Concept on introduction and development of green finance instruments and principles

Content

Acronyms and Abbreviations

AIFC	Astana International Financial Centre
EBRD	European Bank for Reconstruction and Development
GEC	Green Economy Concept
NDC	Nationally Determined Contribution
UNFCCC	United Nations Framework Convention on Climate Change
CAGR	Compound Annual Growth Rate

1. Executive Summary

1.1 Key Messages

- **Kazakhstan has a decisive opportunity to orient its financial system towards low-carbon and sustainable development**
- **The Green Financial System for Kazakhstan project was established to assist the Astana International Financial Centre scope, conceptualize and initiate development of a domestic green financial system**
- **The project found a strong official commitment to sustainable development and large demand for green finance across key sectors of Kazakhstan's economy**
- **The project also identified domestic challenges to green finance which include policy and capacity constraints, a shallow financial sector and an immature green ecosystem**
- **The project culminated with a series of recommendations and supporting actions revolving around three core areas: developing a complementary strategic framework; establishing enabling conditions; and supporting effective market mechanisms, including carbon markets and services**

1.2 International Context

"The global financial system needs reshaping to finance an inclusive, prosperous and environmentally sound future, in other words: to achieve sustainable development."

UNEP, The Financial System We Need: From Momentum to Transformation, October 2016

With few exceptions, policymakers around the world are scaling up efforts to tackle the urgent threat and growing impacts of climate change. The Paris Agreement and Sustainable Development Goals are important outcomes of these recent efforts.

Meeting the ambitious goals of these multilateral commitments will require an unprecedented mobilization of both public and private sources of finance for green investments. According to the New Climate Economy this figure is estimated at US$90 trillion over the next decade and a half[1]. A green financial system is a critical supporting pillar for achieving this envisaged low-carbon, sustainable future.

[1] New Climate Economy (2014). Better Growth, Better Climate. http://2014.newclimateeconomy.report/wp-content/uploads/2014/08/NCE_ExecutiveSummary.pdf. Investment needs for infrastructure to be consistent with the 2°C scenario are about 10%

Green finance refers not only to the financing of public and private green investments, or green financial flows. Importantly, it also refers to efforts to incorporate environmental considerations into decision-making across financial institutions and markets, or in other words the “greening” of the financial system. Broadly speaking, therefore, a green financial system involves the effective management of environmental risks.

Considerable recent progress has been made towards these ends, what UNEP has referred to as a “quiet revolution” in financial system reform, and change is accelerating.[2] At an international level, institutions such as the G20, UNEP, EU and Financial Stability Board have introduced high profile green finance initiatives and proposed pathways for change. At a national level, countries at various stages of development have championed a process of reform, providing greater alignment between their financial sectors and sustainable development goals.

A key outcome of these efforts is an understanding that green finance amounts to far more than financial instruments, structures and innovations. A green financial system moves beyond the product and thematic levels to an alignment of the system as a whole with sustainable development. This, in turn, requires policy commitments to addressing demand and supply side challenges and putting in place supportive enabling conditions. The overall objective of reform is not to create isolated islands of green finance or separate asset classes, but rather to orient incentives within the financial system that facilitate green economic development.

1.3 Kazakhstan Context

Kazakhstan has made great development strides since independence. GDP growth has averaged more than 7 percent per year over the past two decades.[3] Living standards – measured by GDP per capita – have risen more than 10-fold in a single generation and Kazakhstan has achieved upper-middle-income status, as classified by the World Bank.

At the same time, Kazakhstan has pursued a favorable business climate, made large-scale infrastructure improvements and implemented a program of structural economic reforms. This has facilitated significant flows of foreign direct investment and supported progressive gains in competitiveness.

However, the threat posed by climate change is challenging Kazakhstan’s highly energy and emissions intensive economy. Presently, Kazakhstan utilizes two to three times more energy per unit of GDP than the average for OECD countries. It is also the largest emitter of greenhouse gases in Central Asia, with emissions per capita among the highest in the world.[4] Kazakhstan is already experiencing consequences from climate change including drought, desertification and agricultural degradation.[5]

---

more than what is required anyway to sustain growth and meet the basic needs without considering the climate and pollution challenge. See OECD “Invest in Growth, Invest in Climate”, pp28. The report is available at http://www.oecd.org/env/investing-in-climate-investing-in-growth-9789264273528-en.htm.

[2] UNEP Inquiry, The Financial System We Need: From momentum to Transformation (2016). Available at:http://unepinquiry.org/wp-content/uploads/2016/09/The_Financial_System_We_Need_From_Momentum_to_Transformation.pdf

[3] World Bank, World Development Indicators, May 2017

[4] Asian Development Bank, Country Parnership Strategy 2012-2016; Energy Sector Assessment

[5] Kazakhstan’s National Communications to the UNFCCC, II-VI; 2009 & 2013

Charting a course for long-term prosperity, therefore, requires encouraging new drivers of greener growth. In addition to generating environmental benefits, green growth promotes efficient resource use, improved and new infrastructure as well as resource, including food security, all of which are critical for sustaining and enhancing the socio-economic development of Kazakhstan's industries, businesses and citizens and enabling the country to address and adapt to the existential threat of climate change.

To remain on the path of development success, therefore, Kazakhstan requires a second transformation towards a low-carbon future. This encompasses a set of important policy challenges, notably:

- How to diversify the economy away from oil and minerals;
- How to reduce economy-wide greenhouse gas emissions and energy intensity;
- How to nurture new drivers of green growth whilst simultaneously strengthening institutions and policy frameworks.

The prize from low-carbon reform is a more resilient and diverse economy. The transformation is pro-growth with the OECD projecting output gains over both the short and long-runs are possible from a "decisive low carbon transition" with additional gains from avoided climate damages, even for fossil fuel exporting countries.[6] Further, such a transition is aligned with Kazakhstan's structural reform agenda and investment policy objectives.

Kazakhstan has made important, early progress towards these ends, aligning national strategic development plans and programs with green economic objectives. Progressive domestic legislation has been passed covering laws on renewable energy and energy efficiency as well as the introduction of an emissions trading system. These efforts are underpinned by ambitious low-carbon and sustainability targets and guided by the "Concept on Transition to a Green Economy" policy framework (Green Economy Concept, GEC) as well as Kazakhstan's nationally determined contribution (NDC) to reduce greenhouse gas emissions under the Paris Agreement.

Green finance is key to capturing the prize of this second, "low-carbon transformation". To place Kazakhstan's economy onto a low-carbon development pathway and, in the process, meet the country's Paris Agreement commitments and Green Economy Concept targets will require a major scaling up of investment from public and private sources for green technologies, businesses and projects. There is currently a significant gap between the projected demand for green finance and the current level of actual investments in the green economy.

Green finance plays a central role in facilitating and intermediating the necessary flows of investment and capital, which is critical to mobilizing the private sector and closing the current green investment gap. Further, there is a growing base of knowledge which demonstrates that private sector investment can be effectively leveraged and barriers overcome through a range of proven measures and interventions.

