

Green Bridge Partnership Programme

Concept Report

July 2013, Astana

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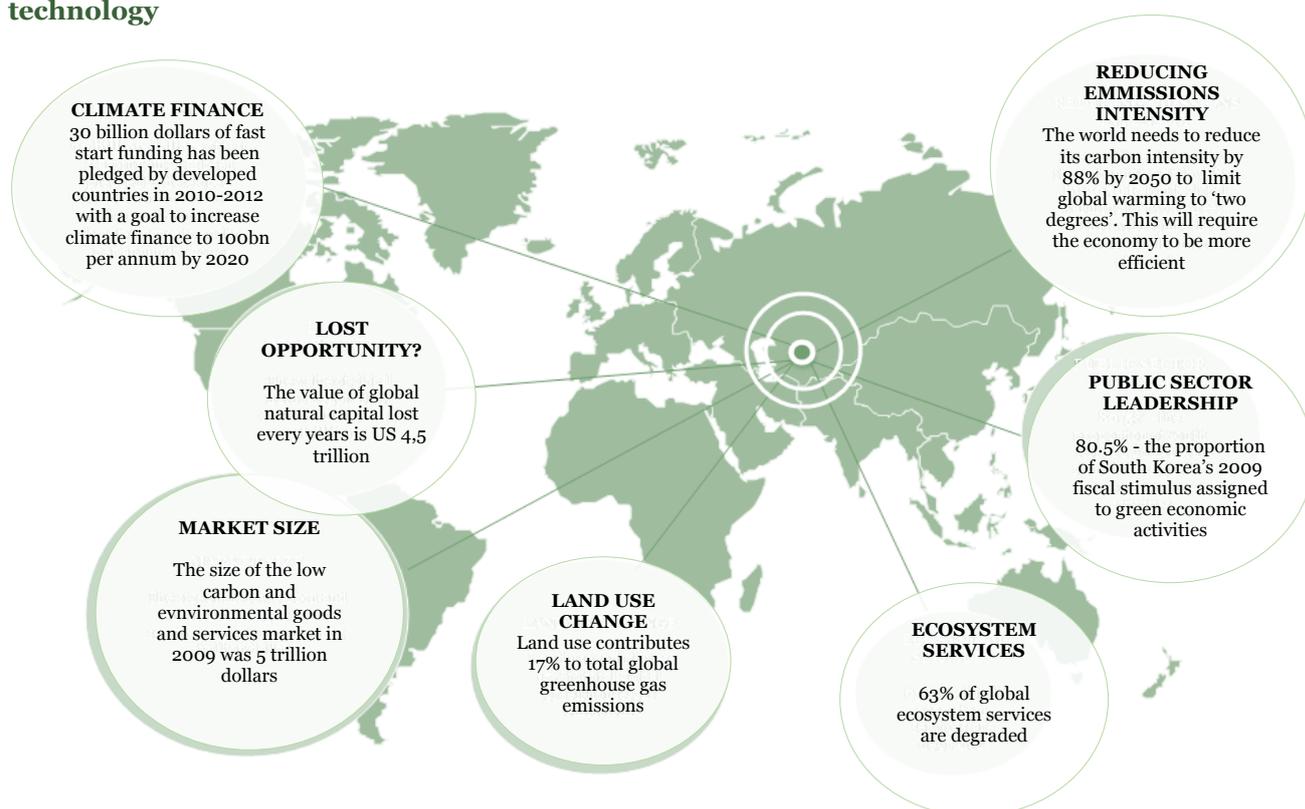
1. Introduction

1.1. Green Economic Growth - accelerating and sustaining growth

The countries of Central Asia share important constraints to economic development including the national and international stewardship of water, energy and ecosystems. Cooperative action and investment into regional Green Growth policies, projects and programmes will benefit Central Asia by bringing greater economic security and prosperity through a more resilient, responsible and sustainable development pathway.

But not all of the policy, financial and technical preconditions currently exist for this to take place. A targeted, partnership-based programme that addresses these issues can therefore have an important role to play. This concept paper outlines the mission, goals, objectives and structure of such an initiative.

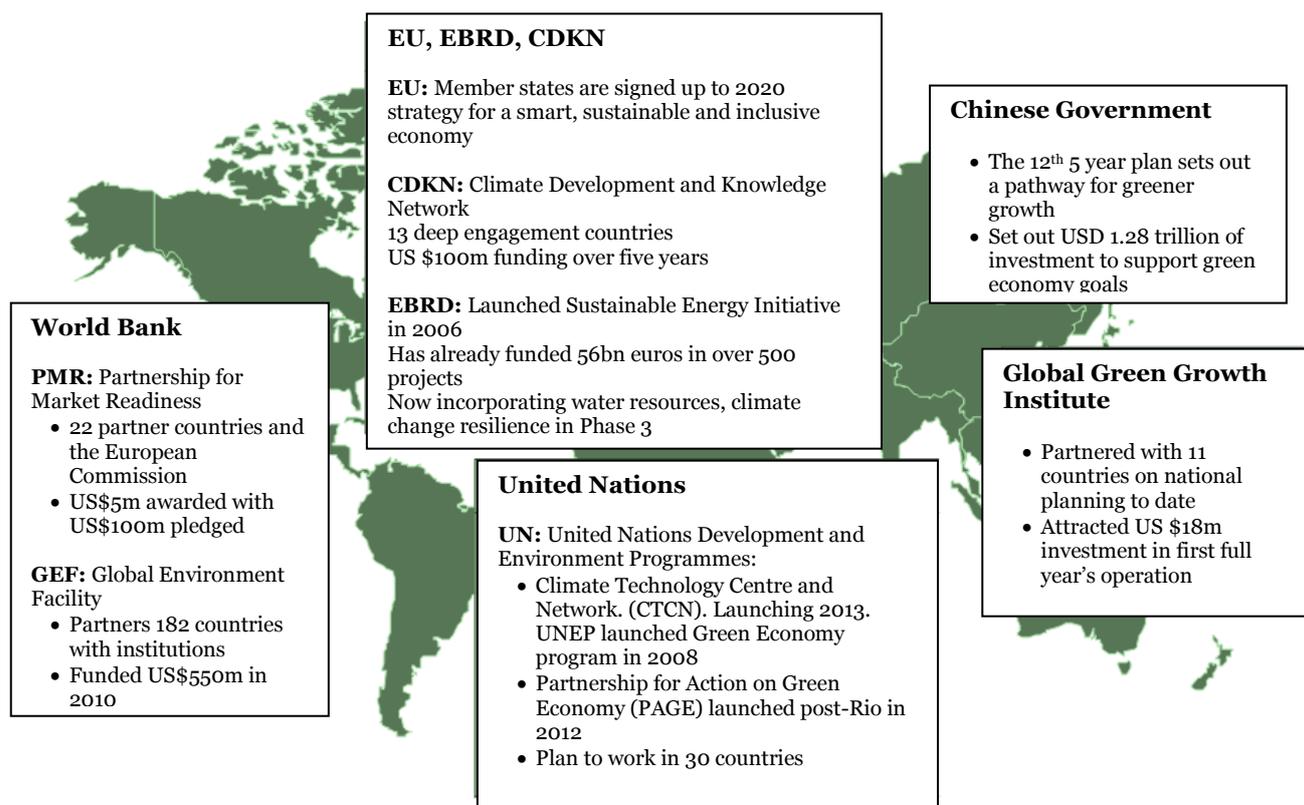
Figure 1. The global green growth opportunity: mobilising international finance and technology



