance sheet restructuring, realigning assets and liabilities to strengthen financial position, providing acquisition finance and liquidity support, promoting access to capital markets, enhancing the ability to manage economic, climate and cybersecurity risks, and better position for future growth; this improved resilience extends to utilities to better absorb significant economic and fiscal shocks
  - supporting infrastructure companies in achieving International Organisation for Standardisation (ISO) 55000, promoting wider support for the development of asset management tools, and making the case for adequate funding of maintenance and ISO 14090 on adaptation to climate change, etc.
  - encouraging better protection of infrastructure against cybersecurity attacks
  - promoting the effective governance of public service providers with a sound policy and a reformed regulatory environment, including situations requiring increased service demand
  - promoting impact financing instruments (bonds or loans) linked to sustainability, environmental, social and governance (ESG) and decarbonisation targets.
- Build capacity to:
  - identify and prioritise climate, physical and institutional resilience investments, especially in critical infrastructure
  - effectively plan, implement and manage resilient projects and contingency plans, including the use of digitalisation
  - implement policy, sector and corporate-level reforms to enhance good economic governance
  - undertake rapid needs assessments to mobilise the emergency investment needed for unplanned events (such as natural disasters).

### VII. Develop human capital and encourage full participation in infrastructure sectors

- Combine investments in future-oriented areas (such as the green transition and digitalisation) with targeted human capital development support to build skills and prepare the workforce for sustainable and resilient infrastructure development and operation, where possible.
- Support investments in infrastructure assets that directly develop human capital, including social infrastructure.
- Strengthen engagement with technical and vocational education and training and tertiary education providers and authorities, where possible, in line with skills required in the sector.
- Support clients in expanding their talent pool through inclusive corporate policies and practices, promoting the participation of women and other underrepresented groups in technical and leadership roles, as well as across the value chain.
- Strengthen skills development and enhance human capital for the sector, where possible, including through inclusive procurement approaches.
- Deepen policy engagement and capacity building, in line with the Bank's Strategy for the Promotion of Gender Equality and Equality of Opportunity Strategy, enhancing the impact of infrastructure investments.

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A photograph of a large industrial building with a white and grey facade. To the right of the building, a series of tall, white smokestacks with red bands are visible, emitting white smoke into a clear blue sky. The foreground shows a paved area and some industrial equipment. A semi-transparent white banner is overlaid across the middle of the image, containing the text 'Section 3: Critical action areas' in a blue serif font.

## Section 3: Critical action areas



# Critical action area 1:

## Enable better-connected, safer and more integrated infrastructure

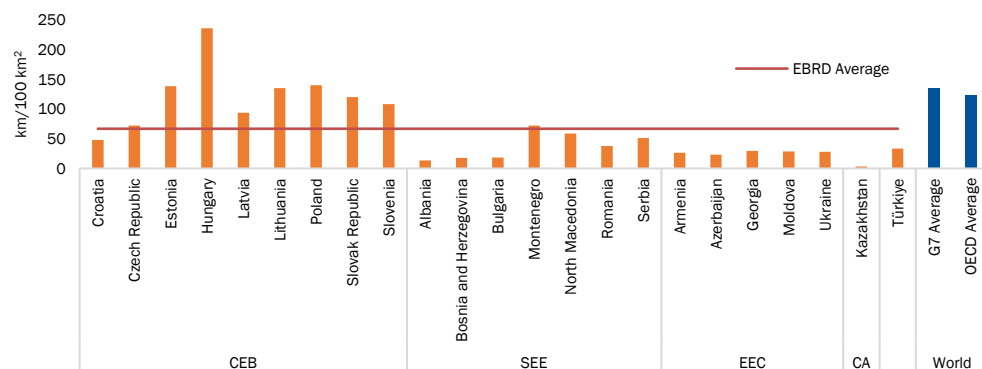
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### Foster well-connected infrastructure systems that improve competition and enable economic growth and trade

Density of road network<sup>1</sup>



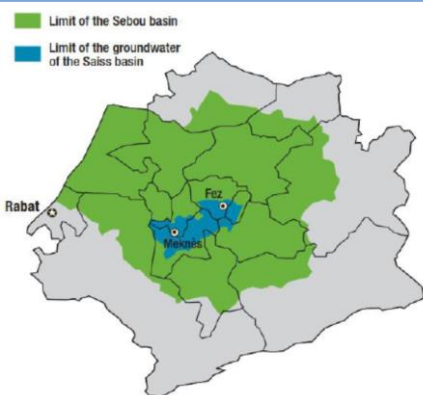
- Most EBRD economies fall below the OECD average on completeness of networks (roads, rail, ports and aviation).
- In addition, congestion, poor intermodal transfers and logistics act as a drag on economic development.

Notes: 1. Data are from 2020, wherever available.  
2. Data are not available for Chile, Colombia, Costa Rica, Egypt, Greece, Jordan, Kosovo, the Kyrgyz Republic, Lebanon, Mongolia, Morocco, Tajikistan, Tunisia, Turkmenistan, Uzbekistan, and the West Bank and Gaza.

### Enable better projects through “systems thinking” on infrastructure

- Encourage national, regional and urban integration within and across sectors.
- Promote “intermodal connectivity”, which integrates different modes of transport, with long-term maintenance funding
- Support strategic, early-stage assessment of E&S risks; identify and embed, where possible, opportunities for enhanced nature returns.
- Support early and comprehensive stakeholder engagement.
- Introduce modern digital technologies for efficient project management, preventative maintenance, better data management, improved critical infrastructure safety (whilst aligning with the Bank's ESP for safeguarding data and protecting against cyber-attacks).
- Valorise wider benefits in financial models where viable through land value capture and shadow water pricing.
- Assess and support planning for land acquisition and compensating income loss.
- Development of sustainable digital infrastructure and investments in dedicated IT infrastructure, preferably in the peripheral parts of the countries.
- Scale up and prepare projects in line with the G20 Principles for Quality Infrastructure investment, the G7 PGII and the EU Global Gateway.

### Adopting a more integrated approach to water management is critical for sustainable development



The image on the left shows the geographical extent of water users (green) in the Sebou basin and limit of water that can be supplied from the Saiss groundwater source (blue), revealing the water resources gap.

EBRD economies need to take a more holistic approach to water management by better understanding the linkages between water users (potable water, industry, agriculture and energy production), but also by substituting water from unsustainable sources – such as depleting groundwater – with more sustainable water sources.

[1] OECDstat (2024), Density of road (km per one hundred sq. km). Paris. [https://stats.oecd.org/index.aspx?DatasetCode=ITF\\_INDICATORS](https://stats.oecd.org/index.aspx?DatasetCode=ITF_INDICATORS)

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# Critical action area 2:

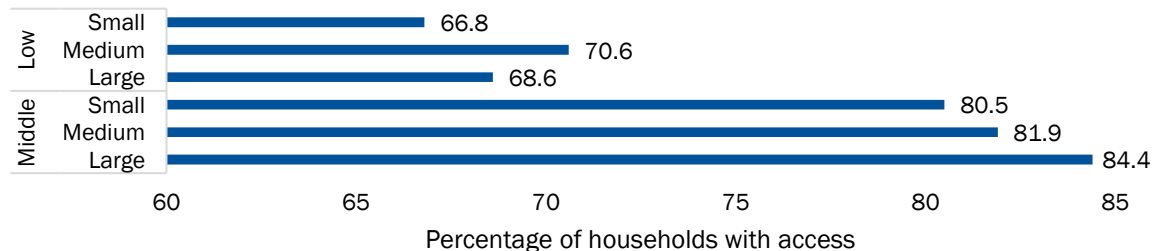
## Broaden access to high-standard, affordable services

### Create improved access to public services to promote economic development and social inclusion

- Service infrastructure and the built environment are often designed based on the needs and perspectives of dominant groups only, reflecting existing power dynamics and decision-making inequalities.
- Infrastructure services are crucial to enabling everyone to participate in the economy fully and equally, especially where access to economic opportunities is restricted due to an individual's location or inability to work away from home.
- The built environment can equally create insurmountable barriers for people with restricted mobility or pose risks in terms of safety and security, especially for women and girls, but also young men or people from an ethnic minority group.
- Inclusive infrastructure should focus on availability, accessibility and affordability considerations.

### Reduce the gap in access to reliable, safer and high-standard public services

Share of households globally with access to adequate water supply and sanitation services (%), by city size and country income class<sup>1</sup>



### Promote investment and policy reforms that deliver high-quality, transparent and financially sustainable outcomes

- Support expansion of both municipal and transport services to remove disparities and extend high-quality coverage.
- Promote the provision of social infrastructure and facilities management, including of affordable housing, where justified (that is, where there is clear value for money in favour of PSP including options for asset recycling).
- Promote the use of targeted financial support by municipalities and transport service companies for specific underserved/disadvantaged groups (in line with the “access for all” principle), while encouraging municipalities to adopt outcome-based results (public service contracting/public service obligations).
- Align the EBRD's policies and investments under the ISS with the Bank's Strategy for the Promotion of Gender Equality and its Equality of Opportunity Strategy, the United Nations 2030 Agenda and the Sustainable Development Goals (SDGs).
- Conduct investments and policy dialogue in line with the Environmental and Social Policy's treatment of relevant supply chains.
- This strategy will:



- ensure the continuation of investment in critical infrastructure to expand service coverage, but also focus on the quality and inclusivity of infrastructure services



- involve all stakeholders, including underserved groups and small/local communities, in decision-making



- leverage partnerships with other public and private actors to accelerate innovation and knowledge sharing.

# Critical action area 3:

## Promote low-carbon/zero-carbon transportation, heating and water systems

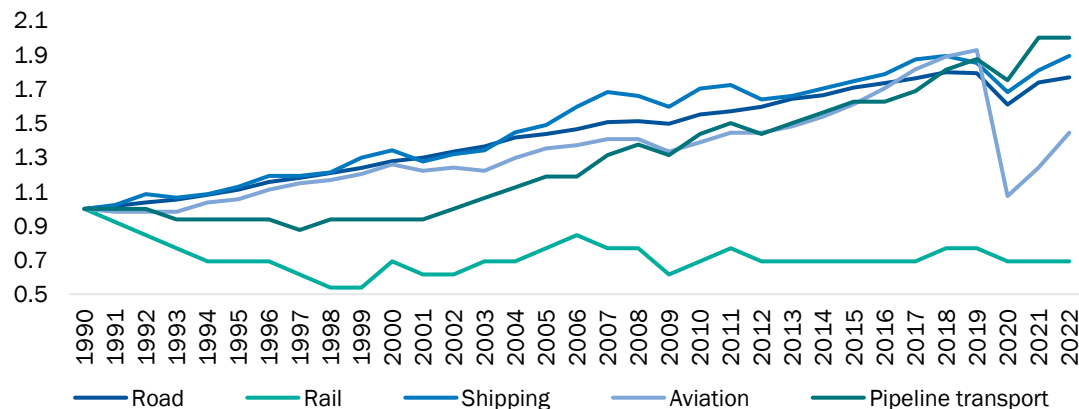


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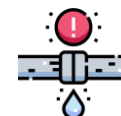
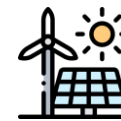
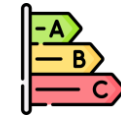
### Support decarbonisation across the transport and municipal infrastructure sectors

- Certain investments are "hard to abate" because of the traditionally high emission levels associated with fossil-fuel usage: roads, aviation, shipping and district heating.
- As emerging markets and developing economies grow, there is increased demand for electricity, potentially accelerating GHG emissions, at least in the short term until the shift to a net-zero economy materialises.
- To transition away from fossil fuels, improvements in energy efficiency and a realignment to low-carbon, net-zero technologies and zero-carbon solutions are needed.
- The transition from coal to less polluting heat or power-generation sources in sectors such as district energy may involve investment in natural gas-based infrastructure.
- The EBRD's involvement in such investments will follow the Bank's approach to fossil-fuel investments contained in the ESS and become increasingly rare over time.

Global CO<sub>2</sub> emissions from transport (1990 = 1)<sup>1</sup>



### Invest in solutions for a decarbonised future



- In line with the 'avoid-shift-improve' principle promote active mobility (such as walking and cycling) through integrated land use planning local area projects and urban regeneration opportunities.
- Speed up the shift to zero-emission vehicles in all sectors and the expansion of charging infrastructure; invest in Paris Agreement-aligned transition fuels and technologies.
- Support upgrades to energy-efficient equipment and improve building insulation.
- Prioritise waste minimisation and where this is not practical to encourage the capture, recycling and/or recovery of waste streams such as materials and other resources (water, energy etc.) according to the waste hierarchy and offering least cost solutions.<sup>2</sup>
- Incorporate renewable energy options and balance with energy storage, where appropriate.
- Support energy performance contracting with energy service companies.
- Focus on demand-side management to reduce energy consumption.
- Assess and identify opportunities to reduce whole-life carbon by using low-carbon/zero-carbon materials in infrastructure projects.
- Avoid and mitigate E&S risks during the shift to decarbonised infrastructure.
- Strengthen local distribution networks to allow green electrons to flow in and out of cities, ports, airports and other relevant infrastructure assets (with reference to the Energy Sector Strategy or 'ESS').

[1] IEA. (2023), Global CO<sub>2</sub> emissions from transport by sub-sector in the Net Zero Scenario, 2000-2030, Paris. [2] Applying in order of preference: 1) waste prevention, 2) preparing for reuse (checking, cleaning, or repairing products so they can be reused), 3) recycling (turning waste into new products or materials), 4) other recovery (including energy recovery, where waste is used to generate energy), and 5) waste disposal (the least preferred option, involving the safe disposal of waste, such as through landfilling). Thermal destruction of waste through incineration (for example) would be possible but only in the minority of cases and under specific conditions, aligning fully with the Bank's PA alignment methodology.