Kazakhstan, therefore, has a decisive opportunity to orient its financial system to fuel a low-carbon transformation. The implementation of a Green Financial System will not only deliver environmental

---

[6] OECD, "Investing in Climate, Investing in Growth", Synthesis Report, 2017. Available at: https://www.oecd.org/environment/cc/g20-climate/synthesis-investing-in-climate-investing-in-growth.pdf

benefits, but also encourage new sources of growth,[7] and promote Kazakhstan's role as a notable regional and international financial actor at the forefront of a dynamic and rapidly growing sphere of finance.

1.4 Challenges to Kazakhstan's GFS

This project has examined the landscape of green finance in Kazakhstan and identified a number of challenges facing a domestic Green Financial System. A summary of these challenges are depicted in Figure 1 as follows:

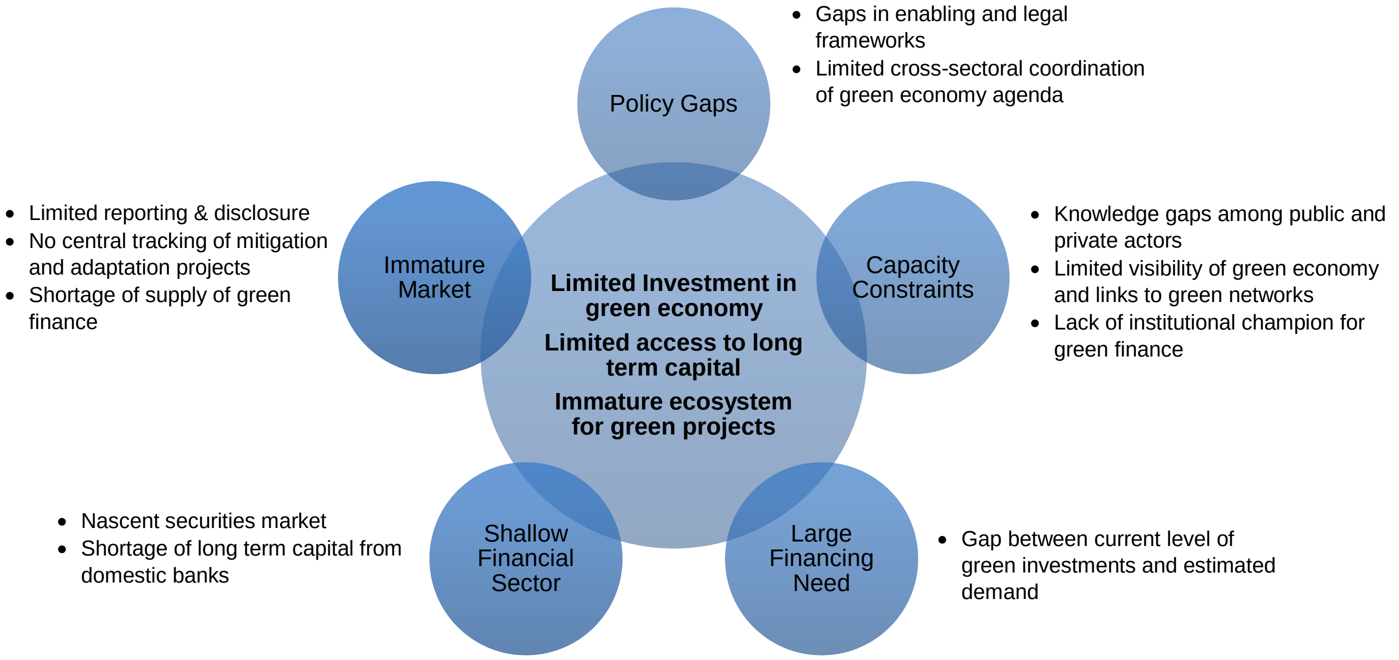

Figure 1. Core Challenges Facing Kazakhstan's Green Financial System

Taken together, these challenges do not reflect a lack of will towards green finance but reflect sector specific constraints as well as an immature green economy. Despite the clarity of Kazakhstan's political commitment to sustainable development as well as concrete ambitious national targets, these challenges highlight the progress that is still required and the need for green finance reform,

---

[7] According to the OECD, climate policies and economic reforms that meet the Paris Agreement objectives are projected to deliver a net increase in GDP in the long run. Dr. Simon Buckle, "The Paris Agreement, Climate Action And Scaling Up Green Finance And Investment", Presentation at the Astana Economic Forum, June 2017

1.5 Architecture for Change

In order to move beyond theoretical frameworks and develop effective and practical recommendations for Kazakhstan's green financial system will require a scaling up of best practice and implementation of reform. This process of transformation, in turn, requires an understanding of the underlying drivers of change.

In a narrow context, "drivers" of change refer to individual agents or sponsors of reform. However, to properly reflect the complexity of greening Kazakhstan's financial system, we depart from a focus on individual reforms towards a more holistic understanding of the systemic and structural drivers that influence the success of transformation. In other words, we contemplate the architecture of change, as follows:

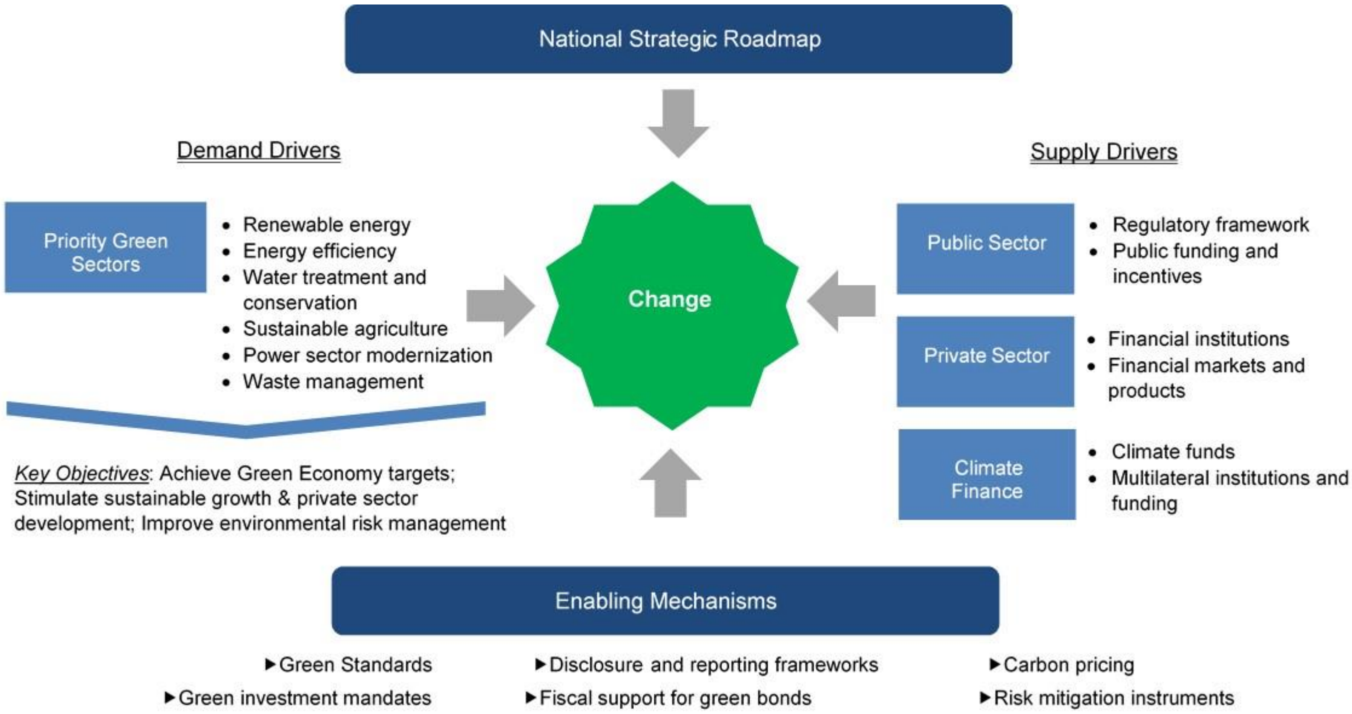

Figure 2. Architecture of Change for Kazakhstan's Green Financial System

The architecture in Figure 2 depicts a holistic system for transformation:

- National Roadmap: a national strategy and implementation program that creates the necessary political capital for change and 'connects up' the various individual aspects of a green finance strategy across different sectors and government authorities;

- Demand Drivers: the ‘need’ for green finance across the multiple, priority economic sectors;
- Supply Drivers: the regulatory environment, public sector, private and quasi-private sectors, and multilateral actors;
- Enabling Mechanisms: the bridges between supply and demand systems, to help convert finance ‘need’ into market activity.

The purpose of this architecture is to facilitate a better understanding of how change occurs as there are no one-size fits all blueprints for developing a green financial system. Effective recommendations for Kazakhstan’s green financial system, therefore, need to be grounded in an understanding of the key factors that drive change.

1.6 Core Recommendations

The key recommendations for the development of the Green Financial System in Kazakhstan can be structured in three successive phases; the Initiation phase (2017-2018), the Deepening phase (2019-2021) and the Expansion Phase (2022-2025), as illustrated in Figure 3.

The focus of the Initiation phase is to lay the groundwork and build momentum for the Green Financial System in Kazakhstan. As a result, the focus is on establishing the governance structure of the system, building institutional support, carrying out enabling activities and establishing some reference financial instruments. All of these actions should support each other. A key to the overall success of the project is to establish a national champion for the Green Financial System, a role for which the Astana International Financial Center is uniquely qualified..

During the Deepening Phase, some of the initial actions with regards to green standards and disclosure frameworks that have been carried out within the AIFC territory can be rolled out to the national level.

During the Expansion Phase, the Green Financial System can be further developed to not only serve the needs of Kazakhstan but of the greater Central Asia region.

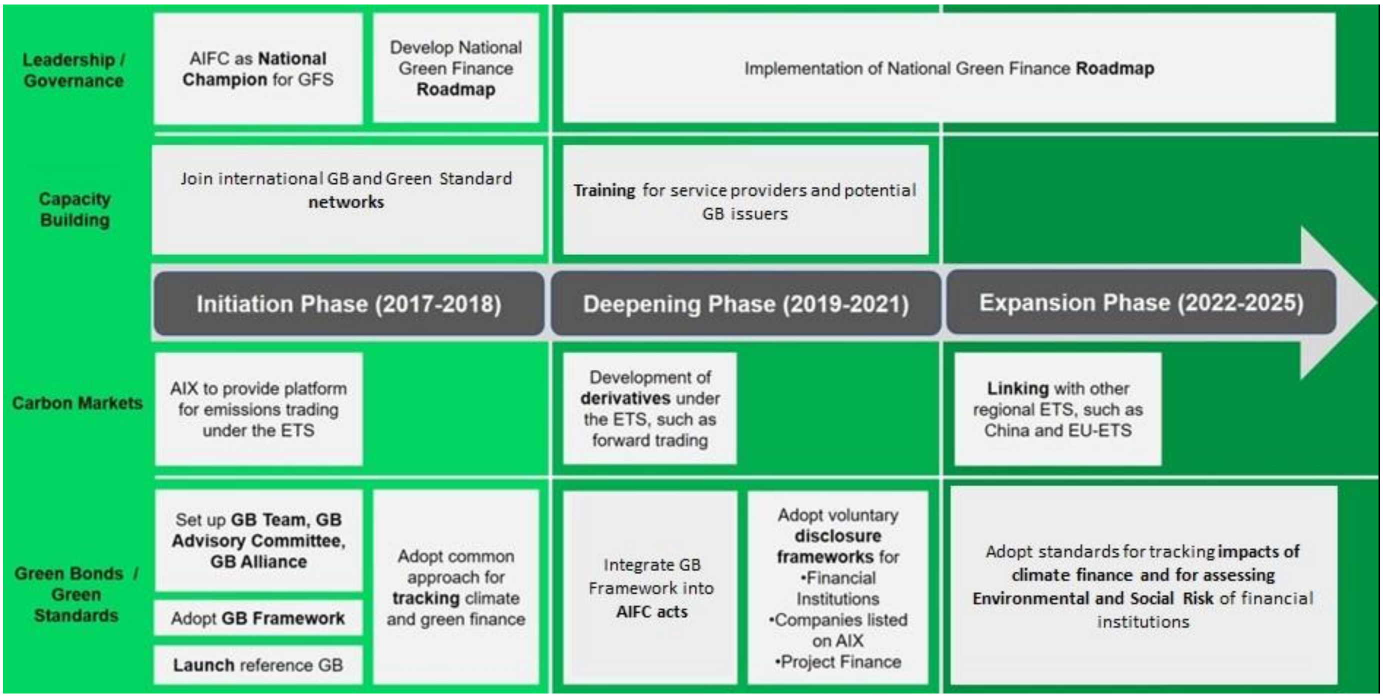

Figure 3. Road Map at a Glance

The below list contains the key recommendations for the development and implementation of Kazakhstan's green financial system and the most important supporting actions to implement them.