1.2. Rationale for a green growth programme

The global institutional landscape for green growth is rapidly expanding with actors from multilateral development institutions and country governments implementing green growth strategies and programmes. This expanding activity and experience is demonstrating some of the positive benefits of investing in sustainable outcomes, however public resources to support new programmes is subject to increasing competition.

Figure 2. The race is on... an emerging landscape of activity for green growth



There is no existing green growth programme that specifically targets Central Asia. The shared environmental goals and constraints between the region's countries combined with considerable needs relating to technology and financial capacity builds a compelling rationale for developing a new regionally coordinated programme.

<p>1. Common goals</p>	<p>The region shares common challenges to and opportunities for greener growth.</p> <ul style="list-style-type: none"> • Environmental challenges/constraints • Trans-boundary issue resolution • Growth and development objectives
<p>2. Gaps in supporting architecture</p>	<p>Substantial gaps in technical and financial assistance</p> <ul style="list-style-type: none"> • Donor countries are reducing support to some countries in Central Asia • Weak evidence base for intervention • Demand for investment facilitation and support is high
<p>3. Championing the green economy</p>	<p>There is a regional gap in the institutional landscape for green growth</p> <ul style="list-style-type: none"> • A regional platform and coordinator • Bringing the best from 'East and West' • Need for a recognised focal point for technical and financial support

1.3. Overcoming barriers to investment in green growth

A number of common barriers exist to investment in green growth. These can manifest at country, sector or project level and are shared by the public and private sector.

Table 1. Common barriers to investment in green growth

<i>Category</i>	<i>Barrier to action</i>
Commercial risks	• <i>Lack of access to capital</i>
	• <i>Technology risk</i>
	• <i>Country investment climate</i>
	• <i>Lack of access to insurance</i>
Technology and product risk	• <i>Technology cost gaps</i>
	• <i>Weak intellectual property rights</i>
	• <i>Lack of demonstration projects</i>
Policy environment	• <i>Weak policy structures</i>
	• <i>Lack of consistent policy frameworks</i>
Capacity and skills	• <i>Low capacity of local institutions</i>
	• <i>Lack of technical capacity</i>
Collaboration and partnership	• <i>Limited collaboration hubs</i>
	• <i>Weak sector and value chain partnerships</i>
Information and knowledge	• <i>Challenges in the interpretation of data</i>
	• <i>Limited examples of good practice shared</i>

By exploring these barriers in the local context, and through consultation with stakeholders, the following key challenges emerge that might be addressed by a regional green growth programme.

Table 2. How a regional programme could address key green growth challenges

<i>Challenge</i>	<i>Solution</i>
No clear Central Asian platform for green growth research, technical assistance and financial support	<i>Fill the geographical gap to bridge green growth efforts in Europe and Asia</i>
Trade-offs between economic demands and sustainability, but also cross-border resource management issues	<i>Support the business case for green growth and bring together fragmented approaches on relevant international issues</i>
A legacy of ecosystem damage and infrastructure challenges constraining growth	<i>Develop key projects and infrastructure investments that meet investment and sustainability criteria</i>
The governing institutions, policy, data, standards, skills and technologies display variable levels of effectiveness in delivering green growth	<i>Create/share tailored knowledge, and support skills and capacity improvements in the public and private sectors</i>