# Paris Agreement alignment: an enabler of transformative infrastructure finance

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## Defining and implementing Paris Agreement-aligned infrastructure

- Provision of affordable water, warmth and connectivity **are fundamental to an equitable economic future**. Equally, there is **no secure or acceptable economic future without a substantial reduction in CO<sub>2</sub> emissions**, in line with the goals of the Paris Agreement, from the infrastructure sectors that provide those services.
- The Paris Agreement provides **the foundation for orienting our efforts** to reconcile those two imperatives.
- The Bank will **continue to refine its approach to assessing and improving projects' alignment with the Paris Agreement**. Building upon sector-specific methodologies, as published in the Paris Agreement methodology for complex infrastructure sectors in 2022, the Bank will continue to **expand its analytical toolkit** and **engage with key sector policy and industry stakeholders** to drive infrastructural transition.



## Enhancement of climate resilience

- Infrastructure comprises long-lived assets that are **inherently exposed** to the impacts of climate change.
- As part of the Bank's Paris Agreement alignment framework, **all infrastructure investments with public- and private-sector clients are screened for exposure to physical climate change risks**, such as extreme heat, flooding and drought.
- When risks are material, clients are supported in introducing **adaptation measures** and enhancing **ongoing climate risk management practices** in line with international best practice, such as EU technical guidance on climate proofing of infrastructure projects.
- The Bank also works with clients to **identify opportunities for infrastructure investments that can enable wider resilience**, such as coastal defence or early warning systems.

## Systemic policy approach

- In line with the nationally determined approach at the centre of the Paris Agreement, in its policy engagement, the Bank will prioritise **country-, region- and city-led systemic thinking, as appropriate to the context**
- The Bank's **Green Cities programme** is an example of such **an integrated and systemic approach to climate action that will be prioritised**, combining a broad approach to identifying and prioritising environmental challenges and connecting them with infrastructure investments and policy measures.
- The Bank will seek to identify **carbon leakage risks** and engage where appropriate to reduce these risks through policy dialogue (e.g. by supporting alignment with EU and other international regulatory frameworks).

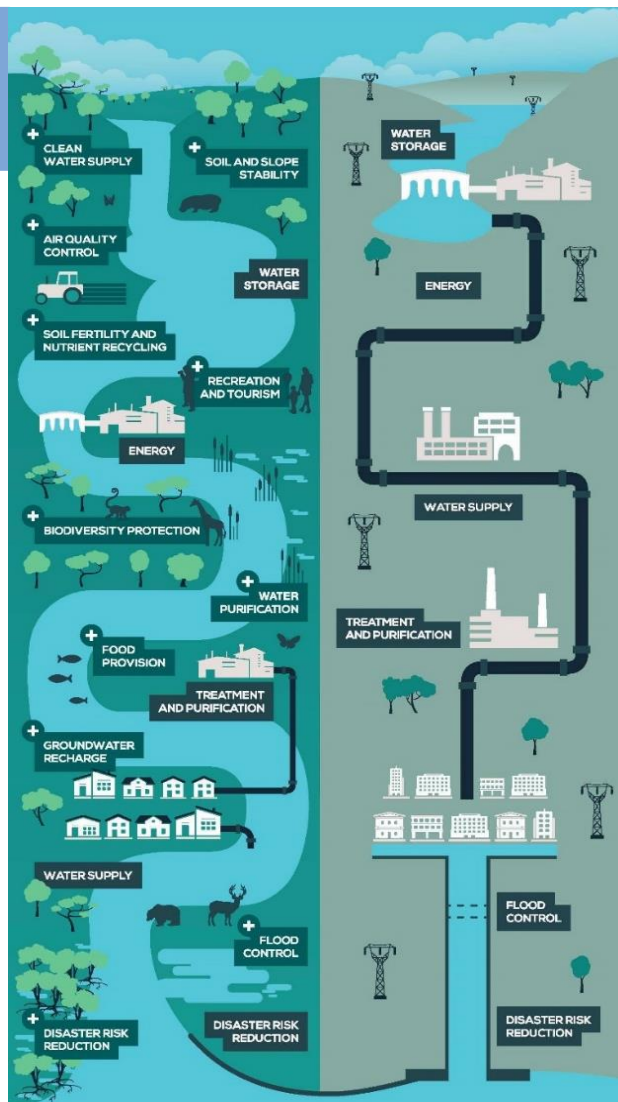


# Critical action area 4:

## Explore the potential for nature-based solutions in infrastructure

### Expand nature in infrastructure to support climate, biodiversity and resilience objectives

- **Nature plays a dual role** in infrastructure: it can act as infrastructure itself (for example, a waterway used for maritime freight transport) and can be protected and enhanced to provide ecosystem services.
- Nature-based solutions can make conventional “grey” infrastructure **more resilient and cost-effective**, with significantly greater **benefits for biodiversity and human health**.<sup>1</sup>
- Incorporating “green infrastructure” into urban planning (for example, green roofs) can mitigate heat-island effects; the reintroduction of “blue infrastructure” (such as wetlands/ “sponge city” concepts) can reduce flood damage and improve water quality while simultaneously creating new urban amenities.<sup>2</sup>



### Promoting nature

- Explore the use of green financing to promote nature components in infrastructure projects, where possible, particularly nature-based solutions in areas exposed to climate change impacts, such as flooding, drought, and extreme weather events. These solutions can enhance resilience, support biodiversity, and provide long-term benefits for both the environment and human health.
- **Consider opportunities to develop nature-based infrastructure projects** where economically feasible and possible, especially:



- **Flood and drought management infrastructure:** Develop watershed management, river remediation, managed aquifer recharge, conservation of wetland or forest area, and sustainable urban drainage investments.



- **Urban green infrastructure elements:** Within the scope of Green Cities Action Plans (GCAPs), support integration for green spaces for urban cooling. Consider using natural capital valuation tools to provide an evidence base that helps cities consider green infrastructure/nature-based solutions when prioritising Green City actions.



- **Coastal protection infrastructure:** Consider greater use of coastal ecosystem management or regeneration, including the regeneration or new development of reefs, mangroves, salt marshes, dune management and beach nourishment, or other coastal systems as ecologically appropriate.



- **Explore the integration of enhanced nature recovery** in infrastructure projects, where appropriate, to identify ways of establishing additional, improved and/or more interconnected natural environments.

# Critical action area 5:

## Scale up and deepen climate action in cities

### Cities are on the frontline of the climate crisis

- More than half of the world's population live in cities; this is expected to rise to 68 per cent by 2050.
- Cities account for 75 per cent of global GHG emissions and consume 75 per cent of energy while taking up less than 2 per cent of land
- Cities in the EBRD regions face common challenges associated with climate change and environmental degradation. They are on the frontline when it comes to climate impacts, which are increasing in scale, frequency and intensity.
- Cities are also critical to addressing climate change, by introducing new technologies and facilitating a shift in consumption patterns and behaviours.
- Cities have an integral role to play in addressing climate-related risks.



### Cities have an integral role to play in reducing climate-related risks

There is an urgent need to do more and cities are a critical conduit:



**Reduce GHG emissions** associated with the transport and municipal sectors (see "Perspective on carbon-intensive infrastructure") by considering climate mitigation when developing the EBRD's investments, policy reforms and high-impact actions.



**Enhance the resilience of urban infrastructure, services and communities** to cope with the impacts of climate change (see critical action area 6 "Increase the resilience of infrastructure and associated services") by considering, among other things, climate adaptation components.



**Facilitate a coordinated and strategic approach to climate action** across all infrastructure sectors using integrated urban planning and investment strategies (e.g. use of Sustainable Urban Mobility Plans, Circular Economy Plans including green procurement).



While noting that the EBRD will continue to provide green, resilient and inclusive investments outside the Green Cities programme, the Bank will deepen the Green Cities programme by:

1. **Increasing the number of follow-on Green City projects.**<sup>1</sup> The programme will focus on the implementation of follow-on investment and policy actions, including promoting good economic governance at the city / municipal level.
2. **Applying the methodology for GCAPs** in line with external developments, tailoring it to the specific needs of cities.
3. **Fully utilise the Green Cities network** for knowledge sharing, capacity building and forging partnerships with other organisations (such as local stakeholders, donors, international organisations).
4. **Introduce and expand the deployment of new financial instruments,**<sup>2</sup> with a strong emphasis on capital markets, with the aim of crowding in the private sector.
5. **Strengthen programme monitoring**<sup>3</sup> for both the framework and GCAPs.

[1], [2] and [3] as recommended by the Bank's independent Evaluation Department in its interim evaluation of the Green Cities Programme, April 2023.



# Critical action area 6:

## Increase the resilience of infrastructure and associated services

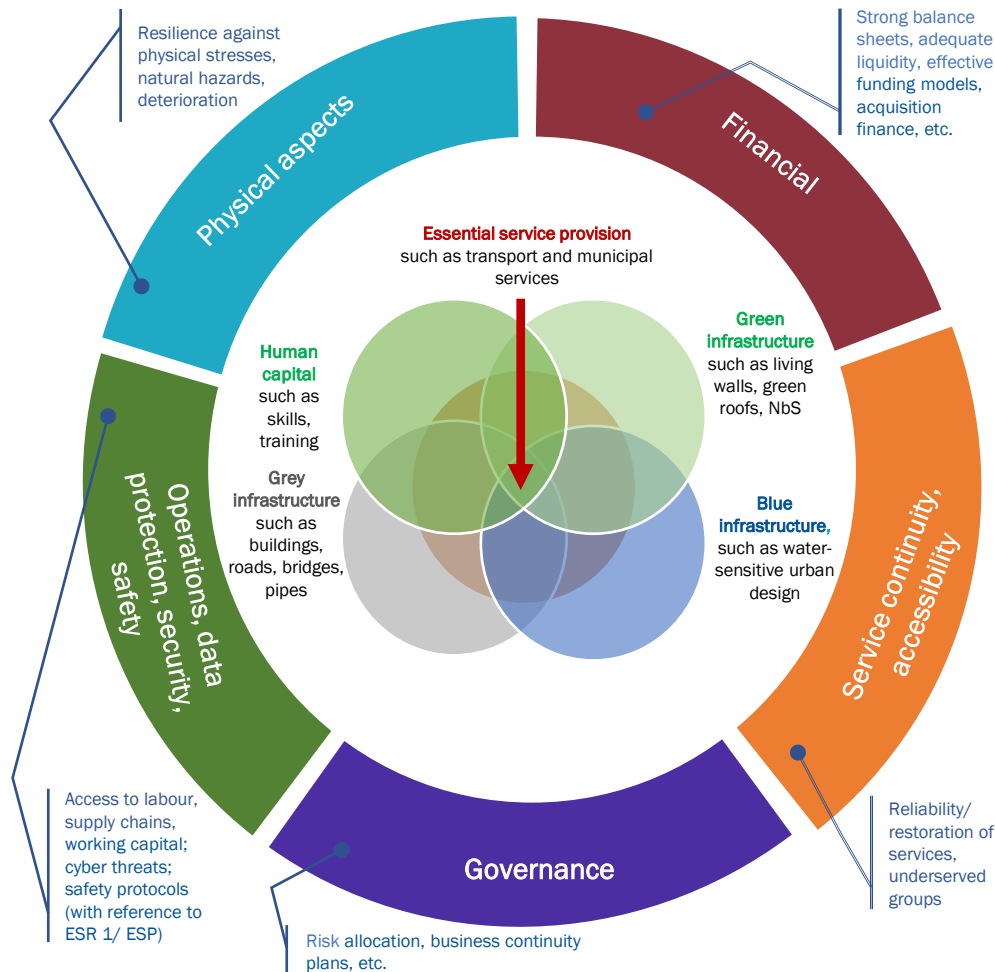
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### Develop and deliver infrastructure in line with a resilient and inclusive future<sup>1</sup>

- **Protecting and strengthening infrastructure services** is essential.
- Investing in resilient infrastructure that can better withstand **external shocks** and **adapt to changing circumstances** is crucial.
- Creating resilient infrastructure requires integrated planning and implementation, where **interactions between all systems of infrastructure** ("grey", "blue", "green" and human capital) are considered and combined.



### Strive for greater overall resilience and better economic governance

The goal is to deliver infrastructure projects that can **withstand, adapt to and recover** from various disruptions. This includes:

- **promoting the creation of robust, quality infrastructure solutions** designed to withstand potential hazards and future climate challenges that consider "grey", "green" and "blue" solutions and the role of enhanced human capital
- **identifying potential vulnerabilities and threats** to existing infrastructure, protecting against financial shocks and **supporting the development of resiliency plans** to manage and mitigate these risks, including against cyber threats
- **supporting the financial resilience of entities** to implement international financial management practices, apply prudent debt management policies and fiscal disciplines, and maintain robust financial performance monitoring by supporting balance sheet strengthening (through, for example, refinancing, improved liquidity) and promoting access to capital markets
- **promoting sectoral reforms and good economic governance**, including the reform of SOEs, and enhancing effective corporate governance of the sector, including at the national, sectoral and corporate levels
- **supporting capacity building**, for both public (including SOEs) and private clients for contract management, enhanced corporate development, project implementation support, ESG and corporate governance action plans.

The EBRD will **align with various global organisations** (MDBs, the G20, the Global Infrastructure Facility, Local Governments for Sustainability (ICLEI), the OECD and Global Infra Basel among others) to **actively promote sustainable, safe and resilient infrastructure** and, in doing so, remain consistent with United Nations ambitions under **SDG9** (on industry, innovation and infrastructure).