Recommendation I: Establish a governance structure to support the GFS

- Establish AIFC as National Champion for the GFS
- Development of National Roadmap for Implementation of GFS

Recommendation II: Accelerate Building of Capacity in Green Finance

- Include green finance content in existing vocational training programs
- Train Green Finance Professionals in Financial Institutions

Recommendation III: : Promote the Domestic Carbon Market

- Launch Trading of KazETS allowances at the AIFC Exchange (AIX)
- Provide transparency on KazETS allowances trading
- Support reforms of the KazETS that increase liquidity of the domestic carbon market

Support reforms of the KazETS that increase linkage with other regional ETS, such as the EU ETS or China's ETS

Recommendation IV: Establish Disclosure and Reporting Frameworks

- Adopt a common definition and approach for tracking Climate Finance and "Green" Finance
- Adopt voluntary disclosure standards for all financial institutions on AIFC territory
- Establish a common voluntary Environmental-Social-Governance (ESG) Disclosure Framework for companies listed on AIX Exchange
- Establish a common disclosure framework for Project Finance by Financial Institutions in AIFC territory

Recommendation V: Embed Green Financial System in regulatory frameworks

- Include Green Finance in key strategic Policy Documents
- Regulatory Frameworks for green financial instruments, monitoring and reporting of environmental risks and impacts

Recommendation VI: Promote Green Bonds as a Long-Term Source of Green Finance

- Set up AIX / AIFC Green Bonds Team, with responsibility for day-to-day management of the Green Bonds programme
- Set up Green Bond Advisory Committee and Green Bond Alliance
- Develop Green Bond Framework, to be owned and updated by the Advisory Committee

Build internal and external support for the issuance of a reference Green Bond

Recommendation VII Consider public financing measures for green investments

- Consider an opportunity for Pension Fund to invest in Green Economy

1.7 Role of AIFC: Summary

This project was established to assist the Astana International Financial System (AIFC) scope, conceptualize and initiate development of a domestic green financial system. Given its unique regulatory status, strong mandate for green finance development and the high political priority on achieving success, the AIFC is well placed to play a central, coordinating role.

A key driver of success for Kazakhstan's Green Financial System will be a strong market-policy dynamic where policies endorse green finance in areas with active local market demand. The AIFC has an important role in supporting this dynamic by acting as a fulcrum between emerging policy, green financial solutions and domestic market activity. This central, coordinating role thus provides criticial support for green finance demand by serving as a locus of political influence to drive the green finance agenda, unlock resources where necessary and crowd-in private sector investment.

Based on the analysis, it is recommended that AIFC's role may be built on the foundations depicted in Figure 4.

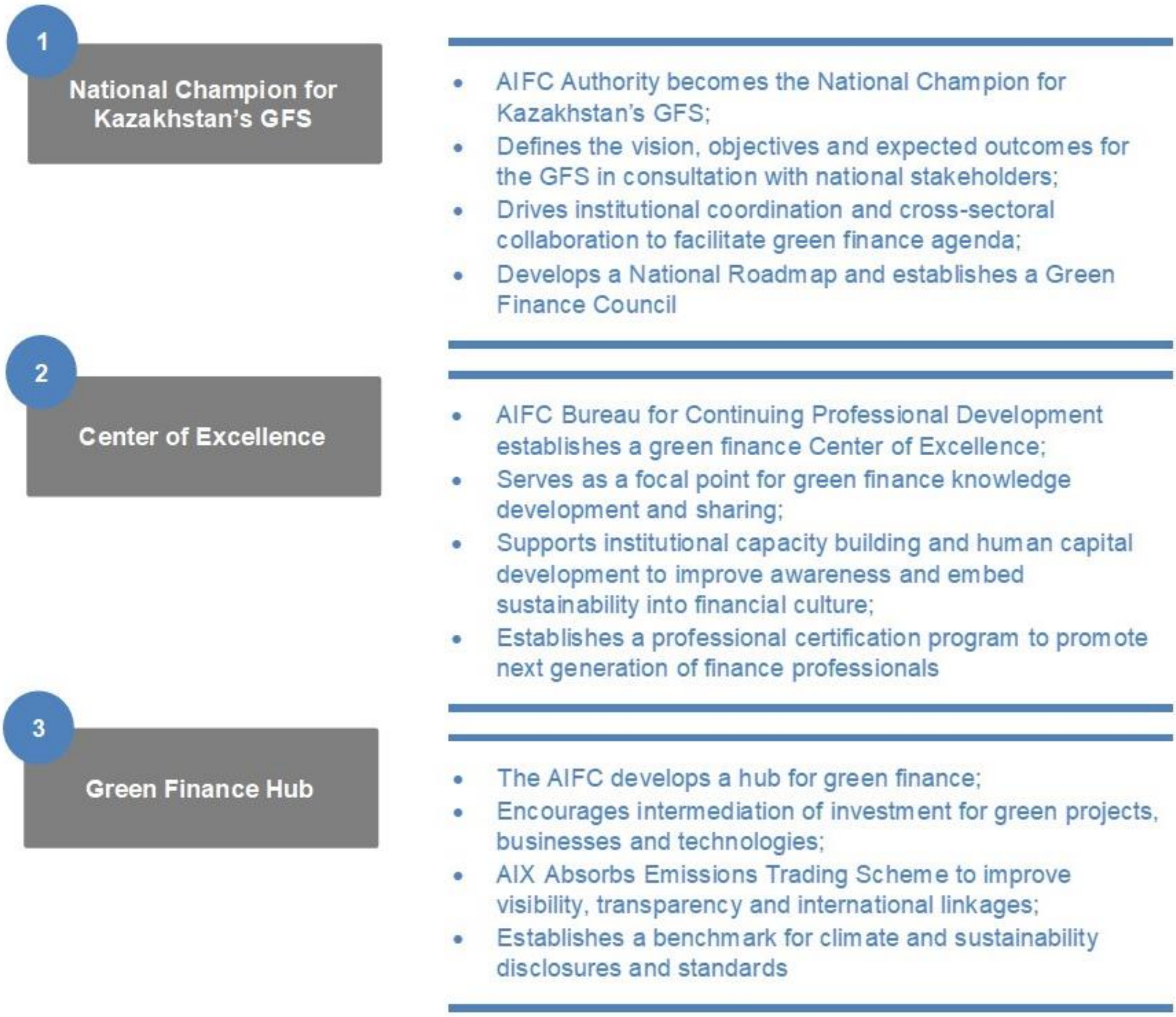

Figure 4. AIFC Roles

2. Green Finance: International Experience

2.1 The Case for Green Finance

Meeting the ambitious Sustainable Development Goals (SDGs) and climate-related goals of the Paris Agreement requires an **unprecedented mobilization and re-orientation of public and private finance towards green investments**. Public finance is essential for realizing these goals but fiscal constraints limit the availability of funding. The private sector therefore, and the **financial sector in particular, plays a central role in green economic development**, intermediating and leveraging investments for green projects.

Green investment flows are growing but currently at a **pace too slow to reach the ambitious global goals**.[8] The global financial system is awakening to its enabling role in a global transition to a sustainable, low-carbon and climate resilient society within the frameworks set by the Paris Agreement and the UN Sustainable Development Goals. The global stock of financial assets is around US$ 300 trillion of which e.g. only US$ 350 billion has been channelled to green energy infrastructure[9].

Meeting global climate and sustainable development goals could require a **mobilization of US$ 90 trillion in green financing by 2030**[10]. This requires a massive shift in aligning the global financial system with the global targets and mobilizing capital to achieve the targets. This means that a **more systematic approach to green finance is required on all levels of society**; inter-governmental organisations, governments, international organisations and public and private sectors.