2. The Green Bridge Partnership Programme

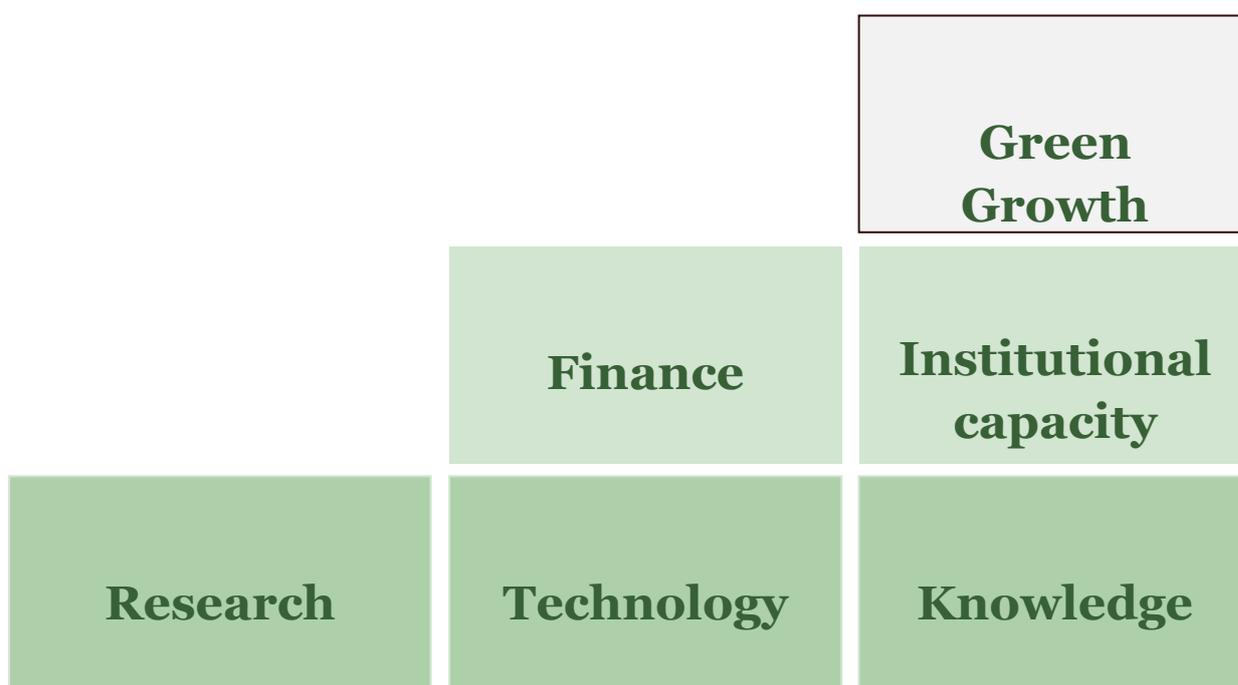
2.1. Mission

The Green Bridge Partnership Programme (GBPP) is intended to bring together the countries of Central Asia with the support from key international institutions and the private sector. Its mission statement is:

“Leading green economic growth in Central Asia through international cooperation and the facilitation of technology transfer, knowledge exchange and financial support.”

An effective green growth programme requires action that addresses a number of fundamental building blocks. Without sufficient progress in each of these domains, meaningful progress would be difficult. The GBPP targets concrete action in all of these through its structure and services.

Figure 3. The building blocks of green growth



2.2. GBPP goals and objectives

The GBPP’s main objective is to facilitate green growth activities across the region. In order to effectively overcome the various constraints and challenges the GBPP requires a focussed set of strategic goals. These goals must respond directly to the barriers to investment to draw in the required levels of finance to meet development needs. The remaining building block of institutional capacity will also be

supported by the programme, through the GBPP in itself will provide part of that solution, whilst building long term capacity in the public sector through its engagement and activities.

Information

GBPP will support world class research undertaken in partnership with international experts and institutions. Knowledge is developed shared and applied across Central Asia.

Technology

GBPP underpins technology transfer but also the development and manufacturing of technological solutions locally. Support will be provided to international partnerships, regional innovation and the incubation of entrepreneurial efforts.

Finance

A range of financial instruments will offer support to a project developed and the scaling of innovative ideas. GBPP will offer technical assistance, grants, matched funding or risk capital, whilst proven technology is scaled through commercial debt, equity and financial risk mitigation.

Goal 1: Information

“The GBPP will act as a knowledge hub, to facilitate education, disseminate information and communicate learning”.

The participatory nature of the GBPP suggests that the presence of a centralised knowledge management hub combined with open and broad communication will be an important part of its agenda. As a knowledge hub, GBPP provides the means to utilise outputs from its activities and combine s national and international research. It also collects and share s country and project experiences, creates datasets, circulates tools and connects people, sectors and organisations.

Research - The preparation of local research, studies, literature and data relevant to a range of Green Growth topics will support public and private sector learning.

Education - Green Growth advocacy can be supported through training and professional development products. The Hub will target policymakers, practitioners and private sector organisations with the capacity to contribute towards GBPP’s outcomes.

Sharing - Dissemination of knowledge products and facilitation of the Hub will facilitate communication between public-private, industrial sectors and countries. A web portal will anchor the user interface and connect a wide range of people and projects.

Goal 2: Technology

“GBPP will act as a regional facilitator and international contributor to the development and adoption of clean technologies.”

The GBPP will have the capacity to research, transfer, augment and develop innovative technology solutions. It will achieve this through a focused programme of work that targets the region’s major technology constraints and opportunities in the areas of clean, renewable energy access, water conservation and resource management, waste treatment and pollution control.

Transfer - GBPP will seek to develop the capacity and skill base for technological transformation. It will demonstrate technologies locally, promote market transformation and support the enabling environment including policy and regulatory.

Innovation - GBPP will act as a regional leader, facilitator and international contributor to the development and adoption of clean technologies. Innovation will also apply to the delivery models and partnerships for green growth including the GBPP itself.

Incubation - GBPP will include provision to support local entrepreneurs with the development of new ideas. This will include R&D support, business plan advice, space for technology development and finance to commercialise and scale ideas.

Goal 3: Finance

“Innovative investment solutions for tangible and bankable projects in a range of key sectors is critical to the sustainable growth of the green economy”.

Project pipeline - The GBPP will address a major barrier to scaling green growth investment by identifying and supporting the development of investment grade projects. Outreach, technical assistance and grant finance will support a robust and diverse range of projects.

Financial Leverage - Public and private sector finance will be attracted and matched to projects through appropriate classification, due diligence and project development support. GBPP will support the preparation of new ideas and businesses for investment purposes.

De-risking instruments - GBPP will employ a variety of financial instruments in support of project finance and the scaling of successful activities. Instrument types include equity, concessional and commercial loans, price support, grants and policy/credit risk guarantees.

2.3. Governing principles

In order to establish itself as a credible player in the green growth space the GBPP must be governed by strong principles which reflect both its mission and the way that it will conduct its business. Collaboration, responding to common challenges, finding new solutions to problems, environmental stewardship and establishing long-term growth lie at the heart of the GBPP’s governing principles.

