

# Concept Note

---

## **Green Cities Programme**

Regional (20 developing countries across the Middle East and North Africa, Western and Central Asia, Southern and Eastern Europe) | European Bank for Reconstruction and Development (EBRD)

4 March 2016



**GREEN  
CLIMATE  
FUND**



GREEN  
CLIMATE  
FUND



# Concept Note

**The Green Climate Fund (GCF) is seeking high-quality projects or programmes.**

Accredited entities may choose to submit a concept note, in consultation with the relevant national designated authority, to present the proposed project or programme idea in order to receive early feedback and recommendation.

Project/Programme Title: Green City Programme

Country/Region: Regional (20 developing countries across the Middle East and North Africa, Western and Central Asia, Southern and Eastern Europe)

Accredited Entity: European Bank for Reconstruction and Development

National Designated Authority: NDAs as designated on the GCF website

**PROJECT / PROGRAMME CONCEPT NOTE**

A. Project / Programme Information	
A.1. Project / programme title	European Bank for Reconstruction and Development (EBRD) Green Cities Programme
A.2. Project or programme	Programme
A.3. Country (ies) / region	<p>20 beneficiary countries in Central Asia , Eastern Europe and the Caucasus, Southern and Eastern Mediterranean, and Western Balkans. Among the beneficiary countries, the Programme will initially focus on Armenia, Egypt, Georgia, Morocco and Kazakhstan. Countries as listed below, and see also the map in the Annex 1:</p> <ul style="list-style-type: none"> <li>• Central Asia: <b>Kazakhstan</b>, Kyrgyz Republic, Mongolia, Tajikistan, Turkmenistan, Uzbekistan</li> <li>• Eastern Europe and the Caucasus: <b>Armenia</b>, Azerbaijan, <b>Georgia</b>, Moldova</li> <li>• Southern and Eastern Mediterranean: <b>Egypt</b>, Jordan, Lebanon, <b>Morocco</b>, Tunisia</li> <li>• Western Balkans: Albania, Bosnia and Herzegovina, FYR Macedonia, Montenegro, Serbia</li> </ul>
A.4. National designated authority(ies)	<a href="#">NDAs as designated on the GCF website.</a>
A.5. Accredited entity	European Bank for Reconstruction and Development (EBRD)
A.6. Executing entity / beneficiary	Executing Entity: EBRD Beneficiary: Municipalities, Municipal Companies, and Local Sub-National Authorities
A.7. Access modality	Direct <input type="checkbox"/> International <input checked="" type="checkbox"/>
A.8. Project size category (total investment, million USD)	Micro ( $\leq 10$ ) <input checked="" type="checkbox"/> Small ( $10 < x \leq 50$ ) <input checked="" type="checkbox"/> Medium ( $50 < x \leq 250$ ) <input checked="" type="checkbox"/> Large ( $> 250$ ) <input type="checkbox"/>
A.9. Mitigation / adaptation focus	Mitigation <input checked="" type="checkbox"/> Adaptation <input checked="" type="checkbox"/> Cross-cutting <input checked="" type="checkbox"/>
A.10. Public or private	publicpublic
A.11. Results areas (mark all that apply)	<p><i>Which of the following targeted results areas does the proposed project/programme address</i></p> <p>Reduced emissions from:</p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Energy access and power generation (E.g. on-grid, micro-grid or off-grid solar, wind, geothermal, etc.)</li> <li><input checked="" type="checkbox"/> Low emission transport (E.g. high-speed rail, rapid bus system, etc.)</li> <li><input checked="" type="checkbox"/> Buildings, cities, industries and appliances (E.g. new and retrofitted energy-efficient buildings, energy-efficient equipment for companies and supply chain management, etc.)</li> <li><input type="checkbox"/> Forestry and land use (E.g. forest conservation and management, agroforestry, agricultural irrigation, water treatment and management, etc.)</li> </ul> <p>Increased resilience of:</p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Most vulnerable people and communities (E.g. mitigation of operational risk associated with climate change – diversification of supply sources and supply chain management, relocation of manufacturing facilities and warehouses, etc.)</li> <li><input checked="" type="checkbox"/> Health and well-being, and food and water security (E.g. climate-resilient crops, efficient irrigation systems, etc.)</li> <li><input checked="" type="checkbox"/> Infrastructure and built environment (E.g. sea walls, resilient road networks, etc.)</li> <li><input checked="" type="checkbox"/> Ecosystems and ecosystem services</li> </ul>

<sup>1</sup> Please use the following naming convention for the file name: “[CN]-[Agency short name]-[Date]-[Serial number]” (e.g. CN-ABC-20150101-1).

	(E.g. ecosystem conservation and management, ecotourism, etc.)
A.12. Project / programme life span	3 years
A.13. Estimated implementation start and end date	Start: 1/01/2017 End: 31/12/2019

## B. Project/Programme Details

The Fund requires the following preliminary information in order to promptly assess the eligibility of project/programme investment. These requirements may vary depending on the nature of the project/programme.

<p>B.1. Project / programme description (including objectives)</p>	<p>Cities are dynamic and vital parts of society, and are the main engines of social, economic and technological development. According to the UN, around half of the world's population now lives in urban areas, and by 2050 this is likely to exceed 70 per cent of the global population. In order for cities to continue to provide their populations with a myriad of necessary services, cities' already substantial demand for resources must increase. As such, cities are a major driver of environmental impacts. Indeed, research indicates that cities already account for up to 70 per cent of energy use and 80 per cent of greenhouse gas emissions, figures which are set to rise over time. Furthermore, major environmental concerns for cities range from the quality of air, traffic congestion and limited land resources to pressure on water resources and loss of green areas due to land use change. Urban activities and how they are organised are a key determinant of wider environmental health, and deeply affect overall quality of life of urban populations.</p> <p>Urban issues are particularly acute in EBRD's countries of operation (COO). EBRD nations are characterized by inefficient use of energy and high carbon intensity (tCO<sub>2</sub>eq/GDP), with some countries almost eight times that of the global average. This energy inefficiency is reflected in the poor energy performance of both public and private buildings in urban areas. Also, many cities in EBRD COOs produce much more municipal solid waste per capita per year than the EU average (for example, in Georgia, this is about double the EU average) and much of this waste ends up in the landfills that "are simply dumpsite areas where the municipal services (or contractors) pile up or simply deposit waste" (UNECE, Environmental Performance Review: Georgia, 2010). In addition, recycling of waste in COO's urban areas is negligible compared to an EU average of 39 per cent (European Environment Agency, 2015) and an EU target of 50 per cent of municipal solid waste (MSW) recycling by 2020. Furthermore, residents of cities in the region are exposed to much higher levels of urban air pollution than other populations. For example, according to the World Bank (2015) 100 per cent of Egypt's urban population is exposed to levels of dangerous particulate matter (PM<sub>2.5</sub>) that exceed WHO guidelines, compared to a world average of around 86 per cent. Last, cities within this region face issues of deteriorating or obsolete infrastructure for meeting demand and quality of life standards.</p> <p>The EBRD Green Cities (GC) Programme (the Programme) aims to deliver a comprehensive and systematic approach to addressing the key environmental challenges facing cities in the EBRD region. Further, the GC Programme is an extension of EBRD's Green Economy Transition (GET) which envisages using public channels of transition impact to support programmes which realize carbon reductions, environmental improvements, and increase material and energy efficiency.</p> <p>Current literature views a 'Green City' as an urban environment that preserves environmental quality, provides access to natural amenities, is resilient to climatic events, promotes a high</p>
--	--