2.2 Options for Mobilising Green Finance

Making a profound intervention and re-calibrating a financial system to a green financial system is a collective effort by a broad range of actors in the financial system. **Aligning the financial system with sustainable development is a policy choice** and it is not feasible on the scale required without sufficient regulatory reform, including creating an enabling environment for green investments. At a global level, these policy choices are being made through the Paris Agreement and the SDGs. Now the challenge is to embed these commitments across the financial system and national legislation, so that the practice of finance is aligned with sustainable development.

A green financial system is built on three pillars (Figure 5~~Figure 5~~) to provide capital to projects and investments that generate environmental benefits and broader sustainable development benefits.

---

[8] UNEP (2016): Emissions Gap Report 2016, https://uneplive.unep.org/media/docs/theme/13/Emissions_Gap_Report_2016.pdf

[9] World Economic Forum, Renewable Infrastructure Handbook: A Guide for Institutional Investors (December 2016). Available at: http://www3.weforum.org/docs/WEF_Renewable_Infrastructure_Investment_Handbook.pdf

[10] UNEP Inquiry, The Financial System We Need: From momentum to Transformation (2016). Available at:http://unepinquiry.org/wp-content/uploads/2016/09/The_Financial_System_We_Need_From_Momentum_to_Transformation.pdf

Figure 5. Green Financial System Pillars

Efforts towards the greening of financial systems are increasing rapidly. Emerging from the experience of a number of countries around the world as well as multilateral organizations are a number of measures for consideration to improve the orientation of the financial sector in order to mobilize capital for green investment.

To overcome barriers to green finance, the G20 Green Finance Study Group has recommended[11] seven **policy options for policymakers to mobilize private capital for green investments**:

1. Putting in place clear signals and strategic policy frameworks for investors, regarding the strategic framework for green investment, e.g., to pursue the Sustainable Development Goals (SDGs) and the Paris Agreement;
2. Promoting voluntary principles for green finance;
3. Expanding learning networks for capacity building, such as such as the Sustainable Banking Network, the Principles for Responsible Investment (PRI);
4. Supporting the development of local green bond market;
5. Promoting international collaboration to facilitate cross-border investment in green bonds;
6. Encouraging and facilitating the sharing of information on environmental and financial risks; and,
7. Improving the measurement of green finance activities and their impacts, e.g. through work on green finance indicators and associated definitions.[12]

The recommended options listed above can be categorized into three fields: **regulatory measures, voluntary measures by the private sector, and public finance interventions**. Most prominent of these categories has so far been voluntary measures, but improving the regulatory field has been high on the agenda in several countries in recent years.

- **Regulation:** The financial sector is a highly regulated industry. However, environmental considerations have largely been done voluntarily, through private and public initiatives and standards. In order to advance green investments, policymakers can consider creating regulatory frameworks that make many of these practices mandatory. To be most effective, these policies should be based on extensive

[11] G20 Green Finance Study Group (2016): Green Finance Synthesis Report. http://unepinquiry.org/wp-content/uploads/2016/09/Synthesis_Report_Full_EN.pdf

[12] Ibid.

engagement between the private sector, civil society, financial regulators, and policymakers.

  - **Voluntary Measures by the Private Sector**: One of the essential functions of financial markets is to price risk to support informed, efficient capital-allocation decisions. Without the right information, investors and other stakeholders may incorrectly price or value assets, leading to a misallocation of capital.[13] The monitoring and disclosing/reporting the information on key issues, including environmental risks, is key in making this information available. Voluntary measures to take environmental issues into account in decision-making by financial actors, and disclosing ESG information on investments, are increasing in volume and amount of commitments. Increasing numbers of private sector actors have signed on to the Equator Principles (EP) for project financiers, Principles for Responsible Investment (PRI) and Principles for Sustainable Insurance, and new initiatives such as the Sustainable Stock Exchanges Initiative and The Principles for Positive Impact Finance.

- **Public Finance Interventions:** Public finance is an important tool for unlocking and mobilizing private finance in the context of sustainable development. If applied correctly, public finance is able to address market failures related to environmental externalities and other ESG issues, and to support the long-term sustainability objectives. As public finance is scarce due to national fiscal constraints and economic downturns triggered by the 2008 financial crisis, it is put in most efficient use, when it is designed to leverage private finance. Public finance can be designed to reduce risks for private investors (e.g. regulatory, currency or technology risk) through risk mitigation instruments. Public finance can also take a sub-ordinate position in investments, or have first-loss position, to help private investors in managing their fiduciary duties. Some of the tools for leveraging environmental private finance with public finance instruments include loan guarantees, policy insurance, equity “pledge” funds and subordinate equity funds.

2.3 Financial Sector’s Role in Green Finance

Designing a robust and efficient financial system has been a global topic of policy debate and action following the 2007-2008 financial crisis. While a reform of the financial system is ongoing, there is also an **important opportunity for greening it**.[14] The UNEP Inquiry launched in 2014-2016 concluded that a "quiet revolution" is underway worldwide to **integrate sustainable development in the structure of the financial system**. Green finance is also becoming a competitiveness factor for businesses and financial centres.[15]

One of the key drivers of this revolution is that **climate change is seen as an increasingly large risk** to economies worldwide. The World Economic Forum (WEF) listed extreme weather events as the biggest global risk in its 2017 report in terms of likelihood, and the second largest risk in terms of impact. According to the WEF, climatic changes also affect global developments in economic growth and reform.[16] There is a growing recognition that the response to environmental risks cannot be delivered by international agencies

---

[13] Financial Stability Board Taskforce on Climate-Related Disclosures https://www.fsb-tcfd.org/

[14] UNEP (2014): Aligning the financial system with sustainable development – Insights from Practice. UNEP Inquiry: Design of a Sustainable Financial System

[15] UNEP (2016): The financial system we need – from momentum to transformation. UNEP Inquiry: Design of a Sustainable Financial System

[16] World Economic Forum (2016): The Global Risks Report 2017, 12th Edition, https://www.weforum.org/reports/the-global-risks-report-2017

and governments alone. It requires new approaches that take a wider view of the interconnected challenges, and that involve a more diverse set of actors.

The **financial sector has a powerful role to play in this change towards a greener economy.** The core purpose of the financial system is to serve the real economy by providing a range of services for households, enterprises and public authorities. Among the most important are intermediation of investments, allocation of capital, and management of risk. The transition to sustainable development reframes these services, inserting new parameters, such as planetary boundaries. This can be simplified into a two-way relationship: sustainability challenges in the real economy are driving new demands on the financial system, and actions within the financial system in turn are also shaping environmental and social outcomes in the real economy.[17]

There is a **growing need of more detailed publicly available information** on green investment flows and the environmental impacts of the investments, in order to track the progress towards agreed-upon environmental goals. For example, the Paris Agreement retains the minimum US$100 billion annual climate finance goal to be provided by developed to developing countries through a variety of instruments, sources and channels, including the private sector. The agreement also sets out increasingly extensive transparency rules for disclosing both climate finance flows and their impacts on greenhouse gas emissions on a national level.[18]

More recently, in the face of a growing and more urgent threat of climate change, **policy connections have formed between reforms of the financial sector and sustainability**. The priorities of harnessing the extensive financial requirements to effectively tackle climate change, achieving the long-term commitments under the Paris Agreement and re-designing a financial system that is fit for purpose have coalesced around an alignment of the financial sector at a basic level with sustainable development.