[1] Adapted from OECD (2021), *COVID-19 and a new resilient infrastructure landscape*, Paris; OECD (2014), *Investing in Growth – Understanding the value of green infrastructure*, Paris.  
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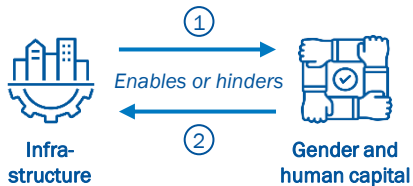
# Critical action area 7:

## Develop human capital and encourage full participation in infrastructure sectors

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### Infrastructure and human capital influence each other

- ① **Infrastructure as a driver of human capital development:** The way we plan, design, build, operate and even decommission infrastructure assets has direct implications for inclusion and gender equality.



- ② **Human capital as a driver of infrastructure delivery:** To scale up sustainable infrastructure delivery across the EBRD regions, the human capital base needs to be developed by increasing the participation of groups that are currently underrepresented.

*Aspect 1 is primarily reflected in critical action area 2, while aspect 2 is the focus of critical action area 7. Both aspects are cited throughout the ISS where relevant.*

### The EBRD must consider how infrastructure shapes human capital development and how human capital can impact infrastructure delivery

- Infrastructure can promote inclusion and gender equality but can also worsen existing inequalities. Better transport and municipal services can increase access to economic opportunities and public life.
- However, the infrastructure sector often reflects broader biases, with under-representation of women, youth, the elderly, those living with a disability etc. common and failure to consider diverse perspectives.
- To build a more sustainable and inclusive future, the infrastructure workforce must have the skills to meet new technology and sustainability requirements. Education, training and tapping into new talent pools are essential.



On average, about **65 per cent** of people in urban areas of the EBRD regions have convenient access to public transportation<sup>1</sup>



Only **22 per cent** of employees in the infrastructure sector today are women<sup>2</sup>



The share of green talent in the global workforce currently stands at **13 per cent**<sup>3</sup>

### Operational implications for the 2025-29 strategic period

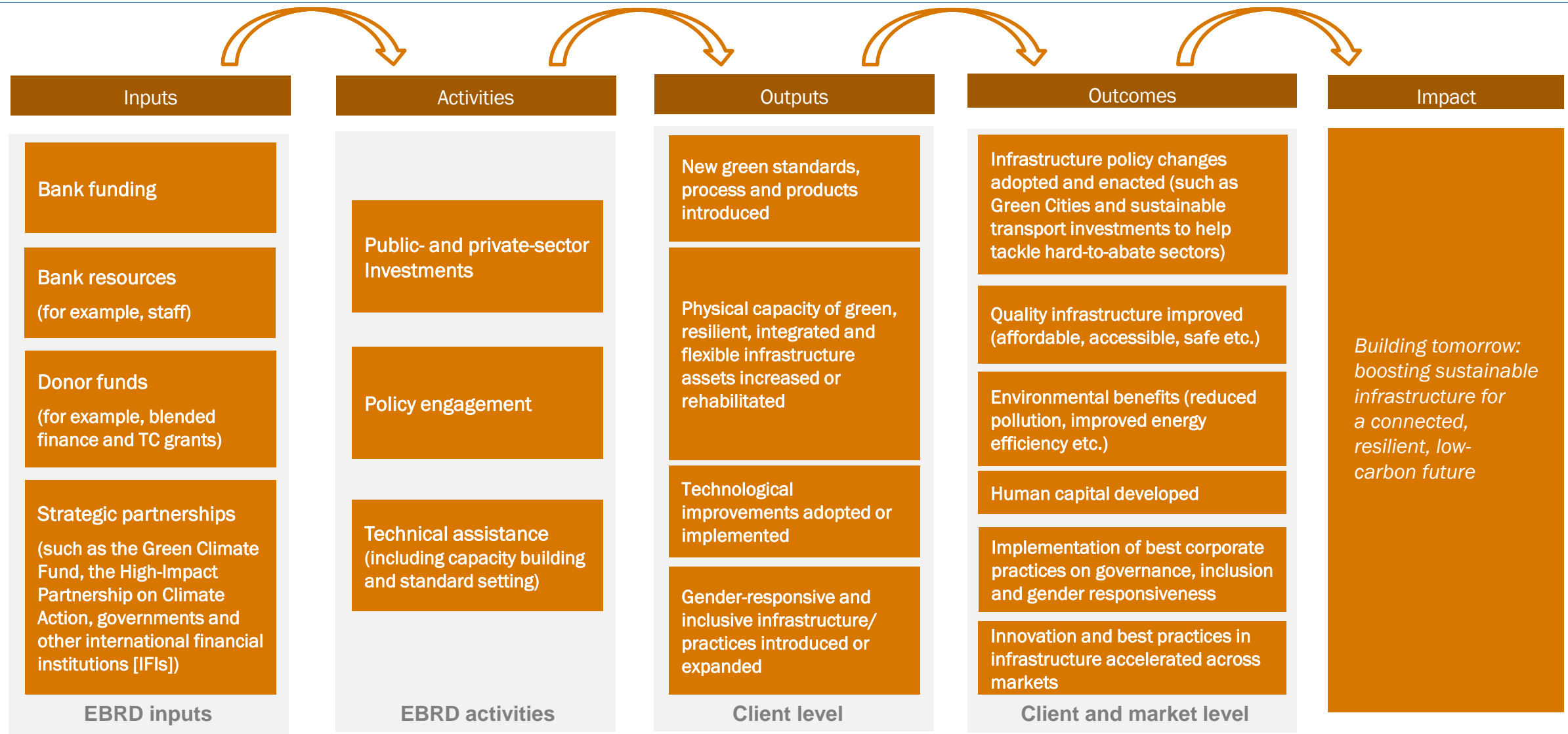
- Build the capacity of municipal and national-level counterparts for inclusive infrastructure planning and operation, where possible, including gender budgeting.
- Provide technical assistance and capacity-building support to smaller communities that face significant capacity constraints to ensure equivalent effective implementation of infrastructure investments afforded to larger communities.
- Integrate GBVH, safety and universal design considerations into transport and urban investments to create inclusive public spaces.
- Explore opportunities to invest in social infrastructure, in line with market needs and where there is clear value for money from private-sector involvement, including housing, school and hospital PPPs.
- Help clients assess corporate climate initiatives from a gender perspective to achieve the twin goals of effective climate action and progress on gender.
- Promote inclusive procurement in the public and private sectors to facilitate on-the-job training and strengthen supplier diversity.
- Support clients in expanding their talent pool through inclusive human resources approaches, focusing on currently underrepresented groups.
- Promote strengthening of skills development in emerging or rapidly changing infrastructure sector occupations, including through policy work.
- Work with infrastructure clients to support recovery from sudden shocks to human capital, for example, natural disasters, fragility and conflict.





# Section 4: Monitoring

## 4.1: Results monitoring: theory of change







# Performance monitoring framework (1/3)

Specific strategic objectives	Tracking indicators		Context indicators
	Outputs	Outcomes (for relevant countries tracked in country strategies)	Impact
<b>1. Improve connectivity</b>	<ul style="list-style-type: none"> <li>Length of linear infrastructure (for example, kilometres of road, railway, pipe) and number of associated assets (for example, stations, pumps) constructed/rehabilitated/upgraded</li> <li>Fleets modernised, replaced, increased (for example, trucks, vessels, railcars, aircraft)</li> <li>Number of digital components</li> <li>Number of capacity-building activities to foster the digital transformation</li> <li>Number of clients supported in entering new markets or expanding operations in existing markets</li> <li>Number of clients supported in developing a policy dialogue on gender equality and economic inclusion, affordable and sustainable transport and municipal services</li> <li>Number of clients supported in using inclusive procurement practices</li> <li>Number of clients with improved safety practices in infrastructure projects</li> </ul>	<ul style="list-style-type: none"> <li>Increase in port efficiency in terms of cargo/passenger handling</li> <li>Increase in airport efficiency in terms of cargo/passenger handling</li> <li>Number of beneficiaries with improved access to: <ul style="list-style-type: none"> <li>water services</li> <li>irrigation services</li> <li>urban fleet</li> <li>wastewater services</li> <li>solid waste services</li> <li>district heating</li> <li>etc.</li> </ul> </li> <li>Number of clients improving their safety performance</li> <li>Number of clients whose digital maturity has increased</li> <li>Increase in economic internal rate of return compared with the baseline</li> <li>Improved efficiency/performance/reliability/service provision compared with the baseline</li> </ul>	<ul style="list-style-type: none"> <li>Road Quality Index/score</li> <li>Rail Service Efficiency Index/score</li> <li>Aviation Service Efficiency Index/score</li> <li>Logistics Performance Index</li> <li>Governance indicators</li> </ul>



# Performance monitoring framework (2/3)

## Specific strategic objectives

## Tracking indicators

## Context indicators

### Outputs

### Outcomes (for relevant countries tracked in country strategies)

### Impact

## 2. Enhance climate and nature action

- | Specific strategic objectives   | Tracking indicators   | Context indicators   |
|---|---|--|
| Outputs   | Outcomes (for relevant countries tracked in country strategies)   | Impact   |
| <ul style="list-style-type: none"> <li>• New/refurbished/expanded infrastructure that promotes low-carbon/zero-carbon solutions (such as units of energy-efficient housing, number of electric fleets, number of production facilities for sustainable fuels for aviation and maritime transport)</li> <li>• New/refurbished/expanded infrastructure that supports circular economy principles (such as number of recycling facilities)</li> <li>• Nature components integrated into infrastructure design</li> <li>• Number of policy-engagement and capacity-building activities supporting low-carbon/zero-carbon infrastructure solutions, renewable energy, resource efficiency</li> <li>• Number of GCAPs finalised and submitted for approval</li> <li>• Number of green bonds issued</li> </ul> | <ul style="list-style-type: none"> <li>• CO<sub>2</sub> equivalent emissions reduced or avoided (tonnes/y)</li> <li>• Total air pollutant emissions reduced (tonnes of nitrogen oxides, sulphur oxides, particulate matter [PM] per year)</li> <li>• Primary energy saved (gigawatts per year [GW/yr])</li> <li>• Renewable heat produced (GW/yr)</li> <li>• Renewable electricity produced (megawatt hour per year)</li> <li>• Water saved, reused and/or recycled (m<sup>3</sup>/y)</li> <li>• Wastewater treated, avoided or reduced (m<sup>3</sup>/y)</li> <li>• Resources recovered or recycled (m<sup>3</sup>/y, tonnes/y)</li> <li>• Waste diverted from landfill (tonnes/y)</li> <li>• Number of clients/stakeholders adopting low-carbon/zero-carbon infrastructure solutions</li> <li>• Number of GCAPs adopted</li> <li>• Number of Cities with follow-on projects</li> <li>• Natural environments restored, improved or enhanced (for example, area of land, length of river, number of interventions)</li> </ul> | <ul style="list-style-type: none"> <li>• Energy CO<sub>2</sub> emissions per unit of GDP</li> <li>• PM<sub>2.5</sub> air pollution, mean annual exposure</li> <li>• Energy consumption per capita by residential, commercial and public services</li> <li>• Governance indicators</li> <li>• Energy CO<sub>2</sub> emissions per capita</li> <li>• Water use efficiency (sector/country specific)</li> </ul> |



# Performance monitoring framework (3/3)

Specific strategic objectives	Tracking indicators		Context indicators
	Outputs	Outcomes (for relevant countries tracked in country strategies)	Impact
<b>3. Strengthen resilience</b>	<ul style="list-style-type: none"> <li>• Infrastructure refurbished/expanded made more resilient (for example, kilometres of additional network)</li> <li>• New/refurbished/expanded infrastructure to support climate adaptation (for example, coastal/river flood defence protection, urban drainage, water reuse)</li> <li>• Number of clients receiving liquidity support</li> <li>• Number of clients adopting resilience-related corporate governance development plans and corporate governance action plans</li> <li>• Number of clients with improved practices in the area of resilience (including climate change adaptation)</li> <li>• Number of capacity-building activities to foster increased resilience (which go beyond climate change impact to include vulnerability to natural disasters, other hazards and institutional strengthening)</li> <li>• Number of new “country platforms” for climate-resilient infrastructure investment supported</li> <li>• Number of clients committed to providing training and other human capital development</li> <li>• Policy advice delivered to authorities on resilience practices</li> </ul>	<ul style="list-style-type: none"> <li>• Number of clients improving their performance and/or efficiency metrics</li> <li>• Number of beneficiaries made more resilient to climate shocks</li> <li>• Number of beneficiaries that maintained access to vital infrastructure services</li> </ul>	<ul style="list-style-type: none"> <li>• Cost of exposure</li> <li>• Annual loss by hazard</li> <li>• Number of people highly vulnerable to climate risks</li> <li>• Assessment of transition qualities indicator on resilience</li> </ul>





Annexes

## Annex A: Acronyms

## Annex B: Assessment of previous strategies (2019-23)

- I. Assessment of the Municipal and Environmental Infrastructure and Transport Strategies
- II. Numerical diagnostics of project financing and portfolio
- III. Operational highlights: investment by sector
- IV. Green Cities and GET promotion
- V. Case studies of successful investments and reforms
- VI. Lessons informing the 2025-29 ISS
- VII. Importance of grant funding

## Annex C: Detailed global context

- I. Climate change
- II. Population change and growth
- III. Mobility, trade and logistics