1. Partnership

The GBPP is founded on the formation of effective partnerships between Central Asian countries and with the international community. At an operational level, partnerships will also be essential with the private sector, academia and existing initiatives.

2. Innovation

Creating an environment that supports creativity, innovation and invention is a necessary pillar of GBPP. Green growth challenges require a great deal of innovation in technology, policy, application and research. GBPP will provide this environment.

3. Independence

For the GBPP to be inclusive and transparent, the organisation needs to demonstrate independent and good governance. Stakeholders may exert influence, but the GBPP must retain ultimate control over its decisions.

4. Sustainability

The GBPP is an environmentally responsible mission. Accordingly, all investment criteria, scoping and activities will be aligned with sustainable principles. The concept of sustainability is also interpreted to represent the long term nature of the GBPP.

5. Value

Value for money (VfM) is realised by a focus on results including a clear commitment to delivering measurable progress; and also through the financial efficiency with which this is achieved. Both criteria must be met in using a transparent framework.

2.4. Key thematic areas

Five sectors have been identified for priority action by the GBPP. These reflect the common development needs of the countries in the region as well as being the cornerstones of green growth.

1.	Water resource management	Management of water resourced including securing a sustainable supply, controlling pollution and degradation of watersheds plustechnological solutions to address water conservation and treatment.
2.	Sustainable energy access	Development of renewable energy supply and the efficient use of energy but in doing so encourage access for all.
3.	Food security and agriculture	Secure and sustainable food and agricultural supply chains through sustainable and climate smart agriculture.
4.	Sustainable urban systems	Green building, infrastructure and planning processes for the built environment including smart city technology and environmental design.
5.	Climate risk resilience	Climate and disaster risk reduction and climate change adaptation including improved risk management and transfer including insurance.

3. GBPP structure and governance

3.1. Principle operating entities

The GBPP needs to bring together the countries of Central Asia to drive green growth. It will be constituted as an independently governed international organisation based on voluntary participation and contribution. Membership may be accessed through two tiers; a financial contributory or non-contributory partnership arrangement. The ‘GBPP Framework Agreement’ addresses the terms and conditions of partnership.

The two principle entities of the GBPP will be the ‘**Green Bridge Facility**’ (GBF) and the ‘**Green Bridge Institute**’ (GBI). There will be strong links between the two entities under the GBPP; however they will be separately managed and financed. The GBF could be financed by domestic budget contributions combined with donor support from the EU, ADB and others (for example). The GBI could be funded through Kazakh government and research related resources, plus revenue from successful commercialisation of technology, products and services.



Figure 4. Two new institutions to deliver the GBPP's objectives

Green Bridge Facility

Further to this role, there will be two aspects to the facility’s operations. The first will be a **technical assistance** operation in support of policy and capacity development activities. It will also coordinate knowledge and partnership brokering between business and government in various forms including peer to peer cooperation, value chain, PPP and cross sector action. The technical assistance services will be coordinated by the GBF and procured from the professional and technical services market as appropriate (as in the case of CDKN). This will maximise efficiency and value for money whilst retaining flexibility.

The second operation within the GBF will be a financial support facility that will play a strong commercial role in taking forward bankable projects and propositions for commercial grade financing. The role of the GBF in arranging finance will be to identify and build a pipeline of credible and bankable projects across the region that are suitable candidates for equity and debt financing structures. The facility will not hold funds, but would seek to syndicate, manage and support the investment appraisal process. A ‘trustee’ would then hold and disburse the funds much like the model of the GEF, Climate

Investment Funds, Congo Basin Forest Fund, Global Fund and others. Suitable partners might include ADB or EBRD. The fund would be capitalised directly from a range of sources including concessional finance from donors and development banks, blended with domestic and commercial finance. The fund could start at \$100m or less but would have no maximum size. Technical assistance funds could be channelled directly through the GBF board.