Aligning the financial system with sustainable development is ultimately a policy choice, and it is not feasible on a large scale without sufficient regulatory reform, including creating an enabling environment for green investments. **Progress towards greening the financial system has been made and efforts are increasing rapidly.** Policymakers and governments around the world have introduced actions to enhance risk management, improve reporting of financial institutions and encourage targeted allocation of capital among other key measures. The UNEP Inquiry identified 217 measures taken by 60 countries worldwide by mid-2016. At a multilateral level, international organizations such as UNEP, G20, and the Financial Stability Board have launched high profile initiatives examining the links between finance and sustainable development and proposing pathways for necessary change. In parallel, the private sector has spearheaded a number of market innovations, notably green bonds, and incorporated sustainability principles and frameworks into business models and management systems.

2.4 Green Standards

Green standards form the base for a green financial system as they anchor local financial systems into international frameworks on sustainable finance, create a platform for engaging with international

[17] UNEP (2016): The financial system we need – from momentum to transformation. UNEP Inquiry: Design of a Sustainable Financial System

[18] Laine A., Clarke, M. et al (2016): Implementation of the Paris Agreement and tasks to develop its rulebook. http://tietokayttoon.fi/julkaisu?pubid=15707

sustainable finance networks, as well as with local and global stakeholders and NGOs. There are a vast number of global networks and organisations focusing on green standards that support the development of green financial markets. These initiatives have been mapped throughout the project for various areas in sustainable finance including banking, investment and insurance.

In addition to different target segments, green standards also have vastly different objectives. The analysis in the project categorized chosen green standards for financial institutions into three classes on the basis of the basic purpose of the standard. First, measurement standards are used to quantify environmental impacts or to define the environmental quality of underlying finance. These are typically standards that act as eligibility criteria or guidance for environmental performance measurement and results-based payments. The second category includes standards that are focused on defining how green finance should be tracked and reported. The third category, disclosure standards, defines what information must be disclosed to evaluate risks.

UNEP FI in its recent report[19] highlights the opportunities and the need to build in sustainable development considerations into the core architecture of financial standards. The report identified five “entry points”, through which a regulator can introduce green/sustainable development considerations into the financial system; systemic risk, governance, transparency, risk/materiality and culture. Each of the five issues feature in normal financial regulation and could be extended to include features of sustainable development. For instance, management of systemic risk could include scenarios for abrupt physical impacts from climate change on e.g. agriculture or rapid impacts on demand for fossil fuels from carbon regulation and reduced cost of renewable energy. Alternatively, disclosure and transparency rules for financial institutions could be extended to cover environmental performance.

From the perspective of AIFC, the adoption of green standards needs to take into account two aspects; the governance structure of AIFC and the strategic and operational priorities of the AIFC. In light of the fact that AIFC is the regulator it is in a unique position to align green standards and reporting frameworks into the core architecture of the AIFC’s financial standards regime, covering systemic risk, governance, transparency and risk/materiality. The project has therefore provided recommendations on adopting green standards for different green financial products and services at different levels of the AIFC governance structure. In other words, the green standards recommended for adoption are matched with some of the central themes for financial reporting. By adopting green standards AIFC can lead through example and provide support for a broader adoption of green standards in the financial industry in Kazakhstan.

2.5 Tracking of Climate Finance

Climate finance is a sub-category of green finance, concerning financing for climate change mitigation and adaptation. Ever since the **goal of mobilising US$ 100 billion per year of international climate finance** was agreed under the UN Framework Convention on Climate Change (UNFCCC), much attention has focused on what should count towards this goal and how climate finance should be measured, reported and verified (MRV’d).

Climate finance can come from a **variety of sources, including from public, private and alternative sources of financing**. Monitoring private finance, in particular the amount of private finance leveraged by

[19] UNEP FI (2017): A Review of International Financial Standards as they relate to Sustainable Development

public finance, is perhaps the greatest challenge in climate finance tracking. The biggest issue with monitoring leveraged private sector finance is the **risk of double counting**. If a project is funded by more than one public source, there is a chance that the project's private investments are reported as mobilised private funding by multiple sources. There is currently no common understanding on what types of private finance could be counted towards the US$ 100 billion goal. As a consequence, estimates of the current climate finance flows vary significantly, ranging from US$ 30-400 billion.

The development of common, transparent, consistent and comparable approaches to estimating the amount and results of climate finance would benefit climate finance providers and recipients alike. Various international processes are currently ongoing to address this need:

- The **UNFCCC** provides general reporting guidelines, including on climate finance. Developed country Parties report on the climate finance provided in their Biennial Reports while developing countries report on the climate finance received in their Biennial Update Reports.
- Under the **Paris Agreement**, more detailed requirements for reporting and transparency of climate finance are being negotiated, with decisions expected in late 2018
- The **Standing Committee on Finance (SCF) under the UNFCCC** assists in the improvement of coherence and coordination in the delivery of climate change financing, mobilization of financial resources and measurement, and monitoring, reporting and verification (MRV) of support provided to developing country Parties. The SCF presented its own biennial assessment and overview of climate finance flows in 2016 which identified areas for further improvements in climate finance tracking and reporting under the UNFCCC. The SCF is carrying out work on MRV of climate finance but the results were not available at the time of writing this report. SCF has invited multilateral climate funds and development banks, other financial institutions and relevant international organizations to cooperate to further harmonize methods for measuring climate finance and to advance comparable approaches for tracking and reporting on impacts.[20]
- **The OECD Development Assistance Committee (DAC)** gathers statistics on official development aid (ODA) and other resource flows to developing countries from bilateral and multilateral donor agencies every year. The DAC uses the so-called **Rio markers** to track the fulfillment of financial objectives of the Rio Conventions, including the UNFCCC. The OECD has also been developing a more comprehensive MRV framework for climate finance in the past decade. The OECD has also worked on methods to estimate **mobilised private and public climate finance** under the Research Collaborative onTracking Private Climate Finance.[21]
- **The group of Multilateral Development Banks** – EBRD, African Development Bank (AfDB), Asian Development Bank (ADB), European Investment Bank (EIB), Inter-American Development Bank (IDB), International Finance Corporation (IFC), World

[20] Report of the Standing Committee on Finance to the Conference of the Parties (2016) http://unfccc.int/resource/docs/2016/cop22/eng/08.pdf