**PROJECT / PROGRAMME CONCEPT NOTE**

	<p>quality of life, and encourages green behaviour. '. The GC Programme will build on this consensus to provide a systematic framework for cities to effectively integrate climate mitigation and adaptation into their planning and operations.</p> <p>Based on the urban challenges in EBRD COOs, the GC Programme has several interdependent aims:</p> <ol style="list-style-type: none"> <li>1. Facilitate and stimulate sovereign and sub-sovereign finance for climate change mitigation and resilience investments in priority sectors including:             <ol style="list-style-type: none"> <li>a. Public building energy efficiency;</li> <li>b. Urban Renewable Energy;</li> <li>c. Water and wastewater;</li> <li>d. Urban public transport;</li> <li>e. Urban roads and lighting;</li> <li>f. Solid waste management;</li> <li>g. District heating modernisation.</li> </ol> </li> <li>2. Build capacity of city administrators and key stakeholders through targeted technical assistance aimed at developing skills in:             <ol style="list-style-type: none"> <li>a. Systematic, comprehensive Green City strategic planning;</li> <li>b. Establishing and managing environmental / social safeguards;</li> <li>c. Delivering outcomes that promote gender equality.</li> </ol> </li> <li>3. Deliver policy support for:             <ol style="list-style-type: none"> <li>a. Preparation and implementation of green strategy documents;</li> <li>b. Development of legislative/regulatory amendments as required.</li> </ol> </li> </ol> <p>By achieving these aims, the Programme will deliver infrastructure investments with improved environmental performance, transforming the quality of urban environments, and improving the quality of life of urban residents. Specifically, by taking a systematic approach, participant cities will improve their public-sector building energy efficiency, increase renewable energy deployment, reduce municipal solid waste generation, increase recycling rates, reduce water waste, expand uptake of sustainable transport options and secure efficiency gains in public buildings. In addition, the Programme will assist cities to maximize their climate change resilience, and establish the policy framework necessary to support the long-term environmental success of their investments.</p> <p>This Programme reflects three unique elements of the EBRD's approach. First, the Programme reflects the environmental dimension, which is a component of the transition approach at the core of the EBRD mandate. Second, the Programme builds on two decades of investment experience in cities to roll-out scalable and replicable financial products. Furthermore, the Programme employs EBRD's successful business model that combines investment, technical assistance and policy dialogue to support cities to successfully transition into 'green cities'. In other words, the GC operational model combines the following instruments:</p> <ol style="list-style-type: none"> <li>1. <b>Project Financing</b> of specific energy efficiency, renewable energy, resource efficiency and environmental investments with clear estimates of energy savings and carbon emission reductions</li> <li>2. <b>Technical Assistance and capacity building</b> to support project preparation, project implementation</li> <li>3. <b>Policy Dialogue</b> to support the development of an enabling environment for environmental investments and actions.</li> </ol> <p>Cities present some of the greatest challenges and opportunities for addressing climate change. Through the GC Programme, EBRD and GCF can work together to improve the lives of growing urban populations by delivering a systematic approach that supports economic and social development and environmental improvement.</p>
<p>B.2. Background information on project/programme sponsor</p>	<p><b>EBRD 's initiatives to build a low carbon, climate resilient economy</b></p> <p>Since 2006, the EBRD has invested €19.4 billion in over 1,087 climate mitigation and adaptation projects to promote efficiency and innovation investments in energy for countries. This resulted in 77.7 million tonnes of CO2 emissions reductions.</p> <p>In 2015, the Bank further extended its environmental focus under the Green Economy Transition (GET), as an EBRD Board-approved overall approach. Through the GET, the EBRD has a target of delivering 40 per cent of its annual investments in 'green' projects by 2020.</p> <p>In urban areas, EBRD has a proven record helping cities invest in climate adaption and mitigation. The Bank financed 45 projects in 39 cities and municipalities through its municipal</p>

	<p>and environmental infrastructure division during 2015 (41 transactions in 2014), representing a total EBRD commitment of €708 million (€726 million in 2014).          These investments ranged from investing in public transport infrastructure, new or upgraded water supply and waste water treatment, energy efficient district heating solutions and municipal solid waste projects. More than 35 million people are expected to benefit from these initiatives, while reducing 878,000 tCO<sub>2</sub>e per year.          Notable transactions included a €175 million investment in the City of Cairo’s Metro Line II and a €125 million loan to support the development of a high-tech hospital near the Turkish capital Ankara (see case studies in Section JJ). To date, though, these investments have tended to be delivered in an ad hoc manner depending on city administration demand. What is needed is a systematic approach to green city development that can accommodate the complexity of urban sustainability.</p>
<p>B.3. Market overview</p>	<p>Urban and municipal services in the Programme’s regions are in various stages of development, but commonly lack internal resources to meet service demands, including investment needs. Markets for green city measures vary across regions, and need to be examined separately.</p> <p><b>Central Asia and Mongolia</b></p> <p>Although the reform process has started, the municipal infrastructure sector remains at an early stage of development. The reform steps successfully completed include decentralisation of ownership and decision-making in most countries, although recently several countries have reversed or are contemplating reversing the decentralisation process. The governance of municipality-utility relationships needs to be improved further (e.g., service contracts are not yet common) and there is a need to increase the transparency of contractual arrangements. Regulatory legislation is weak and political interference in the regulatory process remains prevalent. Cross-subsidies are widespread. Tariffs remain substantially below cost-recovery and do not even cover operation and maintenance in most cases. Metering is rare and billing based on actual use is almost non-existent, providing little incentive for efficient use. Low collections combined with low tariffs require a significantly high level of subsidies to maintain even modest levels of service.</p> <p>Private sector participation is prevalent in the deregulated mini-bus service provision, which is profitable and operates without subsidies, but which has limited capacity to renew its mostly depreciated fleet. Access to commercial financing remains a major issue in the other countries and capital investments are financed almost exclusively from grants from the state, state entities or the international donor/IFI community (except in Kazakhstan). Cost inefficiencies (excessive employment, high energy use), poor revenue collection (low collection rates), high water losses and low water quality need to be addressed. Tariffs are typically set at the national level and interference regarding non-economic or social issues is common. Tariff reform continues to be a substantial challenge, including the elimination of very large cross-subsidies. There is no requirement to make relations between utilities and municipalities more formal and transparent, and in practice political interference is common.</p> <p>In market structure, there is a need to commercialise services, improve operations across the board, increase the coverage and quality of services, and improve cost control. The regulatory system needs to be enhanced to improve transparency and stimulate quality service delivery, depoliticise tariff setting and increase tariffs to cost recovery and eliminate cross-subsidies.</p> <p><b>Eastern Europe and the Caucasus</b></p> <p>Municipal utility services are decentralised both in terms of ownership and decision-making. Utilities are organised as municipal enterprises (semi-corporatised) with de jure management independence, but de facto heavy dependence on the local administration. The governance of municipality-utility relationships needs to be improved further (e.g., service contracts are not yet common) and there is a need to increase the transparency of contractual arrangements. While regulatory legislation is relatively good, political interference in the regulatory process remains significant. Cross-subsidies are widespread. Tariffs remain substantially below cost recovery and are based on out-dated norms rather than actual use. Metering is becoming more common (e.g., water sector in Armenia, Moldova and Belarus) but billing based on actual use remains almost non-existent in most of this region, providing little incentive for efficient use.</p> <p>With respect to urban transportation, private sector participation is prevalent in the deregulated mini-bus service provision, which is profitable and operates without subsidies,</p>