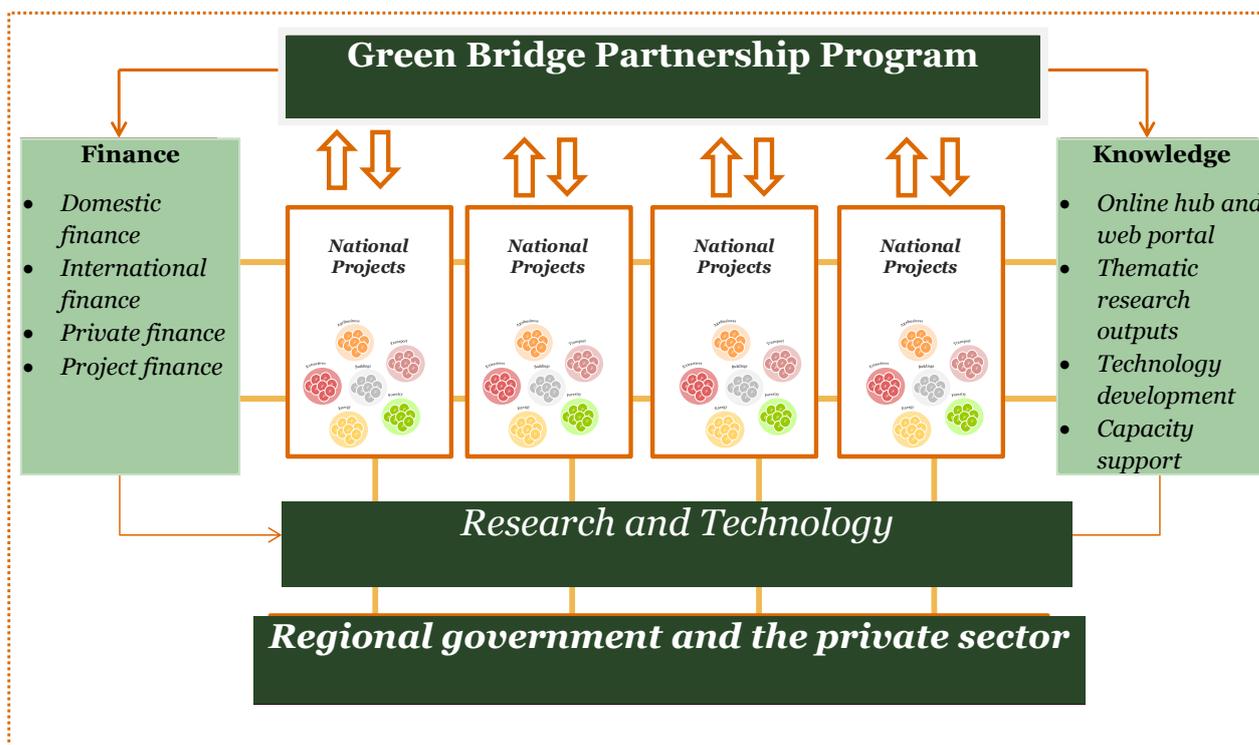
Green Bridge Institute

The GBI is proposed to be housed within an existing academic or government owned institution, or otherwise within newly established virtual or physical premises. It is intended that a Institute director would be needed with programme leaders and research staff. The GBI will have its own identify and remit, including a regional focus.

This entity will focus on improving the evidence base and expertise behind key water, energy, engineering, technology and scientific issues. These activities will be directed so as to directly support the incubation of newly developed or transferred technologies amongst other practical and commercial green growth opportunities.

The Institute would house **technology incubators** (as practiced by top Universities around the world). These incubators would transfer and adapt technology solutions where appropriate and set up legal entities to finance and scale the technology. This would support Kazakhstan’s regional development of manufacturing and export services for the green economy in line with its national strategy. The GBI would seek out and welcome approaches for partnership and **research collaboration** from across the region. It would also partner will key international research entities such as the World Resources Institute, Columbia University, Climate Innovation Centres, GGGI and others.

Figure 5. How the GBPP combines its services to support green growth projects

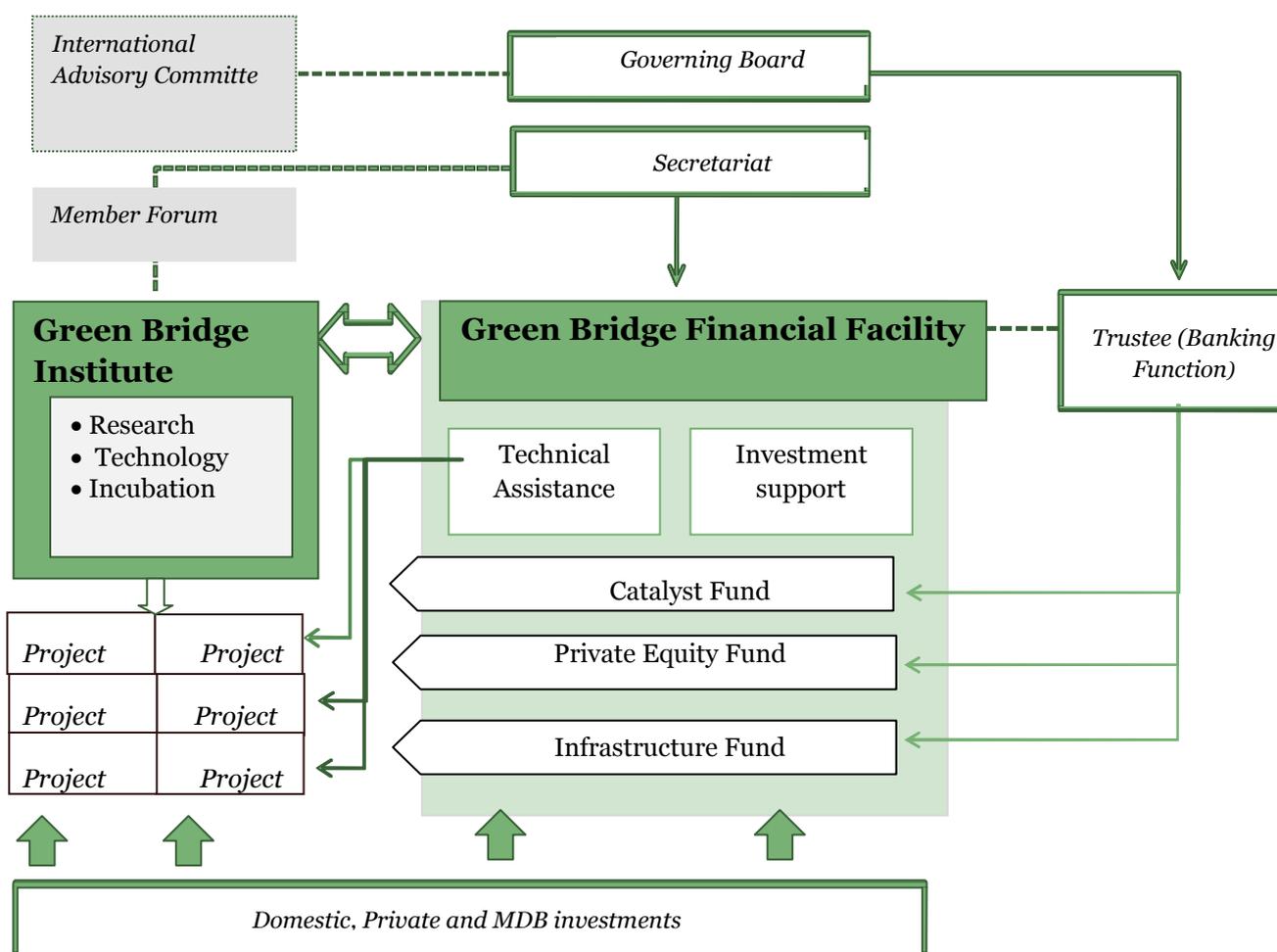


Proposed operating structure

As described above, the two entities set up to deliver the GBPP’s objectives will be governed by a Board, with the day-to-day administration being carried out by a Secretariat. From an operational perspective, it is proposed that funds received from the various domestic, private and multi-lateral sources will be held by a trustee, which would disburse those funds to the two delivery entities as necessary.