[21] Available online at: https://www.oecd.org/env/researchcollaborative/

Bank (WB) and the World Bank Group – have publlished their **Common Principles for Climate Mitigation Finance Tracking** as well as their **Common Principles for Climate Change Adaptation Finance Tracking**[22]. The MDB approach is aligned with the OECD Rio Markers, and data are shared annually.[23] The MDBs have also proposed a common approach for **tracking climate co-finance.**

[22] Available online at: https://www.afdb.org/fileadmin/uploads/afdb/Documents/Generic-Documents/Common_Principles_for_Climate_Change_Adaptation_Finance_Tracking_-_Version_1__02_July__2015.pdf

[23] https://www.oecd.org/env/researchcollaborative/WorldBank-Ebinger-COP21-Side-event.pdf

3. Green Finance: Kazakhstan's Context

3.1 Kazakhstan's Economy

Kazakhstan has made great development strides since independence. GDP growth has averaged more than 7 percent per year over the past two decades.[24] Living standards – measured by GDP per capita – have risen more than 10-fold in a single generation and Kazakhstan has achieved upper-middle-income status, as classified by the World Bank.

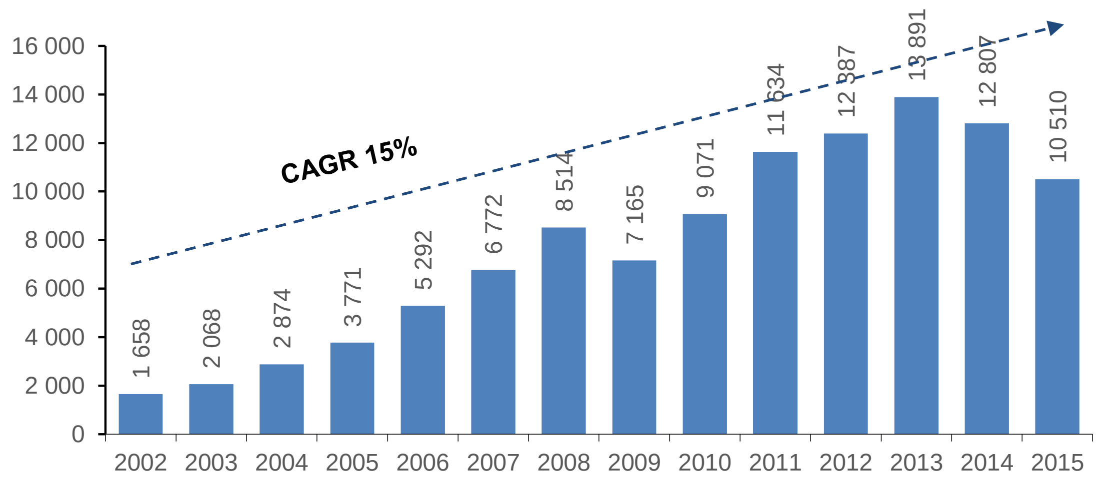

Figure 6. Kazakhstan's Growth Trajectory (GDP per capita, Current US$, 2002-2015)[25]

At the same time, Kazakhstan has pursued a favorable business climate, made large-scale infrastructure improvements and implemented a program of structural economic reforms. This has facilitated significant flows of foreign direct investment and supported progressive gains in competitiveness.

[24] World Bank, World Development Indicators, May 2017

[25] World Bank National Accounts Data (http://data.worldbank.org)

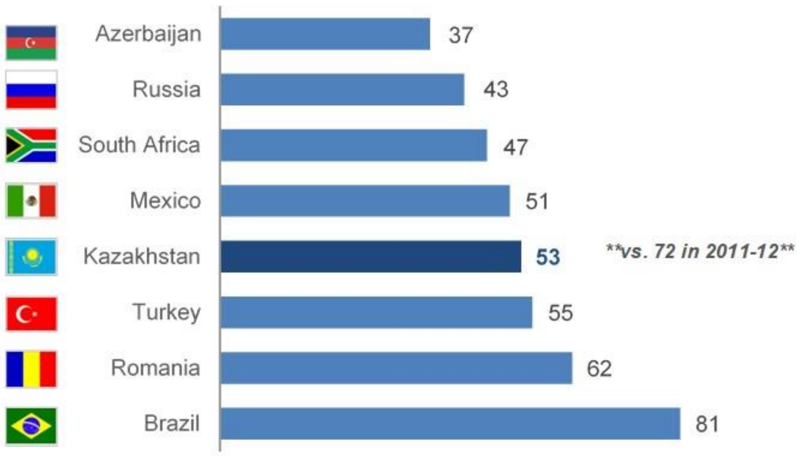

Figure 7. Global Competitiveness Ranking (2016-2017)[26]

In addition, the windfall of high commodity prices sustained over the last decade was seized upon to build significant financial savings. Currently, Kazakhstan's external financial assets amount to approximately 40 percent of GDP or ninety-four billion dollars.[27] As a result, Kazakhstan today is a net creditor to the world.

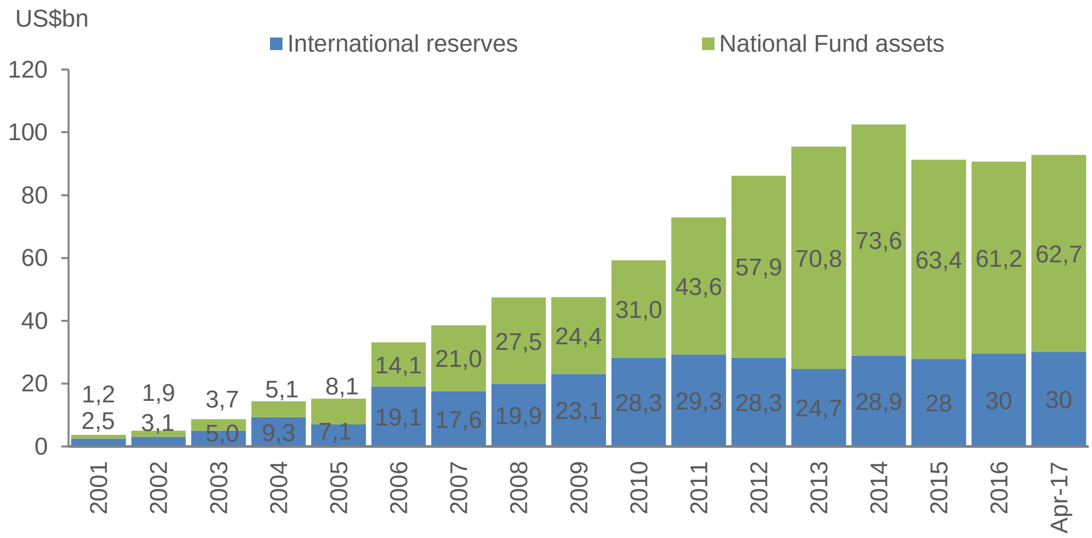

Figure 8. Total External Assets (2001-2017)[28]

---

[26] World Economic Forum, The Global Competitiveness Index 2016–2017

[27] National Bank of Kazakhstan

Kazakhstan has, in other words, achieved one successful transformation, from a post-Soviet economy in transition to a high-growth commodity exporter. However, the natural resource intensive growth model that has largely fueled success to date is now in doubt, challenged by a lower outlook for revenues from oil and other commodities. The latent macroeconomic vulnerabilities of a reliance on commodities have been revealed clearly over the last two years. As commodity prices have fallen precipitously, Kazakhstan's currency and annual GDP growth rate have followed in tandem.