## Annex D: Detailed regional context

- I. Sub-Saharan Africa
- II. Ukraine

## Annex E: Digitalisation of sustainable infrastructure

## Annex F: Collaboration with other multilateral development banks

## Annex G: Linkages to the Sustainable Development Goals



# Annex A - Abbreviations

ABI	Annual Bank Investment	GDP	gross domestic product	OECD	Organisation for Economic Co-operation and Development
AI	artificial intelligence	GET	Green Economy Transition	PA	Paris Agreement
CA	Central Asia	GHG	greenhouse gas	PGII	Partnership for Global Infrastructure and Investment
CEB	central Europe and the Baltic States	GI Hub	Global Infrastructure Hub	PM	particulate matter
CO <sub>2</sub>	carbon dioxide	ICAO	International Civil Aviation Organisation	PPP	public-private partnership
CO <sub>2</sub> e	carbon dioxide equivalent	ICLEI	Local Governments for Sustainability	PSP	private-sector participation
D&B	design and build	IEA	International Energy Agency	PTI	potential transition impact
E&S	environmental and social	IFIs	international financial institutions	RLCF	renewable and low-carbon fuels
EBRD	European Bank for Reconstruction and Development	IMO	International Maritime Organisation	SAF	Sustainable aviation fuels
EEC	eastern Europe and the Caucasus	IoT	Internet of Things	SCF	Strategic Capital Framework
ESG	Environmental, social and governance	ISO	International Organisation for Standardisation	SDG	Sustainability Development Goal
ESP	Environmental and Social Policy	ISS	Infrastructure Sector Strategy	SEE	south-eastern Europe
ESR	Environmental and Social Requirement	km	kilometres	SEMED	southern and eastern Mediterranean
ESS	Energy Sector Strategy	kt	kilotonnes	SIG	Sustainable Infrastructure Group
ETI	Expected transition impact	LAC	Latin America and Caribbean	SMART	SOE Management Assistance Reform and Transformation
EU	European Union	LPI	Logistics Performance Index	SOE	state-owned enterprises
EV	electric vehicle	m <sup>3</sup>	metres cubed	SSA	sub-Saharan Africa
FDI	foreign direct investment	MDB	multilateral development bank	UN	United Nations
G20	Group of 20 industrialised nations	MtCO <sub>2</sub>	megatonnes of CO <sub>2</sub>	UNECE	United Nations Economic Commission for Europe
G7	Group of seven industrialised nations	NbS	Nature-based Solutions	WEF	World Economic Forum
GBVH	gender-based violence and harassment	O&M	operate and maintain		
GCAP	Green Cities Action Plan	°C	degrees Celsius		



# Annex B (I) – Assessment of previous Transport and Municipal Strategies: impact results from the 2019-23 period

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Since 2019, municipal infrastructure has better protected the natural environment in the EBRD regions through:



Water saved  
(m<sup>3</sup>)

214 million



Wastewater treated  
(m<sup>3</sup>)

423 million



Recycling/reuse  
(tonnes)

102 million



Waste diverted from  
landfill (tonnes)

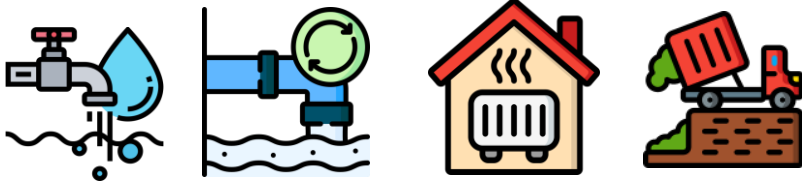
559,000



An estimated **3.4 million more people** per day use urban transport



There has been a **4.1 kilotonne annual reduction** in CO<sub>2</sub>e emissions since 2019



Since 2019, our projects have collectively provided access to drinking water and wastewater services, improved district heating and solid waste management for an additional **23 million people**

Since 2019, high-quality transport infrastructure has connected communities and facilitated economic trade through an estimated addition of:



Roads  
(km)

1,208



Rail  
(km)

935



Fleet replaced or  
modernised (no.)

6,161



Ports & shipping  
(Twenty-foot  
equivalent units)

9.3 million



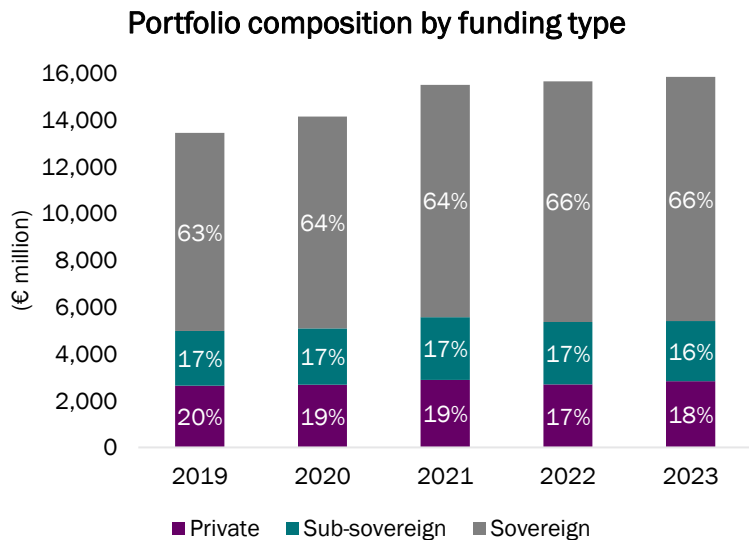
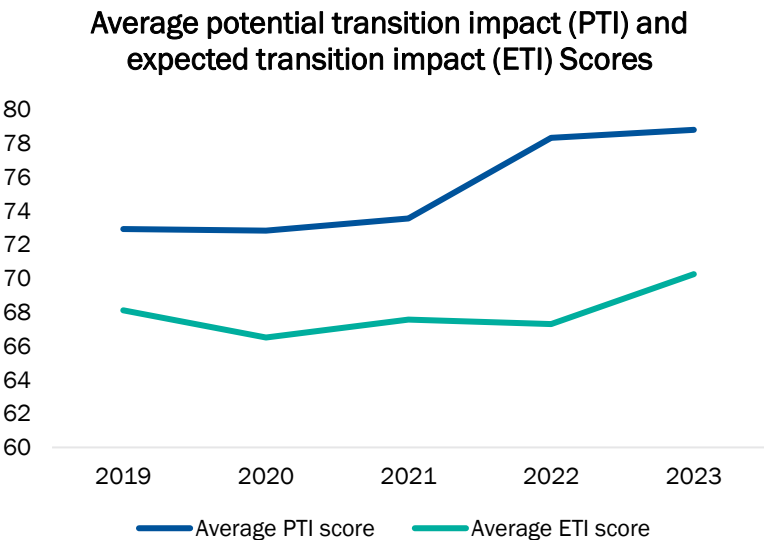
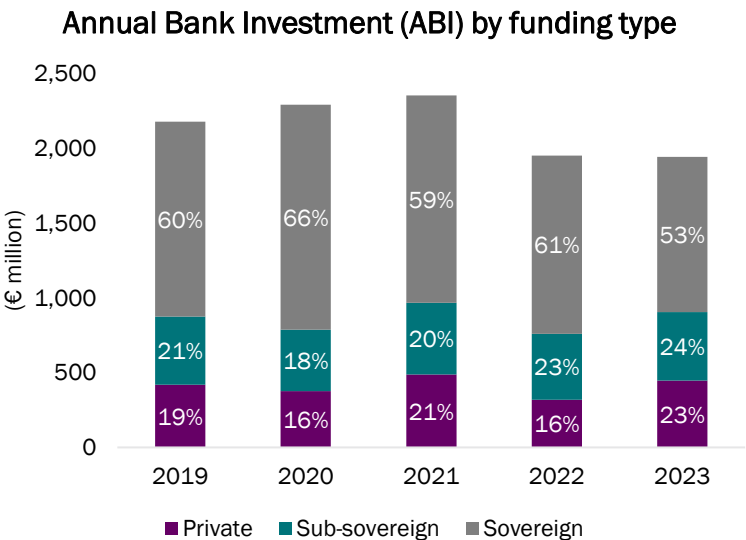
Airline passengers

48.2 million

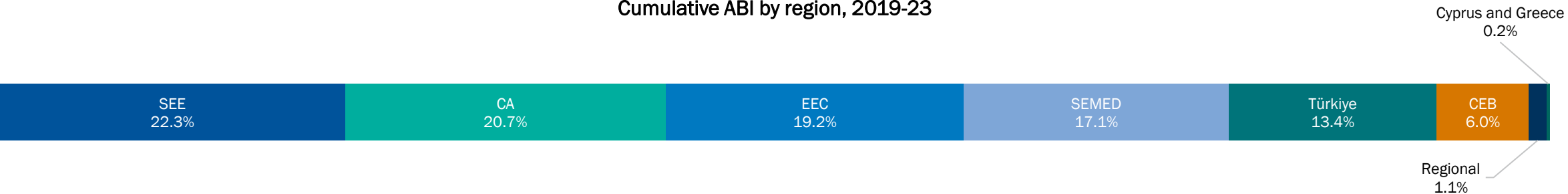
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# Annex B (II) – Numerical diagnostics of projects and financing in the previous period (2019-23)

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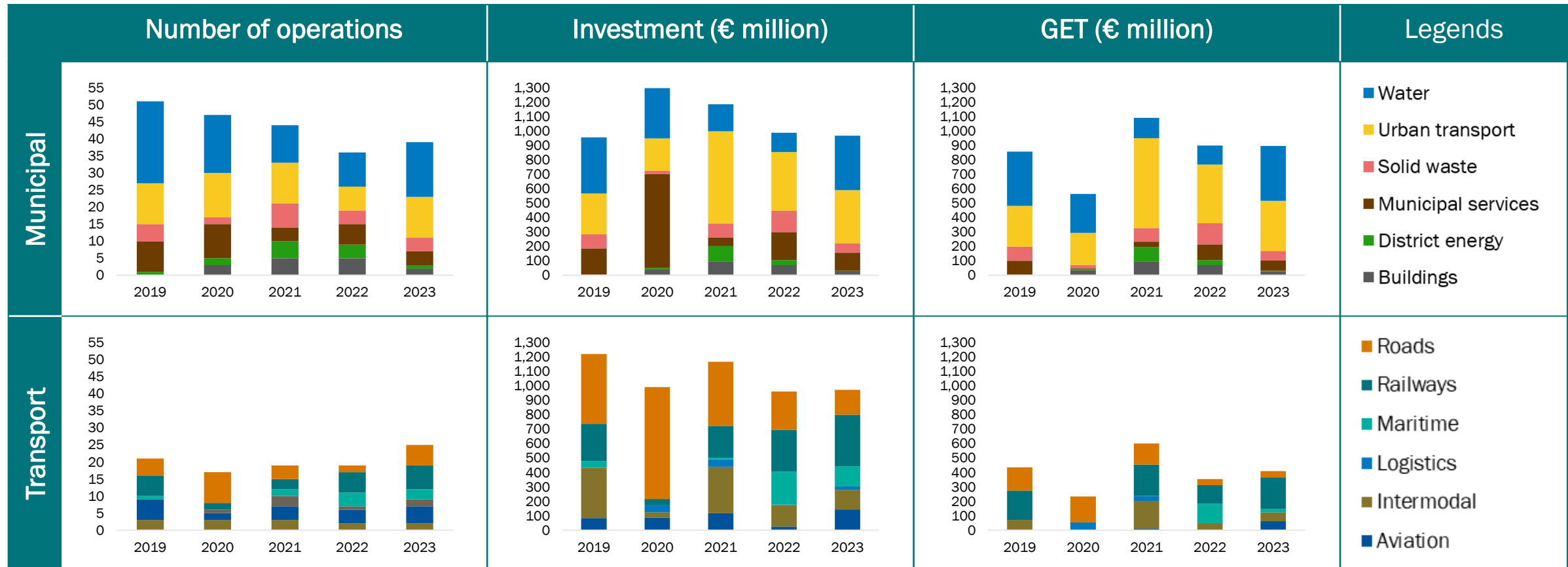
**Cumulative ABI by region, 2019-23**



- The EBRD consistently delivered a balanced level of investment (98 per cent in the form of debt products) across the transport and municipal sectors. Both ABI and portfolio composition have remained stable over the last five years.
- The implementation of these investments was very strong, as indicated by a rising level of impact (PTI score) over time versus ex-ante levels (ETI).
- The EBRD also achieved a geographic spread of its investments (ABI) across all the major regions.



## Annex B (III) – Operational highlights: investment by sector (2019-23)



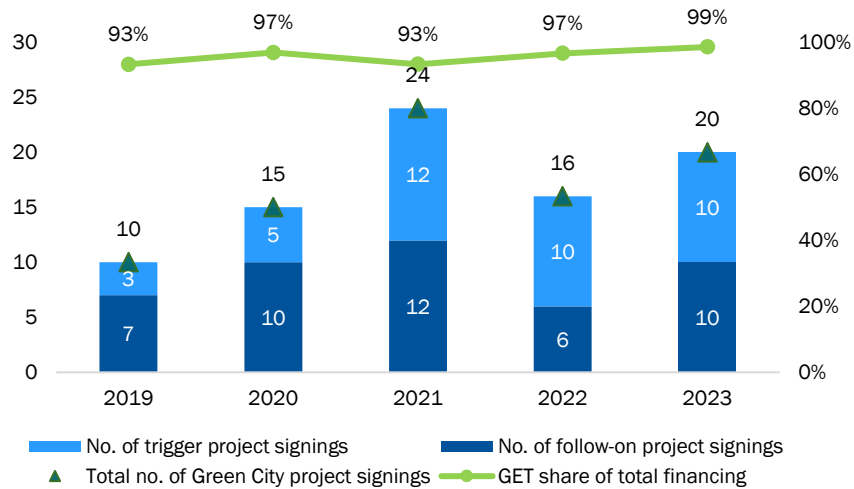
Note: Municipal services encompass urban regeneration, healthcare facilities/medical equipment, financial liquidity support, issuance of city bonds and multiple municipal assets

- In the municipal sector, urban transport and water projects consistently accounted for nearly half of operations, investments and GET financing. However, the Bank also delivered several other project types each year. The Bank's crisis response activities are reflected in the rise in municipal services projects in 2020.
- Transport projects tend to be larger than municipal projects. Their sub-sectoral breakdown presents a more varied picture, with differing levels of activity across roads, rail, maritime, intermodal, logistics and aviation, a reflection of the year-on-year “lumpiness” of large investments in the sector.