The GBI would likely be funded solely through domestic or international donor contributions, with the GBF using donor funds to de-risk projects for investment by the private sector. It is envisaged that the GBF would operate three separate funds: a catalyst fund, to provide technical assistance, grants and risk-sharing instruments; a private equity fund to mobilise equity instruments; and an infrastructure fund to provide debt financing to projects. Further details of how these might be funded can be found in the associated financing paper.

Figure 6. Proposed operating structure of the GBPP



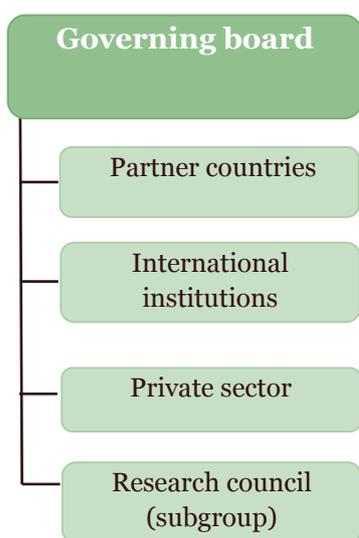
3.2. Governance

Governance structure

Independence is of critical importance to GBPP’s credibility and longevity. Many leading public institutions are successfully experimenting with efficient outsourcing models and solutions, including those that engage the private sector. The governing board would retain control over decision making; however the administrative functions would be best served by an operational rolling term contract issued by the Ministry of Environment. This model is proven in a range of contexts.

The GBF will need commercial and technical skills from the private sector and MDBs to be embedded throughout. The service provider would also need strong networks and access to a wide range of relevant staff and resources. The facility could be administered through a contract issued by MoE. It would be possible if not essential to combine this contract with the secretariat role (for efficiency and continuity).

Governing board



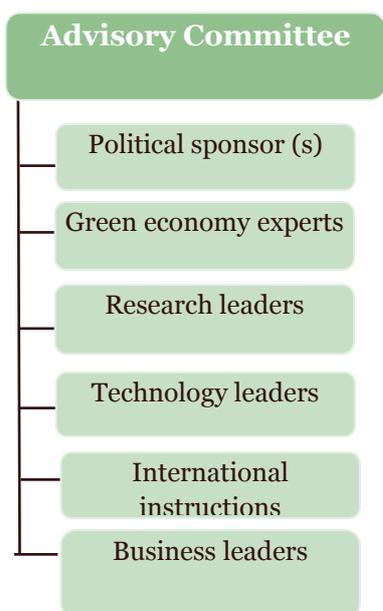
The **governing board** will be representative of the partner countries and international institutions acting as primary contributors to the programme. The board will elect a chair and may appoint additional members to the board including representatives from the private sector, experts or civil society.

Strong governance procedures will be followed including where appropriate, co-chairing of the board, rotation of these chairs and fixed terms of service for individuals. A **governance framework** will be drawn up to detail these procedures.

The board will act as the **primary decision making body** operating to agree procedures for voting in new members, approving investment proposals and signing off work programmes.

To help link the activities of the GBI and the GBF, a **research council** will be formed to set the research and technical agenda for the GBPP.

Advisory committee

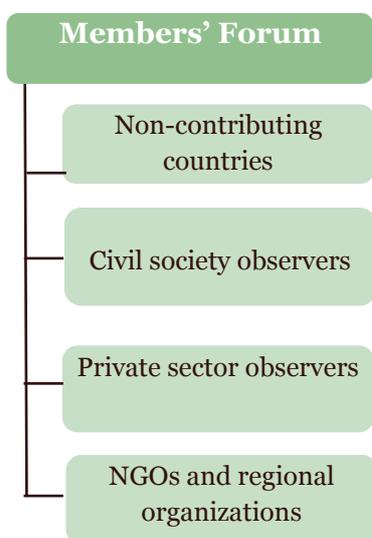


The board will be supported by an **‘Advisory Committee’** whose mandate will be to advise the board on technical issues or GBPP’s continued development.

They will also extend the reach and profile of the initiative within the international political, private sector and investment communities.

These should be well known and recognised experts in their fields able to **leverage their networks to further the aims of the GBPP**. Committee members may be engaged on a voluntary or paid basis.

Members' forum



A further governance structure is the Members' Forum. The forum is a **stakeholder engagement and management** community that would meet on an annual basis to communicate and collect feedback on major developments that relate to the GBPP.

The meetings would include non-contributing participants and observers from the public, private and civil society sectors. The secretariat would host these meetings and brief the board on feedback and proposals.

The meetings would act as a **communication** channel to share achievements, results, findings and examples. Furthermore, the events could be used to launch funding opportunities, competitions, awards and **recruit** additional members and expertise.

Secretariat



The **secretariat** plays a central role in coordinating the key administrative activities of the GBPP.

It serves **administrative functions** for the board (e.g. preparing investment proposals and programmes), and for stakeholder groups including the advisory group, research council, members' forum and trustee arrangements.

It also manages all **communications** ranging from marketing to memberships and providing progress updates against the GBPP results framework.