	<p>but which has limited capacity to renew its mostly depreciated fleet. Cities inherited a diverse set of generation old, public transport networks. With a typical city having established networks for trams, trolleybuses and buses, today's cities struggle to even maintain the existing service networks, let alone finance modernisation or expansion into new public transport networks. Severe lack of maintenance since the 1990s has caused the partial closure of public transport systems around the region. The modal split for public transport is slipping, edging under the 50 per cent level in most cities. Road building as a solution to congestion problems is widely acknowledged in the sector as a failed approach.</p> <p>There are some cases of private sector participation in water management (e.g., management contracts in Armenia). There are a few private operations in district heating but the legal basis and institutional capacity must be improved in order to upscale private sector participation. Access to commercial financing remains a major issue in some countries. Capital investments are financed almost exclusively from grants from the state or the international donor community and IFI loans most of which are concessional. A precondition for commercial investment is improvements in governance, regulation and contractual arrangements along with tariff reform.</p> <p>Most countries have set up national utility regulators, which could enable the depoliticisation of tariff setting. While the legal framework typically allows for cost reflective tariffs, this rarely happens in practice and tariff reform continues to be a substantial challenge, including the elimination of cross-subsidies. There is no requirement to make relations between utilities and municipalities more formal and transparent, and in practice political interference is common.</p> <p><b>South-Eastern Europe</b></p> <p>Although control of urban and municipal infrastructure has formally been transferred to most municipalities, utilities in major cities, with some exceptions, are still under the control of the state. A contradictory legal framework for land rights results in substantial central government interference in local infrastructure operations. Large operators tend to have better financial and operational performance, with adequate metering and bill collection. However, in most towns, inadequate metering, poor collection, and water and heat tariffs below cost-recovery levels prevail, leading to weak financial performance of the utilities. The absence of competitive pressure and clear performance targets contributes to poor operational performance and utilities are often very cost-inefficient. In addition, deficient legal frameworks and uneven regulatory performance limit broader private sector participation outside the urban transport sector. Furthermore, integrating the demand side in the delivery of energy services is an important challenge. Lack of demand side measures leads to excessive consumption and lack of incentives for improvement. There is a general lack of commercial financing for municipal utilities due to the commercial limitations of local utilities leaving utilities and municipalities dependent on IFI financing and when available grants</p> <p>Important challenges remain in the area of tariff setting – further increases are needed to move closer to full cost recovery, remove cross-subsidies that remain prevalent in the region and assist in improving the financial performance of municipal infrastructure operations. Other key challenges include regionalisation of municipal water utilities, a strengthened regulatory framework and introduction of more transparent service contracts, further enhancement of financial autonomy of municipalities under effective regulation.</p> <p><b>Southern and Eastern Mediterranean</b></p> <p><b>TBI</b></p>
<p>B.4. Regulation, taxation and insurance</p>	<p>EBRD need not obtain any additional licenses or permits to carry out the proposed activities in this Programme. For more information, please refer to the Agreement establishing the Bank (the EBRD), the "AEB". The Bank is an international financial institution established and acting on the basis of an international agreement known as the Agreement Establishing the European Bank for Reconstruction and Development dated 29 May 1990, as amended (the "EBRD Agreement"). Members of the Bank are parties to the EBRD Agreement and are bound by the terms of the EBRD Agreement. As an international organisation, the Bank is established and governed on the basis of public international law and, therefore, the Bank is not incorporated under the laws of any country and has no company registration in any country.</p>

**PROJECT / PROGRAMME CONCEPT NOTE**

<p>B.5. Implementation arrangements</p>	<p>All works will be tendered and contracts awarded in accordance with international standards aligned to the EBRD’s Procurement Policies and Rules. Typically, contract supervision is undertaken by international consultants to ensure contract compliance.</p> <p>The Bank will engage with relevant countries through its network of local offices, with each country having at least one representative office. All projects will be subject to detailed technical, financial, legal and environmental and social due diligence as they move through a three stage management approval process. The majority of projects are Board approved, by the EBRD’s Board of Directors (that is, shareholder representatives). The nations we will work with will be from the Bank’s COO and they will be based and their firm commitment to pursue a programme of investments based on the GC concept. The project pipeline will be generated from an assessment done as part of the GC Action Plan.</p> <p>The Programme will monitor its investments through installation, implementation and operation to ensure that they meet overall programme targets, in line with the GCF results framework. EBRD has established monitoring methods for measuring projects’ performance. Indicators include population benefitting from investment and annual GHG reductions. These measurements are integral to EBRD’s operations. The Programme’s beneficiaries will be held to the practices standards of the Bank’s Sustainable Resource Initiative.</p>
<p><b>C. Financing / Cost Information</b></p>	
<p>C.1. Description of financial elements of the project / programme</p>	<p>The Programme’s financial instruments address three key regional barriers to the implementation of urban climate mitigation and adaptation measures: access to finance, resource constraints, and technical capacity. Regionally, the most prevalent barrier is a lack of access to finance. The Fund will assist the Programme’s clients (local and city governments) with accessing affordable finance necessary to address critical, long-term environmental and infrastructure challenges that have historically taken a backseat to short-term economic or political considerations. With the support of the GCF, the GC Programme’s mix of grants and concessional finance, technical assistance for project preparation, and policy dialogues will create an enabling environment for substantive, positive change.</p> <p>Urban planning and development requires resources and capacity beyond finance. Long-term, systematic planning requires both significant investments of officials’ time, and sufficient technical capacity to develop and implement complex systematic programmes. Both officials’ time and capacity are in short supply in the EBRD region. The GC Programme addresses these barriers by providing technical experts to facilitate and expedite planning and development processes. Through the complementary resources of the Programme, cities can develop effective green strategies without placing undue burdens on their internal resources.</p> <p>The Programme will also address technical capacity gaps within beneficiary cities. City and local government officials may not be familiar with Green City planning concepts. To take a comprehensive approach, Green City planning requires interdisciplinary depth in policy, technical and financial issues. The GC Programme will tackle this barrier by training officials in the skills required to develop and implement strategic green city policy and planning instruments. These skills will help city officials establish the necessary enabling frameworks for green city development.</p>