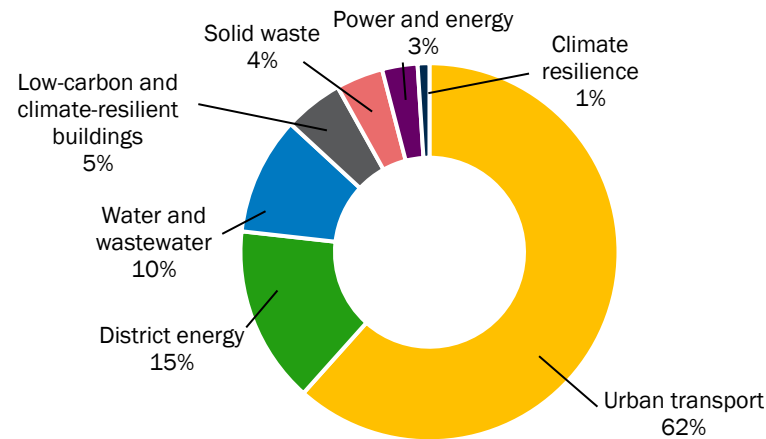


# Annex B (IV) – Green Cities and GET promotion

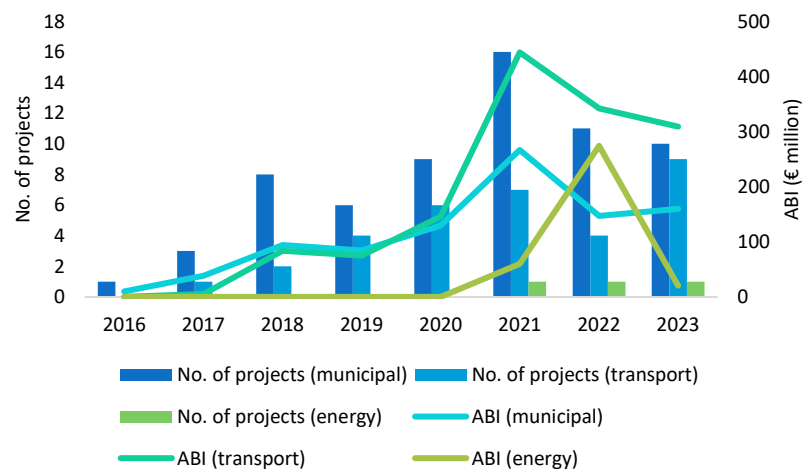
### Green Cities projects and GET share



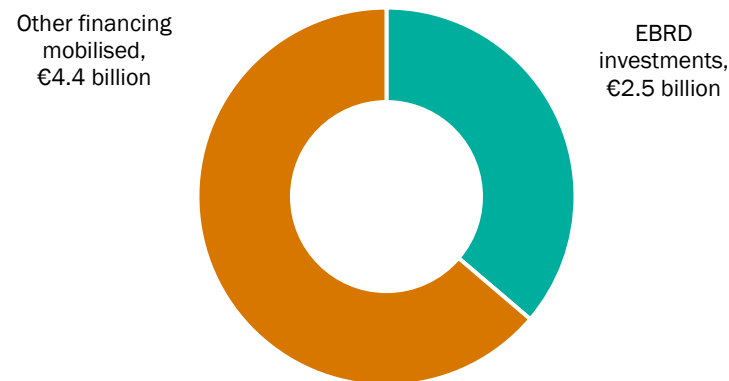
### Green Cities portfolio by sub-sector



### Number of Green Cities projects and ABI by sector



### Green Cities total portfolio value



The EBRD Green Cities programme offers a systematic approach to identifying and investing in urban infrastructure improvements that address climate change (mitigation and adaptation), nature and other environmental challenges in cities.

The programme draws on best-practice approaches, linking strategic Green City planning to investments, while also taking into consideration digitalisation, economic inclusion and resilience.

Since 2019, EBRD Green Cities has become the Bank's urban flagship programme, accomplishing the following:

- 31 new cities have joined the flagship programme since 2019, for a total of 60 cities in 2023
- an average GET share of 96 per cent
- CO<sub>2</sub>e savings from the Green Cities programme equivalent to removing one million cars from the road each year.

# Annex B (V): Case studies of successful investments and reforms (1/2)

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## Landmark municipal and transport transactions

- In 2023, the EBRD provided a loan of €8 million to the City of Chisinau towards a €20 million project to **regenerate the River Bic and transform it into an attractive asset for its residents and the region**. The project will finance a blend of solutions that will collectively **improve the management of storm water run-off** and its interaction with the river Bic, including partial reprofiling of the river channel and new **flood water management measures**.
- In 2020, the EBRD provided a €150 million sovereign loan to Morocco and mobilised grant funding for **the construction of key components of the Saiss irrigation network**. The aim was to enable a shift towards more sustainable and climate-resilient surface-water usage in the Saiss Plain, as well as substantial water savings from the use of a more efficient drip irrigation system in the Garet Plain **to mitigate the adverse impacts of current and future water scarcity**. The investment will result in enhanced economic opportunities from **higher agricultural yields** and **increased skills and employment** for local men and women in the less-developed regions of the country.
- In 2023, the EBRD supported the **modernisation and expansion of North Macedonia's waste management** system with a €55 million sovereign loan. The goal was to enable the country to construct new and rehabilitate existing sanitary landfill sites, to build new transfer stations, a recycling centre and waste infrastructure for collection and transport, and to close two non-engineered dumpsites. It is a **pioneering project** in North Macedonia's solid waste sector **introducing EU-compliant solid waste services**.
- In 2022, the EBRD provided a €23.2 million sovereign loan to Kosovo, as part of an €80 million financing package for the construction of a centralised solar thermal plant that uses the sun's energy for district heating. Following the project's realisation, Kosovo will become the **first economy in the Western Balkans region to use solar thermal energy to heat homes at scale**.
- In 2023, the EBRD joined forces with the EU and the European Investment Bank to provide a financing package worth €2.2 billion to support **Serbia's large-scale modernisation of a 230 km rail link connecting Belgrade to the country's second-largest city, Niš**. The upgrade will enable travel speeds of up to 200 km per hour and decrease total travel time between Belgrade and Niš from the current six hours to one hour and 40 minutes. The improved **rail link, which forms part of the pan-European Corridor X railway axis**, will thereby **support Serbia's economic development**, contribute to its local and regional connectivity and integration, and enhance the competitiveness of rail transport, especially for international and transit freight traffic. The project also includes a package of policy dialogue, including a **corporate development plan, corporate governance action plan and regulatory capacity building**.

## EBRD Green Cities flagship programme

- In 2023, the EBRD provided a MAD 130 million (€12 million) loan to the **Guelmim-Oued Noun** region of Morocco to **improve drinking water supply in rural areas** and to **upgrade four existing wastewater treatment plants**. The investment was the Bank's **first municipal loan in Morocco** and served as a **trigger investment for the region's participation in the EBRD Green Cities programme**, accelerating Morocco's environmental agenda by helping to transform one of its key regions.
- In 2023, the EBRD stepped up its support for **greener transport in Sarajevo canton** with a €25 million sovereign loan for the **construction of a new tramline** to expand the existing tram network by around 50 per cent and unlock the urban development of this part of Sarajevo. The new tramline will help reduce traffic congestion in the canton by encouraging more people to shift from cars to a more eco-friendly and efficient mode of transport. The project is the **seventh investment made under the EBRD Green Cantonal Action Plan for Sarajevo**.
- Dushanbe E-Mobility**, the Bank's first EV mobility financing initiative, totalling up to US\$ 3 million (approximately €2.7 million), was signed in 2021 under the **Dushanbe Green City Programme**. Supported by the Global Environment Facility, the project aims to finance the procurement of 100 EVs and 30 charging stations for a private taxi operator. The investment will allow the company to reduce CO<sub>2</sub> emissions by 1,240 tonnes annually, promote inclusive employment practices and advance Dushanbe's sustainable development vision.

## Crisis response

- In 2020, the EBRD **supported the delivery of vital infrastructure services to the Moroccan people during the Covid-19 pandemic**, with a €300 million financing package to state-owned utility and transport companies. This included a €50 million loan to the Office National de l'Électricité et de l'Eau Potable, €100 million to Société Nationale des Autoroutes du Maroc and €150 million to the Office National des Aéroports.
- The EBRD has deployed over €650 million of financing to Ukraine's infrastructure sector since the beginning of the war to support the provision of vital transport and municipal services. Landmark transactions have included **liquidity support, emergency rehabilitation** and **capital support** for Ukraine Railways, the repurposing of a sovereign loan to the Ukrainian Agency for Restoration for the **upgrade of key road links** between Ukraine and the EU, and financing to the state postal operator, Ukrposhta, and several municipal and private-sector clients.

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# Annex B (V): Case studies of successful investments and reforms (2/2)

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## Low-carbon solutions

- **The GrCF2 W2 E2 - Samarkand E-Bus Project** is a US\$ 49 million (approximately €44 million) EBRD loan signed in May 2023 to finance the acquisition of 100 e-buses with charging units and create e-bus depot infrastructure. The largest e-bus project supported by the Bank to date will result in (i) a 30.6 per cent saving on GHG emissions from a baseline “no project” scenario and (ii) a reduction in tailpipe air-pollutant emissions and noise pollution, and (iii) encouragement to a modal shift from private to public transportation.
- In 2020, the EBRD supported the central Ukrainian city of **Dnipro to improve the energy efficiency of its public buildings** with a €25 million loan to municipal energy management company **Dniprovskia Municipalna Energioservisna Kompanya**. The proceeds of the EBRD loan will be used to co-finance the **refurbishment of about 100 buildings**, including kindergartens, schools and outpatient clinics, which all provide scope for considerable energy efficiency. The new loan builds on the successful implementation of a pilot project with Dnipro’s energy management company in 2020. Under the pilot financed by the EBRD and donors, 33 schools and 48 kindergartens were refurbished, providing greater comfort and energy efficiency.

## Connected networks

- In 2021, the Bank supported the acquisition and modernisation of **Almaty International Airport** by TAV airports, **the largest FDI transaction in Central Asia**, through the equivalent of €130 million in debt financing.
- In 2021, the EBRD provided a €150 million loan as part of a total financing package of €640 million to Türkiye for construction of the **67 kilometre Ispartakule-Cerkezko section of the high-speed railway** from Istanbul to the Bulgarian border. The line is part of the EU Trans-European Transport Network and will improve both **passenger and freight connectivity**, while supporting Türkiye’s low-carbon transition.

## Supporting PSP

- In 2020, the Bank successfully facilitated the financial close of the **BAKAD Road Concession** project, a 66 kilometre ring road in Almaty, **the largest PPP in Central Asia**, and extended a US\$ 350 million (around €315 million) A/B-loan to help remove a major transport bottleneck.
- In 2021, the Bank provided a financing of up to US\$ 29.6 million (€25 million) for the development of **Egypt’s first inland dry port in 6<sup>th</sup> of October City**, west of Cairo, under the **first PPP project in the sector**. The dry port is to function as an **extended gateway to the deep seaports** located in the northern and eastern regions of the country, thus supporting the existing port infrastructure and logistics market.
- The Belgrade Solid Waste PPP is the first large-scale **environmental infrastructure concession** in Serbia. It introduced a **new form of financing** public service, which has traditionally been financed from public funds. The project entailed the construction of a WTE facility, a construction demolition waste facility, remediation, closing and aftercare of an existing landfill site (one of the largest landfills in Europe) and the construction of a new landfill.

## Policy engagement

- In 2021, the **EBRD provided support to the government of the Kyrgyz Republic** to develop a detailed set of legislative recommendations for **improving tariff methodology in the water sector**. As a follow-up action agreed with stakeholders, in September 2023, the Bank launched a technical support programme to implement these recommendations.
- The Bank’s **transaction in the Guelmim-Oued Noun region in Morocco** to improve drinking water supply in rural areas and to upgrade four existing wastewater treatment plants includes a dedicated technical assistance component. This component seeks to help the region **identify appropriate operational and maintenance solutions for rural water supply services**, as well as an adequate management model for using recycled water to **ensure the investments are sustainable**.
- In 2020, the EBRD provided a €300 million financing package to three SOEs – ONDA, ADM and ONEE – to boost their resilience and support vital infrastructure services in Morocco. As part of this transaction, the EBRD is supporting **Morocco’s reform agenda for SOEs** through dedicated technical assistance aimed at developing and implementing a state ownership policy. This work will act as a basis on which the country can **enhance the efficiency, governance and transparency of SOEs**. The technical assistance also includes targeted measures that will benefit three SOEs by strengthening aspects of their operations.
- With the support of the EBRD, in 2023, the government of **Kazakhstan** introduced a **tariff subsidy mechanism for utility service companies**. The mechanism allows utility service providers to attract IFI financing for large-scale investments aimed at modernising critical infrastructure, including the water and wastewater, district heating and electricity distribution sectors.

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# Annex B (VI) – Lessons informing the 2025-29 ISS

## 2019-23 project-level experience



- Public-sector investments can create important leverage for critical sector reforms.
- Access to donor funds, where needed, is critical to green economy ambitions.
- There is a dominant and active public-sector presence with wide-ranging competencies, though often typified by low-level PSP. Many governments find administering PPPs challenging, due to lack of experience and capacity.
- SOEs largely control public infrastructure services, often with a lack of coordination, resulting in conflicting investment priorities and policies, slowing reforms and limiting innovation.
- Clients and local authorities' limited capacity and resources delay implementation and create difficulties in retaining talent and/or developing required in-house skills.
- The practical challenge of engaging all stakeholders results in an apparent lack of awareness, understanding and trust on project, programme and policy choices.
- There is often inadequate financing and/or budget funding for the ongoing care of existing assets and infrastructure networks in both municipalities and transport services.