4. Green Bridge Institute

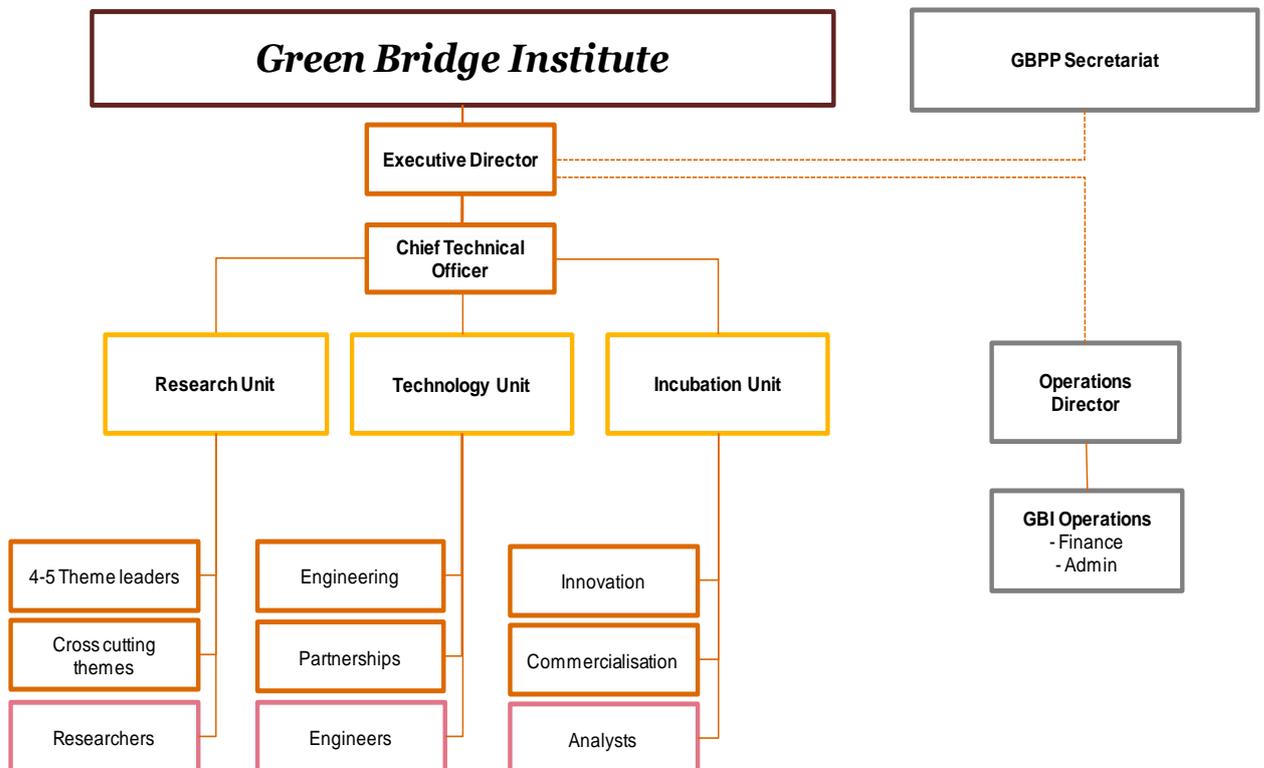
4.1. Overview

The GBI will focus on **improving the evidence base** and expertise on key water, energy, engineering, technology and scientific issues. The GBI will have its own identity and remit, including a regional focus, but would draw from and cooperate with academic resources as appropriate.

It is recommended that the GBI is housed within a leading academic institution, provided there is the appetite and mechanism to do so. If not, it should be established within temporary virtual or physical premises until EXPO 2017 (see section 6). Examples of such organisations include the Grantham Institute housed within Imperial College and LSE, two universities in London. The benefits of being part of an academic institution are: credibility is gained through association with an already academically rigorous research organisation; the physical (or digital) infrastructure is already in existence; and access to national and international research funding channels.

It is intended that an **Executive Director** would be appointed supported by programme leaders and their teams. The Institute may benefit from focusing on two or three themes in its early development phase and linking these to compatible university objectives.

Figure 7. Possible organisational structure for GBI (at maturity)



4.2. Research framework

The GBI's **thematic research framework** would be developed around the top environmental and technology challenges facing the region including water, energy, land use, climate change and environment protection.

The GBI would seek out and welcome approaches for partnership and **research collaboration** from across the region. It would also partner with key international research entities such as the World Resources Institute, Columbia University, Climate Innovation Centres, GGGI and others.

The GBI would also be responsible for creating **technical environmental and performance standards** for technology types and projects.

Research framework

- Water/energy/land use
- Built environment including transport
- Preparation of standards
- Study of trans-boundary issues
- Advise projects on technical issues

4.3. Technology incubator

Technology incubation

- Technology transfer activities
- Demonstration of technologies in context
- Incubation
- Scale and commercialisation

The Institute would house **technology incubators** (as practiced by top Universities around the world). These incubators would transfer and adapt technology solutions where appropriate and set up legal entities to finance and scale the technology.

The GBI would support a **multi-stage incubation process** starting from innovation support, then through concept development, testing, business planning, commercialisation, launch and scaling.

This would support Kazakhstan's regional development of **manufacturing and export services** for the green economy in line with its national strategy. GBI would connect with science and technology parks to mature its new businesses.

5. Green Bridge Facility

5.1. Basic overview

The GBF complements the GBI by leveraging the knowledge base that has been developed through research and then taking a more **practical implementation approach** to delivering green growth projects. In addition, the technology incubator element of the GBI will bring through new products and technologies that will be ready for further development and investment with support from the GBF.

The GBF combines targeted grant based technical assistance with investment support to help projects reach **‘investment grade’** status. These could be projects that have come through the GBI or independently. The GBF will act as an agent of the governing board in **developing and recommending investment proposals**. This model of providing both technical assistance and investment support is well established. Many climate finance funds such as the EBRD’s Sustainable Energy Initiative and the Private Infrastructure Development Group provide a combination of grant finance and commercial instruments to de-risk projects and draw through a high quality pipeline of projects for the private sector to invest in. The GBF will focus on:

Pipeline development

The GBPP will **assemble and balance its investment portfolio** through its financing channels. The facility will target investment diversity across sectors, countries and technologies. Financing arrangements will be subject to the highest international standards.

Technical assistance

Technical cooperation will be **provided to qualifying recipients that align with the themes, principles and objectives of the GBPP**. Assistance will be planned and allocated in a transparent and fair manner seeking to achieve maximum transferable and replicable results.

Investment support

Projects that have been identified and supported with technical assistance will be **supported through the investment cycle** including investment appraisal, due diligence and de-risking if appropriate. The GBF will also work to help combine public and private sources of finance.