PROJECT / PROGRAMME CONCEPT NOTE

	Financial Instrument	Amount	Currency	Tenor	Pricing	
C.2. Project financing information	<b>Total project financing (a) = (b) + (c)</b>	1200	<u>million USD</u> ( <u>\$</u> )			
	(b) Requested GCF amount	(i) Senior Loans	120 <sup>1</sup>	<u>million USD</u> ( <u>\$</u> )	( 20 ) years – Subject to change  ( ) years	( .75 ) %  ( ) %  ( ) % IRR
		(ii) Subordinated Loans	.....	<u>Options</u>		
		(iii) Equity	.....	<u>Options</u>		
		(iv) Guarantees	.....	<u>Options</u>		
		(v) Reimbursable grants *	.....	<u>Options</u>		
		(vi) Grants *	444 <sup>2</sup>	<u>million USD</u> ( <u>\$</u> )		
	<sup>1</sup> Items (i) and (ii) have to be considered as floor and ceiling respectively, i.e. the programme will allocate <b>at least</b> USD120m from GCF as concessional loan, and <b>no more</b> than USD384m from GCF as investment or technical assistance grant. <sup>2</sup> Of which USD60m for technical assistance and USD384m for investment support.					
	<b>Total Requested (i+ii+iii+iv+v+vi)</b>		564	<u>million USD</u> ( <u>\$</u> )		
	(c) Co-financing	Financial Instrument	Amount	Currency	Name of Institution	Seniority
<u>Senior Loans</u>		480	<u>million USD</u> ( <u>\$</u> )	EBRD/TBD	<u>Options</u>	
<u>Grant</u>		60	<u>million USD</u> ( <u>\$</u> )	EBRD/TBD	<u>Options</u>	
<u>Grant</u>		96	<u>million USD</u> ( <u>\$</u> )	EBRD/TBD	<u>Options</u>	
<u>Options</u>		.....	<u>Options</u> ( <u>\$</u> )	.....	<u>Options</u>	
Lead financing institution: EBRD, sponsors						
(d) Covenants	TBD, could include tariff reform, public service contracts, usual financial covenants					
(e) Conditions precedent to disbursement	TBD, could include reforms to tariffs, corporatisation					

**D. Expected Performance against Investment Criteria**

Please explain the potential of the Project/Programme to achieve the Fund’s six investment criteria as listed below.

<p>D.1. Climate impact potential <i>[Potential to achieve the GCF's objectives and results]</i></p>	<p>Total tonnes of CO<sub>2</sub> eq to be avoided or reduced per annum</p> <p><b>1,787,000 tons CO2 eq per year</b></p> <p><b>39.3 million tons CO2 eq over programme assets’ lifetimes of 20 years</b></p> <p>Expected total number of direct and indirect beneficiaries and number of beneficiaries relative to total population (e.g. total lives to be saved from disruption due to climate-related disasters)</p> <p><b>Direct Beneficiaries: 10,400,000</b></p> <p><b>Female Direct Beneficiaries: 5,200,000</b></p> <p><b>Indirect Beneficiaries: 6,000,000</b></p> <p><b>Indirect Female Beneficiaries: 3,000,000</b></p> <p><b>Number of People with Strengthened Awareness of Green Cities: 2,460,000</b></p> <p><b>% Regional Population Directly Benefitting: 4.24%</b></p> <p><b>% Benefiting of Vulnerable Populations: TBD</b></p>
---	--

<p>D.2. Paradigm shift potential <i>[Potential to catalyze impact beyond a one-off project or programme investment]</i></p>	<p><b>Scaling up and replicating Green Cities</b></p> <p>The Programme will be critical for diffusing lessons and green development models to all cities in the target region. In particular, through the application of finance, technical and policy support the pilot cities will generate experience and knowledge that will be shared in a larger, open network. Specifically, cities in the twenty beneficiary countries and beyond will have access to successful cases of how financing green city measures improve urban quality of life and enhance cities’ competitiveness improve climate change resilience. These results will be shared through a variety of channels including guidance documents and manuals, case study brochures, presentations, and an annual regional green city forum open to all. Using these channels, the aim will be to encourage replication and scaling up of green city approaches across the region and beyond. In this way, the Fund can contribute to a larger urban transition, partially catalyzed by its investment into EBRD’s initiative, which scales up and disseminates models to a wider pool of beneficiaries. To further ensure scaling and replication, the Programme will link to other green city initiatives of IFIs and other stakeholders such as the World Bank’s Global Platform for Sustainable Cities and the Covenant of Mayors.</p> <p><b>EBRD’s Theory of Change</b></p> <p>A theory of change (ToC) diagram is presented in Figure 1 and provides the logical underpinning of the Programme. Specifically, the ToC highlights the relation between “activities”, the main “products”, “results” and “impacts” achieved through the activities.</p> <p>The ToC conveys the logic that the combination of green city investments, improvements in cities’ technical capacity, and policy dialogue are necessary to drive wider adoption of green city measures and the consequent climate change mitigation and resilience impacts throughout the economies of participant countries.</p> <p><b>Potential for Knowledge and Learning</b></p> <p>The Programme will provide significant potential for knowledge transfer and learning – both within and between cities. Indeed, transfer of expertise and skills to city officials and other relevant stakeholders is a core objective of this programme. The roll out of the Programme to participating cities will generate a body of case study experience that will be drawn on to generate a range of knowledge products including:</p> <ul style="list-style-type: none"> <li>• Best practice manuals</li> </ul>
---	---

## PROJECT / PROGRAMME CONCEPT NOTE

- Training seminars for local government officials
- An annual Forum for participating cities to exchange experience
- Case study brochures

The audiences for these knowledge products will be varied. Within a city, it will be important to disseminate lessons learned across city departments as well as into the commercial and NGO sectors. The knowledge products will also be critical for conveying lessons learned between cities. Thus, key audiences for the knowledge products will be officials and stakeholders in other jurisdictions. City officials and relevant stakeholders will also benefit from EBRD's established knowledge dissemination seminars, which provide a forum for existing and prospective clients to focus on a specific topic and share experiences as part of EBRD's programmes. The most recent seminar, in Tbilisi, was on sustainable municipal services management and sector development.

The use of these knowledge products will enable the practical experience in GC developments to be shared across the region, and in doing so, expand the implementation of green city developments.