## Key findings of thematic evaluations

### For municipal projects:

- Increase the number of Green Cities follow-on investments.
- Support Green Cities in financial mobilisation.
- Step up ambition on the monitoring and reporting of Green Cities projects

### For transport projects:

- While public-sector implementation timelines generally lagged, private-sector projects delivered on time.
- Make decarbonisation a central theme going forward.
- Redouble efforts on policy dialogue to foster better integrated planning (for example, connecting rail linkages to airport improvements and EV charging to road projects).



## Lessons learned for the 2025-29 ISS



- Support creation of well-functioning public-sector entities, including support for regulatory and legislative reforms that facilitate increased, phased-in PSP, encouraging competition for further efficiencies, service improvements and innovations; utilise and scale up PPP advisory where applicable.
- Progress towards the use of engineering, procurement and construction/D&B contracts to simplify public-sector workload and make better use of private-sector contractors' expertise.
- Accelerate loan disbursement, project implementation and skills by building capacity (through technical assistance), establishing national facilities, improving procurement processes (for example, using advance procurement procedures), and carrying out thorough stakeholder engagement and market sounding with the private sector.
- Help build the competencies of public partners outside of government bodies (for example, SOEs or sovereign wealth funds).
- Encourage governments to establish and enforce modern standards to better protect public health and safety, safeguard the environment and facilitate a more sustainable future.
- Support establishment of clear and transparent legal and regulatory frameworks that protect the interests of both public and private entities.
- Collaborate with the MDB system on upstream policy and capacity building, midstream project preparation/advisory, and downstream financing for the private sector.
- Support sound pricing mechanisms that facilitate investments that are fair and cost reflective.
- Promote the use of green bonds, sustainability-linked bonds and sustainability-linked loans, and encourage the use of local currencies in long-term financing in an effort to develop capital markets.
- Deepen the EBRD Green Cities programme.
- Continue to seek donor support for technical cooperation assignments and capex co-financing, which are critical to achieving project objectives, adding strength to implementation capacity and enhancing the quality of the EBRD's monitoring.



# Annex B (VII): Importance of grant funding

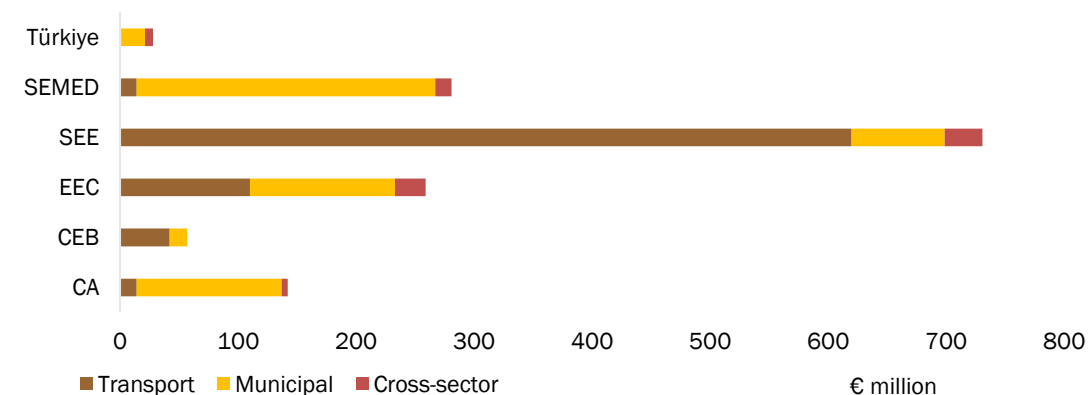
## Relative weight of grant instruments (2019-23)



**Project preparation and implementation** grants supported with due diligence, procurement and implementation, as well as supervision and independent monitoring of investment projects.

**Policy and advisory** grants helped clients, as well as local and regional governments, develop corporate development programmes or sector reform strategies, carry out strategic studies, such as e-mobility, prepare Green Cities action plans and conduct policy dialogue with various stakeholders.

## Grant funding by sector and region (2019-23, €1.5 billion)



The largest contribution to the transport sector in SEE is from public infrastructure investments co-financed with investment grants under the Western Balkans Investment Framework.

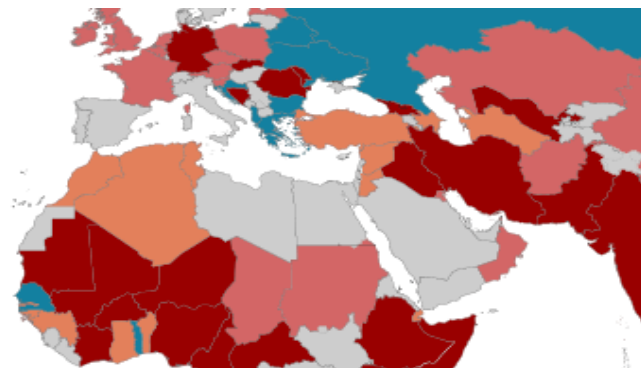
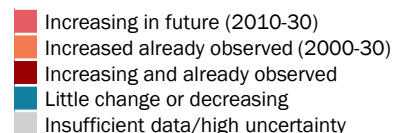
- **Grants** continued to play a key role in infrastructure projects across the EBRD regions, with €1.5 billion in various types of grant instrument committed between 2019 and 2023. Of the total amount, the Bank committed more than €1 billion to co-investment grants (68 per cent of all funds).
- **Grant funding supported over 60 per cent of EBRD project investments** in transport and municipal infrastructure in 2019-23.
- For the first time, the Bank introduced new, **innovative instruments**, such as funded and unfunded guarantees in 2022 to support Ukraine and other regions of the Bank's operations.
- **Policy and knowledge management** support addressed the Bank's cross-cutting themes of green economy, inclusion and digital transformation. Some examples of grant-funded activities across those themes are renewable heating integration in Mongolia, EV pathways and strategic initiatives in the Western Balkans, regulatory support for SOEs in Morocco and cross-regional policy dialogue on energy efficiency.
- **The Bank developed crisis response** programmes to address the impact of Covid-19 and the war on Ukraine. It is well positioned to address future crises in the economies where it works.
- **Policy and regulatory support** for governments, municipalities and SOEs will continue. Such non-transactional support is expected to be deployed to address the development of low-carbon/zero-carbon pathways in transport infrastructure and the sector reform of SOEs, including commercialisation and digitalisation.
- **Donor support** will remain an important part of the Bank's infrastructure finance, with the use of diverse donor instruments to address market barriers and clients' capacity, and an enabling environment to achieve maximum impact.

# Annex C (I): Climate change

## Key global risks and responses

- Infrastructure enables economic activity. Disruption from physical, climate-related hazards, such as extreme flooding, prolonged heat waves, etc. can cause direct losses in terms of assets, people and livelihoods, indirect losses and long-term economic and social developmental harm.
- The Global Floods Database (2022) provides analyses of the extent to which countries and regions have been exposed to flooding events, as observed by satellites in 2000-15, and will be exposed by 2030, according to models. Most climate-related events are human-caused, with many of the economies in the EBRD regions disproportionately affected. Many economies in the EBRD regions have been, and continue to be, disproportionately exposed to flooding events.

### Global flood risk<sup>1</sup>

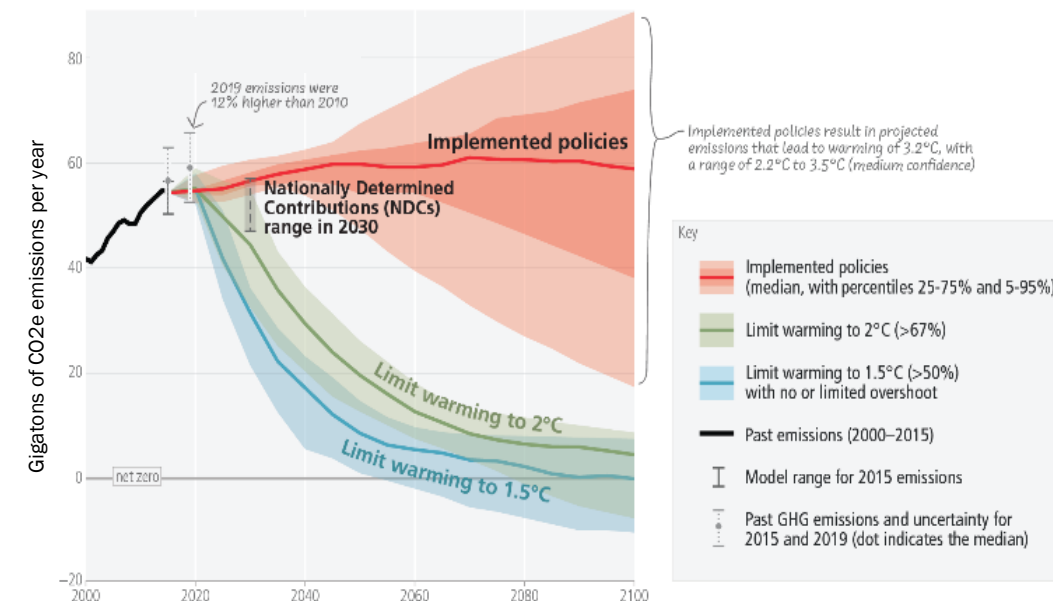


- The Paris Agreement aims to limit global temperature rise to below 1.5°C and has widespread support, with countries rolling out their national climate mitigation and adaptation plans in line with the Agreement.
- The EBRD is also committed to aligning its activities with the Agreement, making at least 50 per cent of its investments green by 2025. Meanwhile, all MDBs recently published a joint statement on scaling up finance and enhancing climate outcomes, strengthening country-level collaboration and increasing co-financing and private-sector engagement, at the 28th Conference of the Parties of the United Nations Framework Convention on Climate Change in Dubai.

## Need for greater climate financing

- Pathways to keeping the global temperature in line with the Paris target require rapid and deep reductions in GHG emissions in all sectors.<sup>2</sup> Conducting business as usual (current policies) is projected to result in warming of 3.2 °C.

### Net global GHG emissions<sup>2</sup>



- While global climate finance more than doubled from US\$ 0.65 trillion in 2019-20 to US\$ 1.27 trillion in 2021-22, this still falls far short of the estimated annual needs of US\$ 9 trillion by 2030.<sup>3</sup> Furthermore, with most funding being directed to mitigation, the funding gap for adaptation is widening; needs are estimated to be 10–18 times greater than current public flows.<sup>4</sup>

[1] Global Flood Database (2022), Global Flood Database. <https://global-flood-database.cloudtoastreet.ai/> [2] Intergovernmental Panel on Climate Change (2023), AR6 Synthesis Report: Climate Change 2023, Geneva, Switzerland. <https://www.ipcc.ch/report/ar6/syr/>.

[3] Climate Policy Initiative (2023), Global Landscape of Climate Finance 2023, San Francisco, CA. <https://www.climatepolicyinitiative.org/publication/global-landscape-of-climate-finance-2023/>.

[4] UN Environment Programme (2023), Adaptation Gap Report 2023, Nairobi. [https://www.unep.org/resources/adaptation-gap-report-2023?gclid=CjwKCAiXreqBhAxEiwAfGfndDV\\_yDQtyqkHYpFvYvTUowvb3TqP-R9r0\\_naSS-wDe-UjHRgzI9FDhoCIMYQAvD\\_BwE](https://www.unep.org/resources/adaptation-gap-report-2023?gclid=CjwKCAiXreqBhAxEiwAfGfndDV_yDQtyqkHYpFvYvTUowvb3TqP-R9r0_naSS-wDe-UjHRgzI9FDhoCIMYQAvD_BwE).