5.2. Technical Assistance (grant financed)

Institutional capacity development and policy advice

- Institutional strengthening
- Policy development
- Training and skills

National, sub-national and sector based green growth planning support

- Green economic strategy support
- Sector facilitation and planning

Innovation prizes and competitive challenge fund models

- Country, corporate and individual prizes for innovation
- Launch competitive grant funds for targeted green growth challenges

Investment readiness

- Investment process support
- Investor matching
- Project development assistance

5.3. Financing projects

The Technical Assistance inputs will be administered directly by the GBF against a planned budget and programme, and will be primarily funded by domestic and or donor/IFI contributions. This will include investment support, but not direct project financing. The finance will be provided/ led by two special funds ('GBPP Private Equity' and 'GBPP Infrastructure') established in partnership with a trustee that receives private and public finance on commercial terms. The GBF will however identify, qualify and support project access to the two investment funds.

A third fund, the 'GBPP Catalyst' fund will have access to public finance to provide risk mitigation or price support instruments alongside commercial finance. A project developer may therefore engage with GBPP in a number of ways:

- Through access to research and technology developed by GBI.
- Through TA support to project development through the GBF.
- Through investment support provided by GBF.
- Through access to finance provided through GBPP PE or infrastructure.
- Indirectly through project finance supported by instruments that support the price or revenue for investments, or through a guarantee to underwrite part or all of the investment risk.

The role of the GBF in arranging finance will be to identify and build a pipeline of credible and bankable projects across the region as suitable candidates for commercial equity and debt financing structures.

The facility will not hold funds, but would seek to syndicate, manage and support the investment appraisal process. A 'trustee' partner would disburse the funds much like the model of the GEF, Climate Investment Funds, Congo Basin Forest Fund and Global Fund.

The GBF will act through three financing channels. These will not be separate legal entities, rather fund structures set up between the GBPP and its trustee.

1. Catalyst Fund

Facilitation TA fund providing grant finance but also risk mitigation and incentives to attract investors.

2. Infrastructure fund

Provides forms of debt finance including bonds to fund major infrastructure projects.

3. Private Equity fund

Invests in companies that are exploiting green growth market opportunities.

Further details on the sources of funding and the models for deploying finance are given in the GBPP financing paper.

6. GBPP and EXPO 2017

6.1. Alignment of GBPP and EXPO

From June to September 2017 Astana will play host to EXPO 2017, the theme of which is Energy of the Future. Over 100 countries and 6 international organisations will participate and 5 million visitors will be expected over the duration of the event. The theme was proposed by the host nation is response to the energy and environmental challenges facing the world. The aim of the EXPO is to share experiences from around the world on alternative energy sources and to promote Kazakhstan's transition to a green economy.

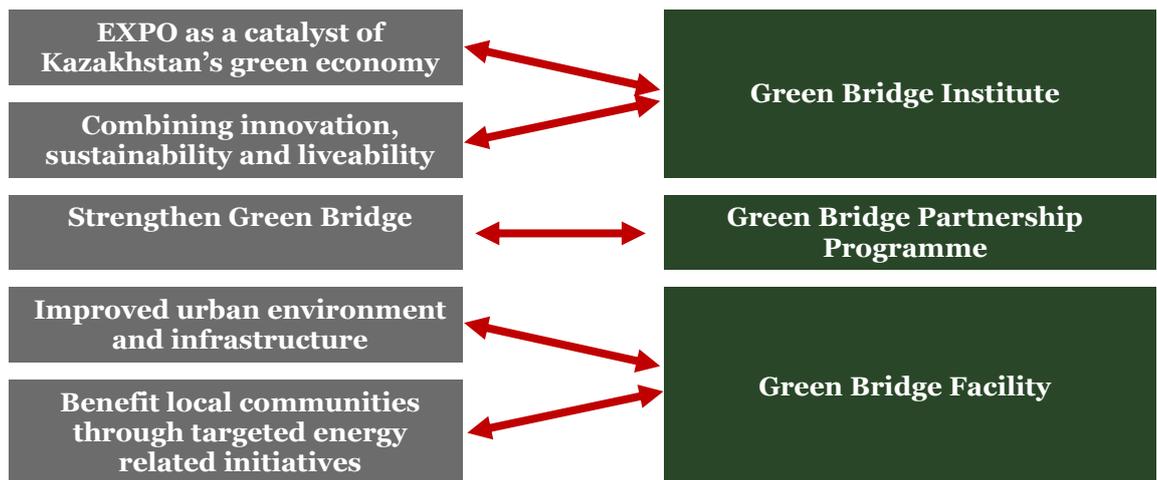
The main aspiration of EXPO is to achieve impact at a global, national and regional level. The goals of GBPP are aligned with that of EXPO's through the desire to have an impact at regional level.



Boost Kazakhstan's transition towards a green economy and foster sustainable development throughout the region.



Provide knowledge, partnership and finance support to achieve green economic growth in Central Asia.



6.2. How to further align GBPP’s activities with EXPO

The relationship between EXPO and GBPP is founded on common goals and there is an opportunity to strengthen relationship further in advance of the event. In addition the there is a role for GBPP to play at EXPO and after to spread the message of green growth within Central Asia.



In addition, some of the initiatives proposed by the EXPO can be hosted by the GBPP¹:

**Nazarbayev University
Future Energy Lab**

The GBI can host a world class laboratory for access to clean and efficient energy supply. The GBF would provide finance, knowledge and partnership support to green technologies related to the three EXPO themes: clean sources, energy efficiency, and energy access.

**Nazarbayev Open
University**

GBF can provide support and help create an online platform that would serve as a virtual base for EXPO. It would be a hub that will hold all the information regarding visitors around the world, future energy events, discussion forums, virtual lectures by Nazarbayev University professors and students, reading and course schedule of future energy classes.

**Technology Incubator
and Fund**

GBI can incubate the business and research ideas of young Kazakh entrepreneurs and GBF can provide them the support to test and pilot their idea, which they can later display and present at the EXPO. Initiatives like this will foster and promote entrepreneurial spirit in the green economy sector, not only in the country but in the whole of Central Asia.