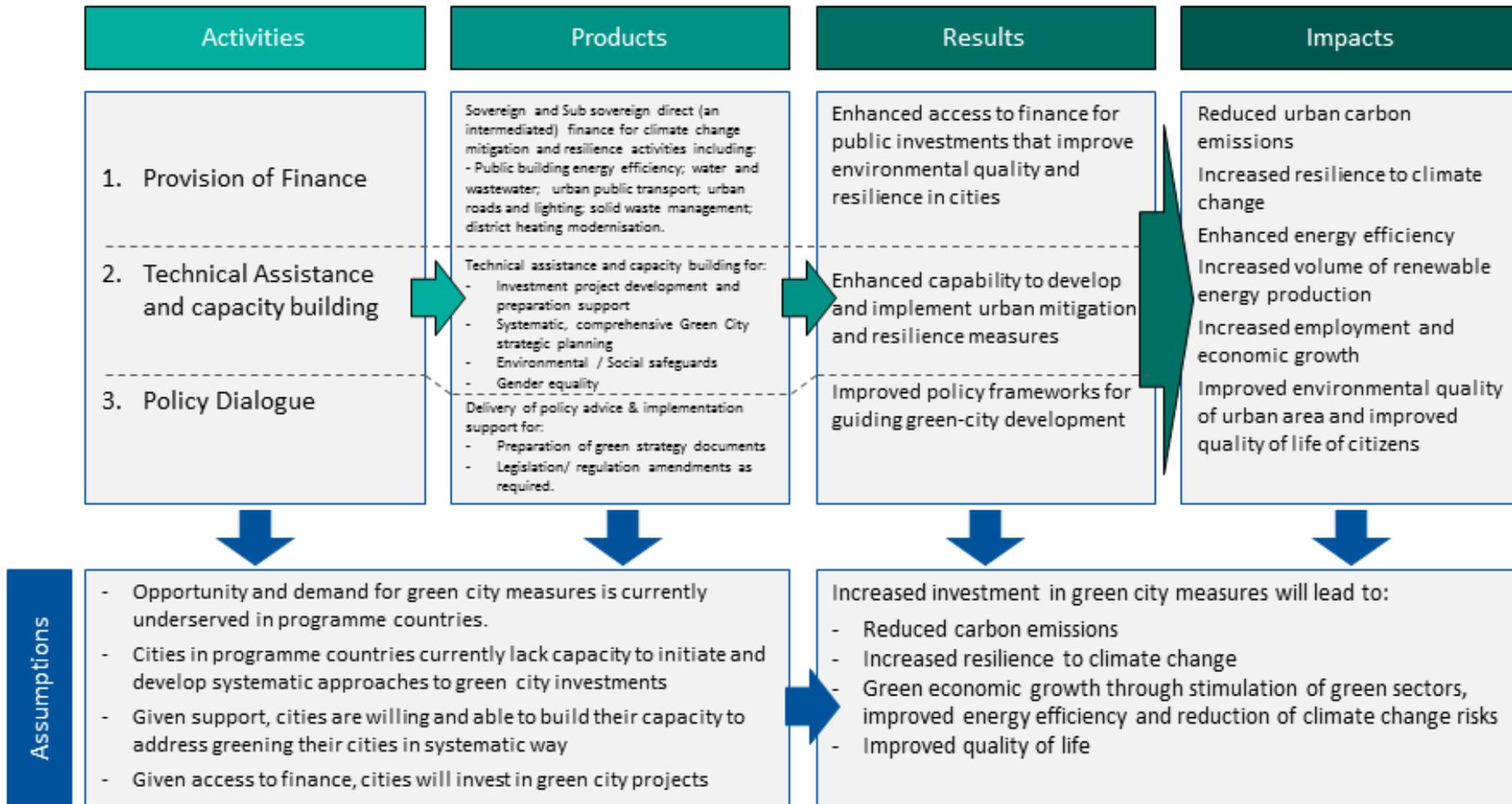
### **Contribution to the creation of an enabling environment**

The Programme contributes to creating an enabling environment for green city strategic planning and investment through the provision of accessible financing, targeted capacity building, policy dialogue and raising awareness of green urban measures.

### **Contribution to the regulatory framework and policies**

Creating an enabling policy and regulatory framework for GC actions is integral to the Programme's objectives. The GC Programme will work with city governments to develop and implement appropriate strategic, legislative and regulatory instruments to promote green city actions. The EBRD anticipates that a core plank of the policy dialogue activities will be to develop a strategic planning approach to guide green urban actions. Through these efforts, the Programme will demonstrate to city stakeholders the central role of an enabling policy framework for implementing successful green city measures.

Figure 1 EBRD Green city Programme Theory of Change



D.3. Sustainable development potential  
[Potential to provide wider development co-benefits]

The Programme aims to deliver essential urban services, notably in water and wastewater, public transport, urban roads and lighting, solid waste management, district heating and energy efficiency. These services have a direct impact on the citizen's health and safety, productivity and economic prosperity as well as environmental sustainability.

**Economic co-benefits**

By delivering demand-side water efficiency improvements and waste water recycling at scale in some of the most water-scarce regions in the world, the Programme will drive business competitiveness and reduce the water stress faced by communities.

Green jobs are important element of the Programme's co-benefits. For instance, FYR Macedonia mentioned in its Intended Nationally Determined Contributions (INDC) that investments in urban lighting and buildings alone will create around 4,000 jobs. This number will be similar in other countries.

**Social co-benefits**

The GC investments will deliver a range of health and social benefits. For example, improving the fuel efficiency of the public road transport will reduce harmful exhaust emissions, whereas delivering energy efficient heating and/or cooling in SEMED can help the countries to improve health and well-being as well as mitigating supply constraints.

**Environmental co-benefits**

To be added

**Gender-sensitive development impact**

[The EBRD's Strategy for the Promotion of Gender Equality](#) is core to the Bank's aim to achieve a more systematic approach in terms of gender equality. The Gender Equality Strategy includes specific references to the work to be done on climate change.

Consistent with the Bank's Gender Equality Strategy, the Programme aims to mainstream gender considerations into the financing, technical assistance, capacity building and policy dialogue activities. In this context, the Programme will draw on the EBRD's experience with past applications of gender analyses as a tool for identifying scope for addressing gender equality issues. Examples of where such analyses have been applied include Bishkek in the Kyrgyz Republic:

- Gender and public transport:  
A gender analysis sponsored by EBRD assessed how men and women use public transport and their respective priorities and concerns. Based on findings, the public transport company included the purchase of low-floor trolleybuses to allow easier access for passengers with prams and shopping bags. The fare system will accommodate different travel patterns of men and women. Recommendations were also made to strengthen the company's capacity to consider gender in its design of future investments and in terms of equal opportunities within the company itself.
- Gender and water services:  
Gender concerns were also taken into account in a recent EBRD investment into water infrastructure improvements in Bishkek that will address the city's problem of unreliable water supply and poor water quality. Recommended activities included strengthening the water company's capacity to take into account gender differences when developing services, increasing women's employment opportunities in the company, and designing and delivering a gender-differentiated communication strategy.

Mainstreaming gender equality into this Programme ensures alignment with the Gender Policy and the Gender Action Plan of GCF which aimsto:

- Ensure that women and men will equally benefit from loans/investments supported by the Fund;
- Address assessed potential project/programme risks on women and men associated with urban infrastructure investments financed by the Fund;

	<ul style="list-style-type: none"> <li>• Contribute to reducing the gender gap of climate change-induced social, economic and environmental vulnerabilities; and</li> <li>• Build women and men’s resilience to climate change.</li> </ul> <p>Specific proportion of men and women in jobs created will be assessed at the later stage.</p>
<p>D.4. Needs of recipient <i>[Vulnerability to climate change and financing needs of the recipients]</i></p>	<p><b>Climate risks in the beneficiary countries</b></p> <p><i>Western Asia</i></p> <p>Armenia, Azerbaijan and Georgia are experiencing the impacts of climate changes, such as increasing temperatures, melting of the glaciers, flooding, heat waves, and water shortages. Shifting precipitation patterns, glacial shrinkage and more variable hydrology have serious implications for water availability. This impacts the economic productivity of the region in a range of key sectors including agricultural irrigation, hydropower generation and natural resource extraction.</p> <p><i>Central Asia</i></p> <p>The countries in Central Asia are projected to be particularly affected by climate change. Predicted increases in the variability of precipitation and changes in snowmelt patterns have a severe impact on water availability. This is potentially a detrimental risk to economies relying on water as the key resource, particularly for agricultural irrigation and hydropower as the main source of electricity.</p> <p><i>The Middle East and North Africa (SEMED)</i></p> <p>The SEMED region is projected to suffer from increased water scarcity due to climate change. The stress on water resources is often exacerbated by widespread inefficient usage practices and a lack of adequate institutional capacity for effective management. Further, temperatures in the region are projected to rise, leading to increased heat stress and more frequent heat waves. This in turn will result in more demand for interior cooling and an increase in energy usage.</p> <p><b>Beneficiary groups and need for the proposed programme</b></p> <p>A wide range of socioeconomic groups in the proposed regions will benefit from the Programme. In particular, the Programme will reach low-income households, internally displaced persons, refugees and women, as they are the groups most prone to impacts of climate change such as reduced availability of clean drinking water and flooding. The Programme will promote the inclusion of underserved social groups through inclusive stakeholder involvement in GC strategic planning and the consequent development of GC investments that serve all citizens including low-income households.</p>
<p>D.5. Country ownership <i>[Beneficiary country ownership of project or programme and capacity to implement the proposed activities]</i></p>	<p><b>Coherence and alignment with the country’s national climate strategy and priorities in mitigation or adaptation</b></p> <p>The Programme is in line with the beneficiary countries’ nationally set climate strategies and priorities. All the beneficiary countries but Uzbekistan have submitted their Intended Nationally Determined Contributions (INDC). In these INDCs, energy efficiency, buildings, transport and waste management were mentioned among the key target sectors for mitigation while water and wastewater management was a key adaptation priority.</p> <p>The Programme will cover these priority sectors and contribute to meeting the countries’ nationally set climate targets and policy priorities by supporting green urban planning and mobilizing investments for cities in energy intensive or climate vulnerable regions, as well as build local capacity and awareness.</p> <p>The following are the national priorities in selected target countries:</p> <p><i>Egypt</i></p> <p>Enhancing urban environments is a top priority in Egypt, which suffers from severe energy deficits, water scarcity, low levels of productivity and pollution. In its INDC, Egypt prioritized improving the living standards of its citizens, addressing population growth and the consequent impact on urban services and increasing productivity.</p> <p><i>Armenia</i></p>