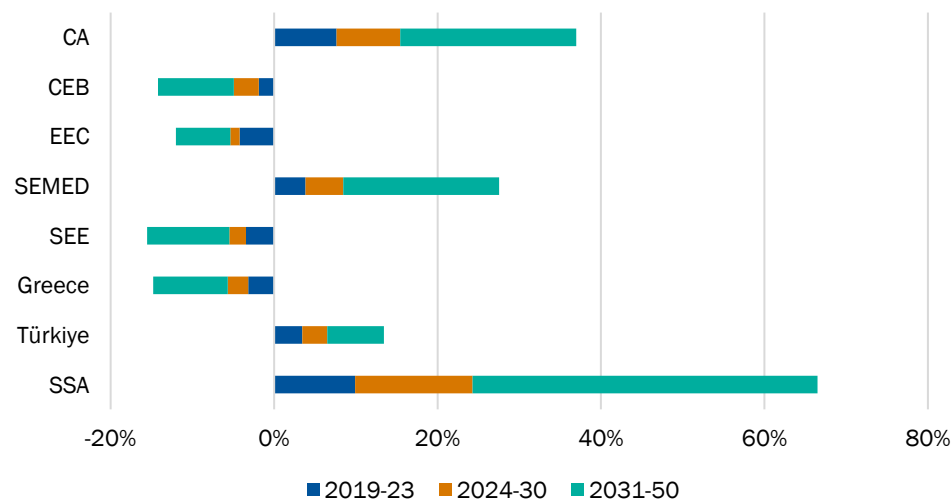


# Annex C (II): Population change and growth

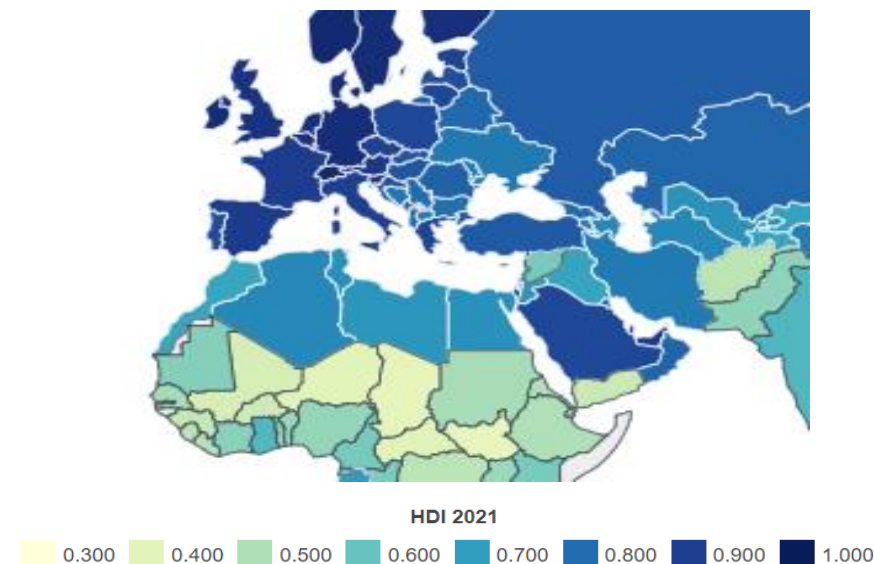
## Growing and ageing population

- Demand for municipal services and transport is strongly linked to population growth. Some regions, particularly sub-Saharan Africa and Central Asia, have higher growth rates. Others, including parts of Europe such as Bulgaria, have experienced population decline or slower growth.
- The number of people aged 65 or older has been increasing rapidly in all regions of the world, a result of longer life expectancy and universal healthcare provision. This trend is set to continue over the next three decades.<sup>1</sup> By 2050, the number of older people is expected to double. Such rapid population ageing will intensify the need for social (health) care, for anticipating the change in household structures (single to multi-generational occupancy) and for considering public transport, transport and municipal service requirements. Changes in demographics aided by technological advances have also seen a shift in workplace trends, illustrated in the uptake of remote working and flexible schedules.

Population growth between 2019-23 and forecast<sup>2</sup>



Human Development Index by country (2024)<sup>3</sup>



[1] UN Department of Economic and Social Affairs (2023). World Social Report 2023: Leaving No One Behind in an Ageing World, New York. <https://desapublications.un.org/publications/world-social-report-2023-leaving-no-one-behind-ageing-world>.

[2] <https://databank.worldbank.org/source/population-estimates-and-projections#>

[3] <https://worldpopulationreview.com/country-rankings/hdi-by-country>.

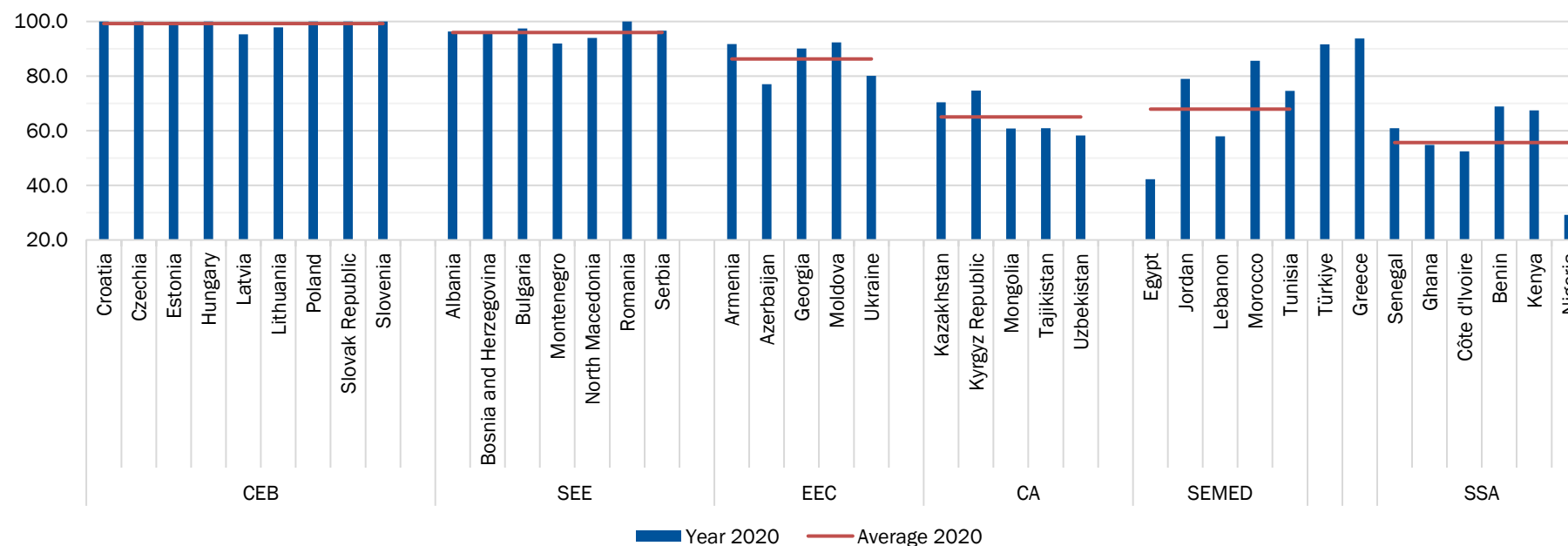


# Annex C (III): Mobility, trade and logistics

## Trade and logistics

- Trade provides a crucial opportunity for national economic development, boosting productivity growth through the exchange of goods. Transport, in turn, is key to the development of trade and FDI by providing the means for emerging markets to integrate into the global economy.
- Trading efficiently involves speeding up the flow (import and export) of goods, which depends not just on the quality of the infrastructure between two trading countries but also the wider shipping and trading network and controls. The World Bank's Ease of Doing Business survey measures the time and cost (excluding tariffs) associated with documentary compliance, border compliance and domestic transport within the overall process of exporting or importing a shipment of goods. The measure assesses the absolute level of regulatory performance on a scale from 0 to 100.

World Bank 2020 Doing Business scores<sup>1</sup>



- Logistics performance is highly correlated with trade expansion, export growth and attractiveness of FDI.
- Recently, there has been a reconfiguration of global supply chains, presenting a potential opportunity for EBRD countries as foreign investors look to diversify their suppliers.

<sup>1</sup> World Bank (2019). *Doing Business 2020 : Comparing Business Regulation in 190 Economies*, Washington, DC. <http://documents.worldbank.org/curated/en/688761571934946384/Doing-Business-2020-Comparing-Business-Regulation-in-190-Economies>



# Annex D: Sub-Saharan Africa

## Broad overview

The World Bank estimates that countries in sub-Saharan Africa **need to double their investment in SDG-related infrastructure**, increasing it to 7.1 per cent of GDP annually from 3.5 per cent today.<sup>1</sup>

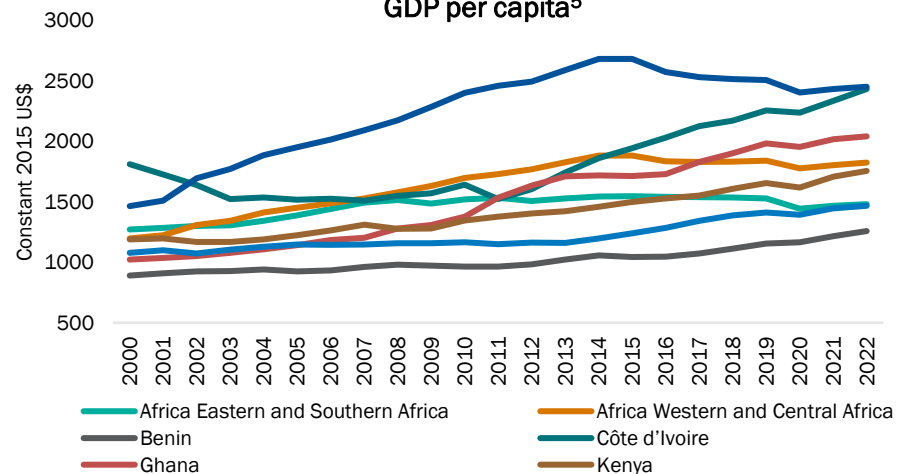
**Population growth remains uneven** across the continent. While Ghana and Kenya experienced a growth rate of 1.9 per cent in 2022, Benin observed a 2.7 per cent increase in the same year.<sup>2</sup>

**Urban areas in Africa will attract an additional 1 billion residents by 2050.** Experts forecast the urban population to triple and the **number of “megacities”** — densely settled areas with 10 million or more residents — **to increase** from the current three (Cairo, Kinshasa and Lagos) to 14 by 2050.<sup>3</sup>

## Urban Population as % of Population<sup>4</sup>

Country	2000	2022
Senegal	40%	49%
Ghana	44%	59%
Côte d'Ivoire	35%	53%
Benin	38%	50%
Kenya	20%	29%
Nigeria	35%	54%

## GDP per capita<sup>5</sup>



## Characterising infrastructure in Africa



The road sector continues to carry around 80 per cent of freight and 90 per cent of passengers in Africa; nevertheless, 53 per cent of the roads remain unpaved and traffic deaths account for about one-fifth of the global number of victims.<sup>6</sup>



Transport emissions in sub-Saharan Africa grew to 156 tonnes of CO<sub>2</sub> between 2002 and 2016, with 153 per cent growth in Ghana and 123 per cent in Kenya.<sup>7</sup> To meet climate goals, around 40 per cent of Africa's vehicle fleet will need to be electric by 2040.<sup>7</sup>



Seaborne containerised trade has faced a multitude of challenges since 2020 around the globe. Sub-Saharan Africa also experienced a dip in import and export volumes in 2020 relative to 2019, though the figures have been recovering in subsequent years.<sup>8</sup>



Africa's air traffic growth is projected to surpass the global average, reaching 7.4 per cent, by 2023.<sup>9</sup>



Water accessibility in sub-Saharan Africa, while improving, varies significantly both within and across countries.<sup>10</sup> For example, 73 per cent of the population of Côte d'Ivoire has a domestic water supply, but this falls to 15 per cent in rural areas. The absence of sanitation is typically more acute.



In Senegal, Ghana, Côte d'Ivoire, Benin, Kenya and Nigeria collectively, there is a shortage of 21.5 million homes. More than half of the continent's urban population lives in informal settlements.<sup>11</sup>



The volume of waste generated in sub-Saharan Africa is rising. It is estimated to reach 269 million tonnes per year by 2030, up from 180 million tonnes currently.<sup>12</sup> Its municipal solid waste collection coverage is below 50 per cent.

Climate change projections point to frequent extreme heat events, increasing aridity, changes in rainfall and as much as a metre's sea-level rise by the end of this century. Rainfed agricultural systems, on which the livelihoods of many of the region's population depend, are particularly vulnerable. As agricultural livelihoods become more precarious, the rate of rural–urban migration is likely to grow, adding to the strong urbanisation trend. Urbanisation and improved living standards will increase demand for cooling in buildings, further contributing to urban energy demand and requiring electrical grid reinforcement.

Metric	Senegal	Ghana	Côte d'Ivoire	Benin	Kenya	Nigeria
GDP per capita (constant 2015 US\$), 2022 <sup>5</sup>	1,465	2,031	2,430	1,226	1,755	2,450
Population (millions), 2022 <sup>13</sup>	17	33	28	13	54	219
Infrastructure investment (% of GDP) <sup>14</sup>	9.2%	6.5%	4.5%	8.3%	6.8%	4.4%
Infrastructure gap (% of GDP) <sup>14</sup>	2.2%	2.5%	0.8%	3.3%	1.2%	1.1%

[1] World Bank (2019), *Beyond the Gap: How Countries Can Afford the Infrastructure They Need while Protecting the Planet*, <https://hdl.handle.net/10986/31281>; [2] World Bank Data, *Population growth (annual %)*, <https://data.worldbank.org/indicator/SP.POP.GROW>; [3] United Nations (2019), *Africa's megacities a magnet for investors*, <https://www.un.org/africaneconomicmagazine/april-2019/africa%E2%80%99s-megacities-magnet-investors>; [4] World Bank Data, *Urban population (% of total population)*, <https://data.worldbank.org/indicator/SP.URB.TOTL.IN.ZS>; [5] World Bank Data, *GDP per capita (constant 2015 US\$)*, <https://data.worldbank.org/indicator/NY.GDP.PCAP.KD>; [6] African Development Bank (2014), *5 Infrastructure Development: In: Tracking Africa's Progress in Figures*, <https://www.afdb.org/en/knowledge/publications/tracking-africa%E2%80%99s-progress-in-figures>; [7] African Development Bank (2023), *Transport: Toward a more inclusive, safer and cleaner mobility in African Cities*, [https://www.afdb.org/sites/default/files/2023/01/18/transport-toward-a-more-inclusive-safer-and-cleaner-mobility-in-african-cities\\_sudap\\_paper\\_-\\_addb\\_umdf\\_-\\_2022.pdf](https://www.afdb.org/sites/default/files/2023/01/18/transport-toward-a-more-inclusive-safer-and-cleaner-mobility-in-african-cities_sudap_paper_-_addb_umdf_-_2022.pdf); [8] UNCTAD (2023), *Review of Maritime Transport 2023*, [https://unctad.org/system/files/official-document/mtt2023\\_en.pdf](https://unctad.org/system/files/official-document/mtt2023_en.pdf); [9] Boeing (2023), *Commercial Market Outlook 2023-2042*, <https://www.boeing.com/commercial/market/commercial-market-outlook>; [10] WEF (2022), *Low water accessibility in Sub-Saharan Africa means children are having to go to wells instead of to school. How big is the problem?*, <https://www.weforum.org/agenda/2022/09/water-accessibility-divide-sub-saharan-africa-visualised/>; [11] UN Statistics Division (2021), *The SDG Report 2021 Extended Report*, <https://unstats.un.org/sdgs/report/2021/extended-report/Goal%2011/final.pdf>; [12] Adedara et al. (2023), *Municipal Solid Waste Collection and Coverage Rates in Sub-Saharan African Countries: A Comprehensive Systematic Review and Meta-Analysis*, *Waste* 2023, 1(2), 389-413; <https://doi.org/10.3390/waste1020024>; [13] World Bank Data, *Population, total*, <https://data.worldbank.org/indicator/SP.POP.TOTL>; [14] Global Infrastructure Hub (GI Hub), 2018, *Global Infrastructure Outlook*, Sydney, <https://outlook.gihub.org/>.