	<p>The country has stressed urban development, in particular energy efficiency, building sector and waste management, as key mitigation measures in its INDC. As a net energy importing country, Armenia aims to tap into its substantial energy efficiency potential.</p> <p><i>Kazakhstan</i></p> <p>Kazakhstan has adopted green growth as a national policy objective and priority, and is aiming to improve its regulatory environment for green city investments over the next few years.</p> <p>Other priority countries to be added.</p> <p>Beyond the commitments outlined in nations' INDCs, cities in the Programme's region have also signed onto the Covenant of Mayors. Forty-nine cities across the region have submitted or had their Sustainable Energy Action Plans (SEAP) accepted by the Covenant, collectively pledging to reduce CO2 emissions by an average of 22% by 2020 compared to 1990 emission levels.</p> <p><b>EBRD's capacity to deliver the proposed programme</b></p> <p>The EBRD has invested over EUR 5.8 billion across 360 municipal environmental infrastructure projects, mostly in cities. In 2015 alone, the EBRD financed 45 projects in the sector, representing a total EBRD commitment of €708 million. The Bank's investments in water and sanitation services, waste management, district heating and other municipal infrastructure in 2015 are expected to benefit more than 35 million people in the EBRD region, while investments in urban transport systems will improve travel conditions for an estimated 531 million passengers every year. Some 66 per cent of such investments in 2015 contributed to energy efficiency and climate change mitigation, with predicted emission reductions estimated at 878,000 tCO2e a year.</p> <p>The EBRD's investments in essential urban services leveraged considerable volumes of loan and grant co-financing from the private sector and international donor agencies. In 2015 alone, the EBRD mobilized EUR 189 million of investments in addition to its own finance.</p> <p>As a result of this activity, the EBRD has long-standing, established relationships with local governments, private companies and donors that can be drawn on to deliver the core elements of the GC Programme.</p> <p><b>Stakeholder engagement process</b></p> <p>The Programme will be designed and implemented in line with the Green Climate Fund (GCF)'s requirements for stakeholder engagement and disclosure, as well as the GCF's Criteria for Programme and Project Funding. With the assistance of the Bank's Civil Society Unit, the Programme will prepare a Stakeholder Engagement Plan and seek feedback from CSOs and other relevant stakeholders. The Stakeholder Engagement Plan will guide communications in the Programme with stakeholders including public disclosure of additional information not required by local laws and gender considerations. The Programme will ensure all consultations be designed in a gender responsive way and women will be equally consulted and participate in all discussions related to the project.</p> <p>The EBRD's stakeholder engagement approach will ensure that the views and concerns of local communities are adequately reflected and that the programme objectives, risks, and results are communicated effectively among local stakeholders ensuring local ownership of the Programme.</p>						
<p>D.6. Effectiveness and efficiency <i>[Economic and financial soundness and effectiveness of the proposed activities]</i></p>	<table> <tr> <td><b>Estimated cost per ton CO2eq</b></td> <td><b>€27.77 / tCO2eq</b></td> </tr> <tr> <td><b>Estimate GCF cost per ton CO2eq</b></td> <td><b>€7.58 / tCO2eq</b></td> </tr> <tr> <td><b>Co-financing ratio</b></td> <td><b>47% from GCF</b></td> </tr> </table>	<b>Estimated cost per ton CO2eq</b>	<b>€27.77 / tCO2eq</b>	<b>Estimate GCF cost per ton CO2eq</b>	<b>€7.58 / tCO2eq</b>	<b>Co-financing ratio</b>	<b>47% from GCF</b>
<b>Estimated cost per ton CO2eq</b>	<b>€27.77 / tCO2eq</b>						
<b>Estimate GCF cost per ton CO2eq</b>	<b>€7.58 / tCO2eq</b>						
<b>Co-financing ratio</b>	<b>47% from GCF</b>						

**E. Brief Rationale for GCF Involvement and Exit Strategy**

Local, city and municipal governments in the Region are becoming more aware of the pressing challenges posed by climate change. Many cities realise it is in their best interest to act now, as evidenced by the target nations' wide participation in the Covenant of Mayors. The EBRD is well placed to work with the GCF and cities to stimulate the roll out of a green city urban transformation paradigm.

There is a compelling case for GCF involvement in the Programme. First, the Programme will catalyse city action and directly contribute to GCF's mission to expand the collective response to climate change by investing in low-emission and climate-resilient

development. Indeed, cities within the proposed region are recognised as being the critical delivery channels for climate change mitigation and adaptation activities (see D.5 on INDCs above). However, the region’s urban areas are not currently equipped to tackle the combined challenges of urbanization, climate change and deterioration of environmental quality. The Fund will be instrumental in providing cities with the resources they need to launch energy and resource efficient, and broader green development plans. Using a diverse set of financial resources, the Fund and EBRD can provide a comprehensive package for cities yielding improved urban infrastructure, systematic strategic planning, and enabling policy frameworks. By working together with GCF resources, the EBRD can support cities to reduce emissions, improve quality of life, and reduce resource demand - in all, contributing to realizing the 2°C warming limit agreed by the Conference of Parties.

Second, through the GC Programme, the GCF will contribute to its ambitious mission to “accelerate the operationalization of the adaptation and mitigation windows, and to ensure adequate resources for capacity-building and technology development and transfer”, as requested to the GCF Board during COP 20. By participating in the proposed Programme, the Fund can leverage the EBRD’s wide range of networks with city administrations and deliver a large number of projects to reach critical mass for the creation of a green cities network. For EBRD, technical support and policy dialogue, which are necessary components of the successful adoption of Green City measures, can only be provided by donor funding. The GCF is the ideal partner for this Programme due to the combination of concessional lending, grants and resources for technical assistance and policy dialogue required to achieve the Programme aims and consequent paradigm shift in the targeted countries.

Third, the Programme directly addresses two of the GCF’s five cross-cutting investment priorities: (a) creating climate-compatible cities and (b) transforming energy generation and access. Within these two areas, the Programme will contribute to a paradigm shift in urban climate change mitigation and adaptation through seven of GCF’s eight strategic impact areas (see A.11 on Results Areas)

Fourth, cities are a logical area for GCF support. As the world becomes increasingly urbanized, the requirement for city actions to address climate change mitigation and adaptation becomes all the more pressing. In the target Region, without the combined forces of the GCF and IFIs like the EBRD, many cities will not be able to effectively meet the challenges of climate change. Cities have an added benefit for GCF involvement – they provide a platform for the significant scaling and replication of successful activities that are so critical to address climate change issues.

Finally, by taking a systematic interdisciplinary approach, the Programme addresses the breadth of GCF’s mission and the cross-cutting nature of climate change issues. Indeed, GCF’s assistance would contribute to pioneering a Green City approach in the Region, helping to integrate ad hoc efforts under a collective framework. Globally, and particularly in the urbanized programme region, cities represent one of the greatest opportunities to address local and global environmental challenges. The GCF and GC Programme can help establish an urban development model and knowledge base, catalysing other cities, regionally and globally, to adopt similar measures and approaches.

**Exit Strategy**

Governments which are accessing GCF resources through the EBRD will repay the resources in line with the Loan Agreement with the EBRD.

**F. Risk Analysis**

TBD

**G. Multi-Stakeholder Engagement**

TBD

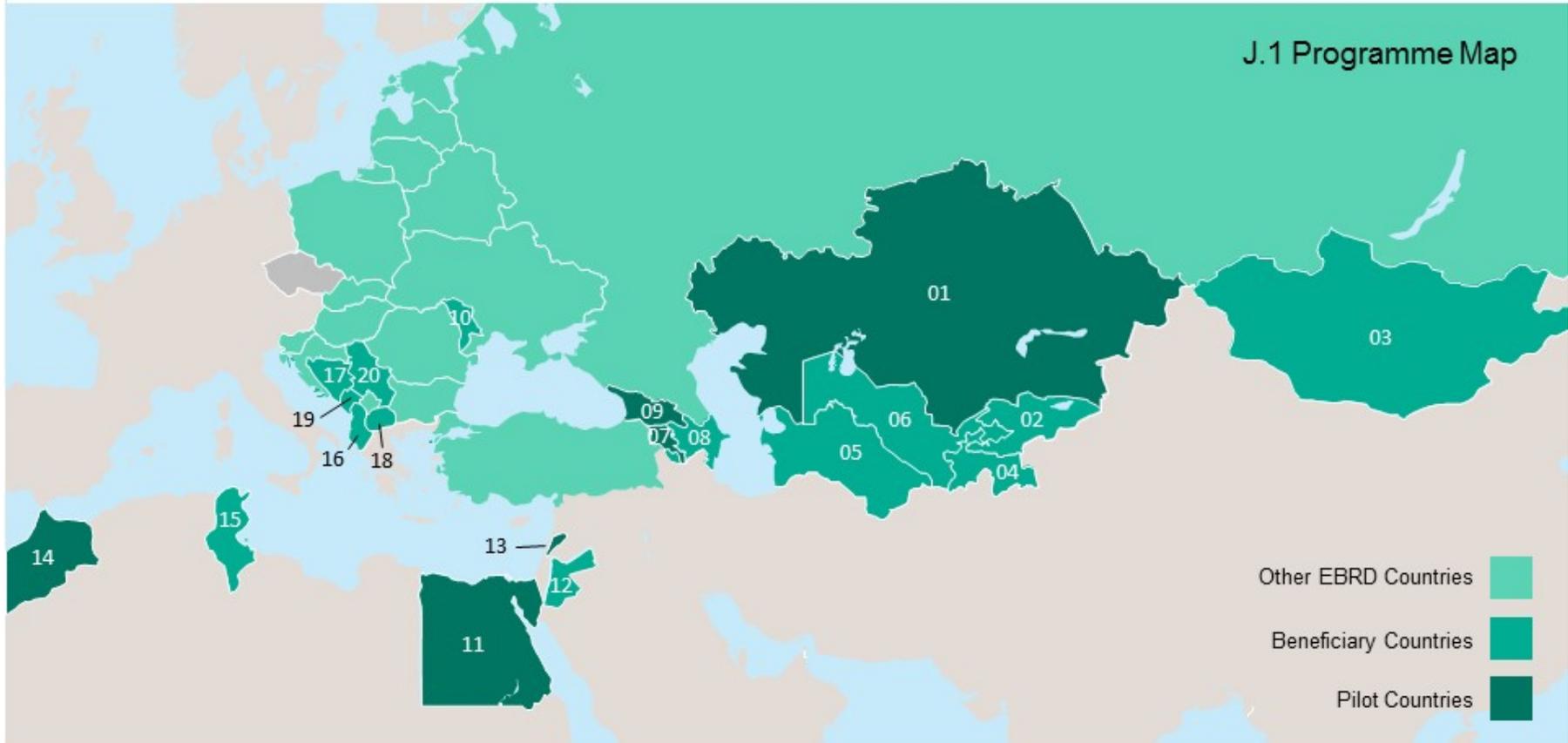
**H. Status of Project/Programme**

- 1) A pre-feasibility study is expected to be completed at this stage. Please provide the report in section J.
- 2) Please indicate whether a feasibility study and/or environmental and social impact assessment has been conducted for the proposed project/programme: Yes  No   
*(If ‘Yes’, please provide them in section J.)*
- 3) Will the proposed project/programme be developed as an extension of a previous project (e.g. subsequent phase), or based on a previous project/programme (e.g. scale up or replication)? Yes  No   
*(If yes, please provide an evaluation report of the previous project in section J, if available.)*

**I. Remarks**

**J. Supporting Documents for Concept Note**

- Map indicating the location of the project/programme
- Financial Model
- Pre-feasibility Study
- Feasibility Study (if applicable)
- Environmental and Social Impact Assessment (if applicable)
- Evaluation Report (if applicable)
- Case Studies



Central Asia	Eastern Europe and Caucasus	Southern and Eastern Mediterranean	South-eastern Europe
01 Kazakhstan *	07 Armenia *	11 Egypt *	16 Albania
02 Kyrgyz Republic	08 Azerbaijan	12 Jordan	17 Bosnia & Herzegovina
03 Mongolia	09 Georgia *	13 Lebanon	18 FYR Macedonia
04 Tajikistan	10 Moldova	14 Morocco *	19 Montenegro
05 Turkmenistan		15 Tunisia	20 Serbia
06 Uzbekistan		* Pilot Country	

## Case Studies

### Cairo Metro, Egypt

In December 2015, the EBRD signed a senior sovereign loan to the Arab Republic of Egypt in the amount of up to EUR 175 million, to be co-financed with the European Investment Bank (EIB), to part-finance the purchase of 13 air-conditioned train sets (eight wagons per train) to be operated on Cairo Metro's Line II, as well as spare parts and maintenance equipment. The project will address Cairo's urgent infrastructure needs, promote greater sustainability and efficiency of the metro services and contribute to decreasing the carbon emission profile of the sector.