# Annex D: Ukraine



**European Bank**  
for Reconstruction and Development

## Impact of Russia's war on Ukraine for the country's infrastructure and its people<sup>1</sup>



The ongoing conflict has caused extensive damage to Ukraine's infrastructure and people. As of December 2023, around 9.6 million people remained displaced, including 5.9 million across Europe and 3.7 million within Ukraine. Access to basic services and economic opportunities have been lost, with women and underserved groups most affected.

Over the two years of war, direct damage to buildings and infrastructure has amounted to US\$ 152 billion (approximately €137 billion). Housing and transport are most affected, with damage to 10 per cent of all housing stock, 8,400 km of roads and more than 50 km of railways. There has been a major impact on municipal sectors, too, such as damage to 207 water treatment facilities and pumping stations, and 234 sewage treatment plants and pumping stations.

## Investments and policy priorities over the next five years in Ukraine



- In the early years, **housing** efforts should focus on rapid repairs and the reconstruction of damaged buildings, followed by replacing obsolete and energy-inefficient buildings.
- Transport** should focus on repairing and reconstructing internal and cross-border connectivity in all sub-sectors, including public transport, and mobilise efficient project preparation for reconstruction.
- Water** supply and sanitation efforts should reconstruct damaged infrastructure and restore service delivery, while bolstering the capacity of the relevant authorities in the medium term.
- Irrigation and water resource** priorities include restoring damaged systems, replacing assets in areas that recently faced changes in government control, and building back better of on-farm irrigation technology.
- Other **municipal services**, including district heating and solid waste management, require continued critical services provision and debris removal efforts.
- Public-sector investments should be accompanied by sectoral and governance reforms to facilitate future rebuilding.

(US\$ billion)	Damages (direct costs of destruction/ damage)	Loss (changes in economic flows)	2024-33 needs (costs of repair, restoration and reconstruction)
<b>Housing</b>	<b>55.9</b>	<b>17.4</b>	<b>80.3</b>
Irrigation and water resource management	0.7	0.7	10.7
<b>Transport</b>	<b>33.6</b>	<b>40.7</b>	<b>73.7</b>
Water supply and sanitation	4.0	11.6	11.1
Municipal services	4.9	6.8	11.4

## Suggestions on implementation

- The recovery and reconstruction plan for Ukraine involves addressing urgent needs and preparing for long-term goals.
- This includes leadership at the highest government level, EU integration and securing emergency funding.
- Reconstruction must be strategically prioritised across all sectors, with a focus on resilience and quality.
- Partnerships with international allies must be guided by ongoing needs assessment, aligned priorities, joint planning, financial accountability and effective coordination.
- New financial approaches are needed, such as recovery funds, renovation schemes, green bonds/sustainability-linked bonds and loans, special insurance and sub-sovereign lending.
- Building capacity for project preparation, including local experts and project implementation units, is also important.

[1] World Bank (2024). Ukraine: Rapid Damage and Needs Assessment (RDNA3). Washington, DC. <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/099021324115085807/p1801741bea12c012189ca16d95d8c2556a>



# Annex E: Digitalisation of sustainable infrastructure

**Digitalising sustainable infrastructure leads to smarter, greener, more inclusive solutions that enhance people's lives and protect the environment**

## IoT (Internet of Things) technologies

IoT devices, such as sensors and connected devices, are fundamental in sustainable infrastructure. They collect data on everything from traffic patterns to air quality, enabling the real-time monitoring and management of infrastructure.

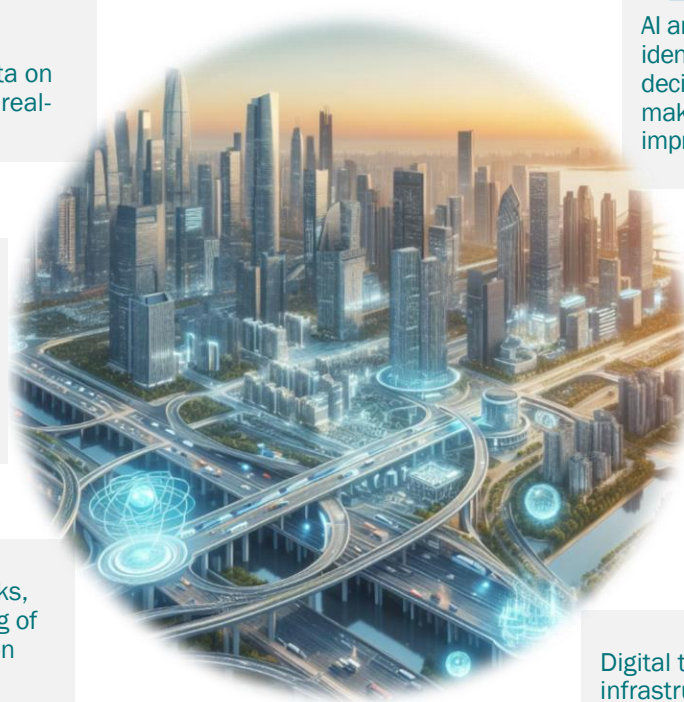
## Cloud and edge computing

Cloud computing provides scalable, flexible computing for large datasets, while edge computing reduces latency by processing data closer to its source, enhancing real-time applications. Both technologies are crucial to managing data and immediate processing in smart cities and logistics.

## Advanced connectivity

High speed and low latency, especially through 5G networks, are essential for the real-time transmission and processing of data. They support faster and more reliable communication between connected devices and enable advanced applications in various infrastructural value chains.

Digitalisation can transform all infrastructure (municipal and transport) projects, at every stage of the project lifecycle. Done well, digitalisation can realise greater efficiencies, performance, reliability, and customer (user) experience gains by connecting every player in the value chain through good data and better decision making.



## Artificial intelligence (AI) and Big Data analytics

AI and Big Data analytics process collected data to identify patterns, predict trends and automate decision-making processes. This technology helps in making informed decisions, optimising operations and improving services based on data-driven insights.

## Automation and robotics

Smart automation technologies can improve efficiencies in multiple areas: robots automate warehouse tasks; drones survey large, inaccessible areas; and autonomous vehicles optimise traffic and public transport.

## Digital twin and buildings information management technology

Digital twins create virtual replicas of physical infrastructure, allowing for simulation, analysis and testing of various scenarios in a virtual environment. This aids in the introduction of new concepts and technologies in building, managing, and operating various infrastructure.

## The EBRD's Digital Approach

The EBRD's Digital Approach focuses on **three intervention areas**:

- 1) the roll-out of essential digital infrastructure and service foundation
- 2) encouraging digital adaptation among organisations
- 3) nurturing innovation among digital-first entities.

Integrating digital considerations across infrastructure projects is a core priority under the Bank's **adaptation focus**.

## Cybersecurity in the infrastructure sector

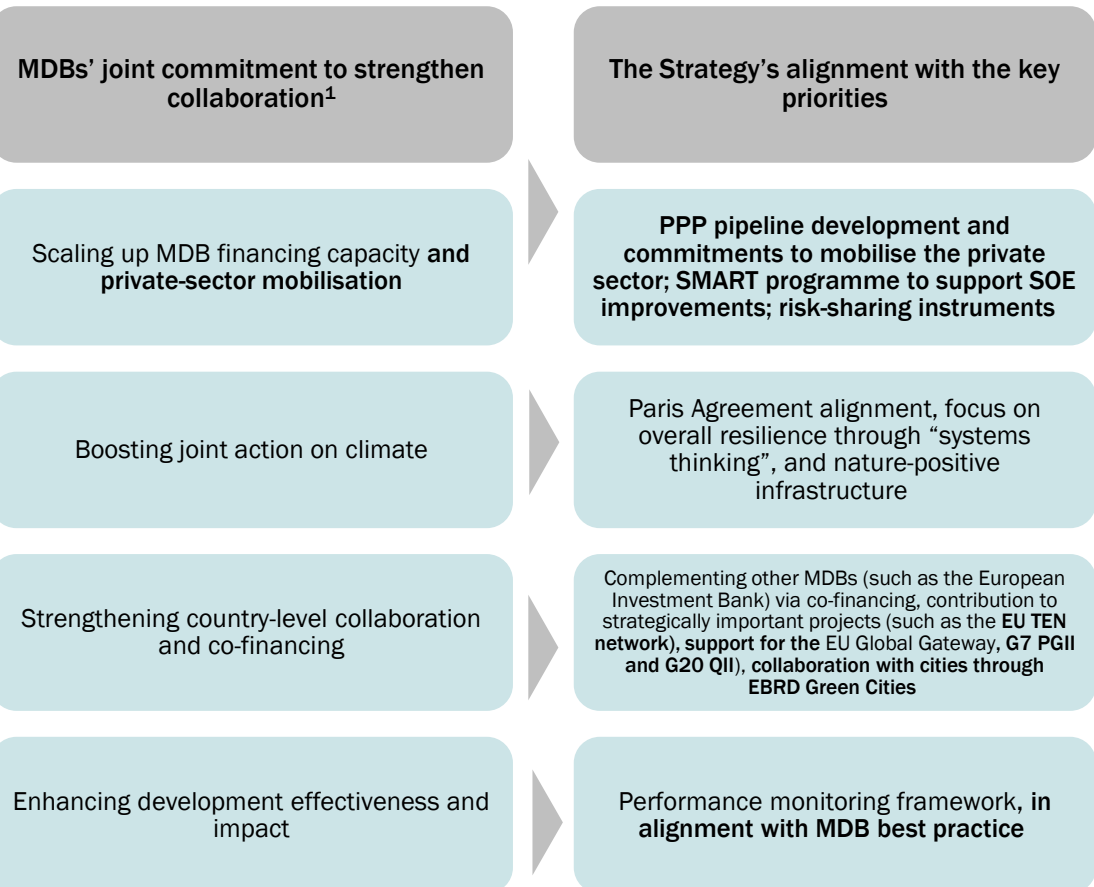
As the infrastructure sector becomes more interconnected, robust cybersecurity is imperative to safeguard resilience with regard to operational continuity, critical infrastructure safety and data integrity.





# Annex F: Collaboration with other MDBs

## Towards a “better, bigger and more effective” MDB system to collectively scale up global efforts to address the multiple crises the world faces



## The Strategy complements the EBRD's unique position in the MDB community

### 1. An integrated approach to municipal and transport sectors

This Strategy is the first sector strategy issued by the group of ten major MDBs<sup>2</sup> that takes an integrated approach to the municipal and transport sectors as a single integrated strategy. This enables the EBRD to enhance project impact by unlocking synergies and adding value across both sectors.

### 2. The delivery of sub-sovereign lending

Basic municipal infrastructure networks and associated essential services are often publicly funded. The EBRD provides critical financing in these areas, particularly with sub-sovereign lending, using well-developed models to achieve efficient delivery of public services. Public service contracting and other forms of performance-based contracting can be used as a means of commercialising public services and creating creditworthiness to enable sub-sovereign investments.

### 3. Role in Ukraine's recovery and reconstruction

As Ukraine's largest institutional investor, the EBRD deployed €1.7 billion and €2.1 billion in the country in 2022 and 2023, respectively. Transport and municipal financing accounted for 11.4 per cent of the total during this period, given the extensive damage to housing and transport.<sup>3</sup>

Following the approval of the general capital increase in late 2023, the Bank is expected to sustain its strong support for Ukraine in the near term. Addressing urgent needs in recovery and reconstruction may imply a relatively greater proportion of public-sector financing in the short term, backed by concessional resources, as the country rebuilds for a green, resilient, inclusive and digital economy in the long run.

[1] ADB, AfDB, AIIB, CEB, EBRD, EIB, IDB, IsDB, NDB, WBG. (2024). Viewpoint Note: MDBs Working as a System for Impact and Scale. <https://www.iadb.org/document.cfm?id=EZIDB0000577-986313001-135>

[2] ADB, AfDB, AIIB, CEB, EBRD, EIB, IDB, IsDB, NDB, WBG.

[3] See Annex D for further details.





# Annex G: Linkages to the SDGs

The United Nations SDGs are a collection of 17 global goals and 169 targets designed as a “blueprint to achieve a better future for all”. EBRD activities in the municipal and transport sectors directly contribute to 15 of the 17 SDGs.



EBRD transition qualities	Green																
	Well governed																
	Competitive																
	Inclusive																
	Resilient																
	Integrated																
Infrastructure contribution	Municipal and transport																

SIG SDG mapping methodology, developed in-house by SIG’s sector specialists, with guidance from the EBRD’s Country Strategy and Results Management team, maps the various elements of a single project to multiple SDGs based on three pillars: pillar 1 – targeted EBRD transition qualities; pillar 2 – sector contribution; and pillar 3 – project-specific characteristics, such as Gender SMART and Green Cities. This process is rooted in the OECD’s SDG mapping principles and, like other MDBs, uses the Harmonised Indicators for Private Sector Operations SDG indicator framework as a guide to link estimated project impacts to the SDGs.



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