This is the first investment of the Bank's Cairo Urban Transport Integrated Approach which consists of a series of investments for the period 2015-20. It aims to improve and reform public transport services in Cairo and its surrounding areas to achieve greater commercialisation of services, enhanced private sector participation, improved regulation and increased opportunities for on the job training as well as the use of carbon monetisation mechanisms (that is to say, where carbon emission reductions are monetised as offsets).

Furthermore, the development of a Nationally Appropriate Mitigation Action (NAMA) will be considered, with the aim of supporting meaningful mitigation actions through financing, technology transfer and capacity building. Through the NAMA, Egypt would seek international recognition for its climate mitigation work and results, establish a mechanism to measure impacts, further embed the paradigm shift towards low carbon technology, and potentially access additional climate finance from funds like the Green Climate Fund.

### Etlik hospital PPP, Turkey

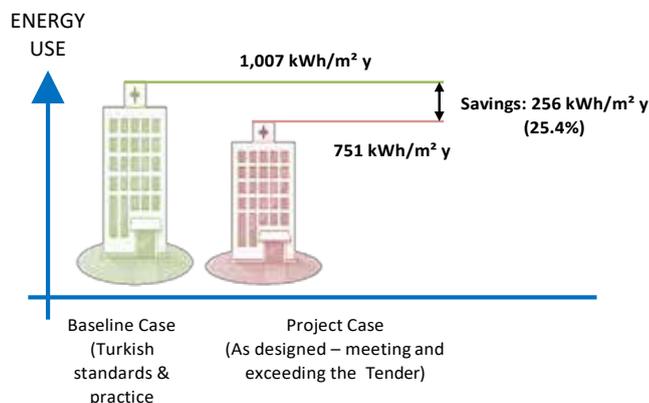
In June 2015, the EBRD arranged for a comprehensive long-term financing package for the development of a €1.12 billion high-tech hospital in the Etlik neighbourhood near Turkey's capital, Ankara. The Etlik hospital is the largest project to be financed to date under the Turkish government's €12 billion programme to build or expand about 60 hospitals across the country in collaboration with the private sector.

The Bank played a key role in securing a total of €880 million in long-term financing for the project, alongside parallel loan financing by SACE (the Italian export credit agency), International Finance Corporation, German development bank DEG, Black Sea Trade Development Bank, as well as international and local banks.

The Etlik Hospital PPP is expected to be a flagship project, setting the standards for future PPP projects in Turkey by making the most of private sector resources and know-how to construct and manage infrastructure facilities quicker and more efficiently for the benefit of the entire population.

The total project cost includes sustainable energy investments of €85.1 million which will be covered by the Bank's funding. These encompass advanced energy and water saving techniques including on-site trigeneration (combining heat, power and cooling), building integrated solar thermal installation, waste heat recovery, an open protocol Building and Energy Management System, LED lighting, rain water harvesting and water-saving taps, among others.

The physical impact resulting from advanced sustainable energy techniques is assessed at 197,000 tonnes of CO<sub>2</sub> reductions and 230,000 MWh of total energy savings each year, which is equivalent to the annual energy use of over 18,000 Turkish households. Annual fresh potable water savings are assessed at 61,320 m<sup>3</sup>, the equivalent of 24 Olympic-sized swimming pools.



### **Astana Bus project, Kazakhstan**

EBRD provided a senior loan of up to EUR 65 million with an option to convert it to Tenge after the last disbursement with a 10 year tenor to Astana LRT, a limited liability partnership incorporated in the Republic of Kazakhstan, fully owned by the Akimat of Astana. The Project contributes to public transport service improvement in the city of Astana by financing up to 200 new modern low-floor buses and establishing a better regulatory framework. The latter will enable Astana to finalise the introduction of a sector-wide integrated ticketing system as well as a mechanism for reliable tariff adjustment and access to municipal funding for all operators. The Project is supported by a Project Support Agreement (“PSA”) among the Bank, the Astana Akimat and the Company.

The transition objectives of the project include: (i) introducing a Public Service Contract between the City and the transport operators; (ii) strengthening regulatory function; (iii) increasing private sector participation; (iv) developing a contractual framework that will enable private operators’ access to investments; and (v) setting a model for transport authority by introducing the management information systems, IFRS reporting and business plan preparation.

### **Aktobe District Heating Project, Kazakhstan**

EBRD provided a loan of up to KZT 3.1 billion (EUR 10 million) to Joint Stock Company Transenergo, a municipal district heating company owned by the Akimat of the City of Aktobe, to support the rehabilitation and upgrade of the DH infrastructure in the City. EBRD’s loan was co-financed by a concessional loan of up to up to KZT 3.6 billion (EUR 12 million) from the state budget. The proceeds of both loans have been used to finance priority capital investments for the modernisation and optimisation of the Company’s DH infrastructure, including: (i) modernisation and merging of the existing boiler stations to optimise the heat production and distribution scheme in the City, (ii) partial replacement of the DH transmission and distribution network in the priority areas, and (iii) development and installation of a hydraulic modelling system. The local boiler houses were equipped with automated control systems and heat meters, which enable the Company to control and regulate heat supply and distribution automatically.

The transition objectives of the project include: (i) development and introduction of the PSC that will establish a contractual relationship between the Company and the City Akimat; (ii) improvement of tariff regulation and structure; (iii) commercialisation and efficiency improvements of operations and financial management.

### **Aktobe Water Project, Kazakhstan**

EBRD provided a senior loan to Joint Stock Company Akbulak, a municipal water and wastewater utility of the city of Aktobe, wholly owned by the Akimat of the city of Aktobe in the amount of up to KZT 2.0 billion (EUR 10.0 million) to support the rehabilitation and upgrade of the water and wastewater infrastructure in the City.

The proceeds of the Loan finances priority capital investments, including, (i) complex modernisation and optimisation of the water and wastewater infrastructure through the network rehabilitation, (ii) introduction of water demand management and bulk metering, (iii) introduction of networks efficiency and development planning, and (iv) reduction of water losses. The transition objectives of the project include: (i) improvement of tariff regulation and structure (tariff increases to cost recovery levels and assistance with the implementation of amendments to the tariff methodology); (ii) establishment of the contractual arrangement between the City Akimat and the Company in the form of a PSC; (iii) commercialisation and efficiency improvements of operations and financial management (including installation of meters, increase in collection ratios, preparation and publication of IFRS accounts, training on procurement).

### **Chisinau Water Project, Moldova**

EBRD provided a senior loan of up to EUR 24 million to S.A. Apa Canal Chisinau Company, the water utility operating in Chisinau, Moldova, signed in 2013. The loan, guaranteed by the City of Chisinau, supports investments in water supply and wastewater facilities in the City, and is co-financed by a loan of up to EUR 24 million from the European Investment Bank (EIB) and a capital expenditure grant of EUR 11 million from the EU Neighbourhood Investment Facility (NIF).

The proceeds of the loan and the grant finance the extension, rehabilitation and modernisation of water and wastewater infrastructure, including water supply, together with a sewage collection system and treatment. The investments enable the Company to increase operating efficiencies with energy savings and reach compliance with the EU Water and Wastewater Directives in its service area. Furthermore, the project helps to improve living conditions, reduce health risks for the city’s population and prevent excessive exploitation of natural resources and environmental pollution.