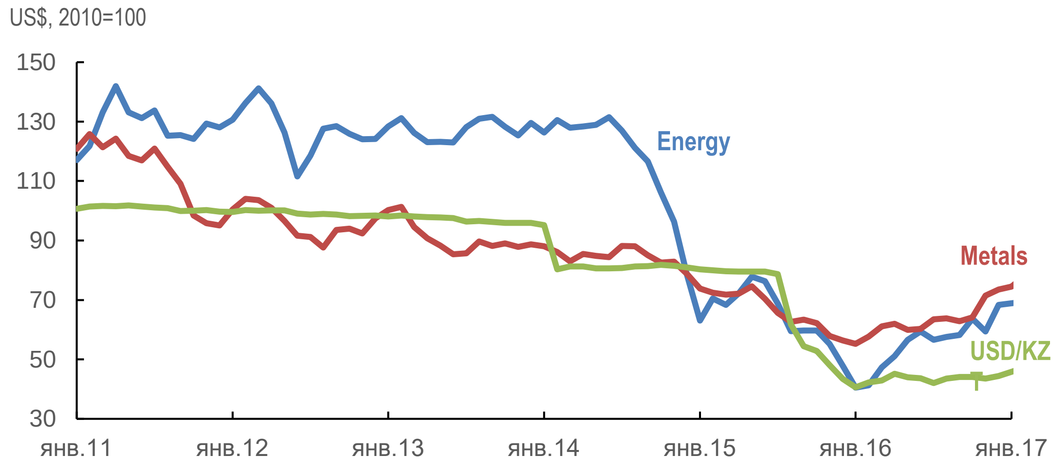

Figure 9. Commodity Price & Currency Indices (2011-04/2017)[29]

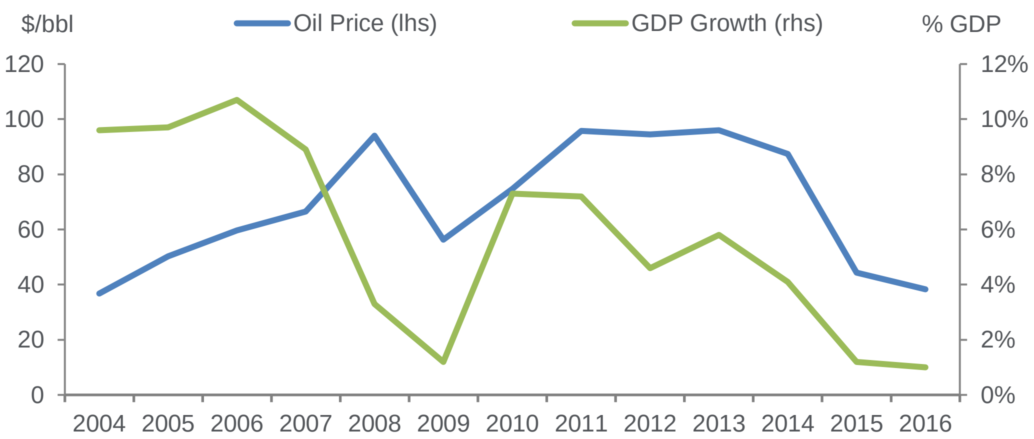

Figure 10. Nominal GDP Growth relative to Oil Price (US$/bbl, annual average)[30]

---

[28] World Economic Forum, The Global Competitiveness Index 2016–2017

[29] World Bank; National Bank of Kazakhstan

At the same time, the threat posed by climate change is challenging Kazakhstan's highly energy and emissions intensive economy. Presently, Kazakhstan utilizes two to three times more energy per unit of GDP than the average for OECD countries. It is also the largest emitter of greenhouse gases in Central Asia, with emissions per capita among the highest in the world.[31] Kazakhstan is already experiencing consequences from climate change including drought, desertification and agricultural degradation.[32] Additionally, global progress towards a low-carbon future, spanning market shifts towards renewable energy and policy frameworks that limit greenhouse gas emissions may constrain future demand for fossil fuels, which creates risks for Kazakhstan's economy and may lead to 'stranded' fossil fuel reserves.

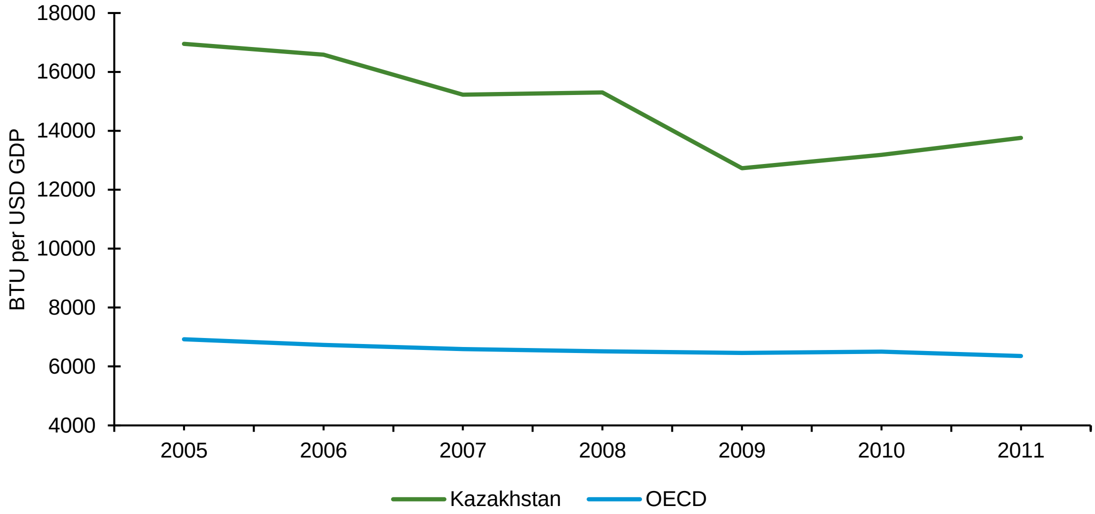

Figure 11. Primary Energy Consumption per US$ GDP (PPP, 2005 U.S. Dollars)[33]

Charting a course for long-term prosperity, therefore, requires encouraging new drivers of greener growth. In addition to generating environmental benefits, green growth promotes efficient resource use, improved and new infrastructure as well as resource, including food security, all of which are critical for sustaining and enhancing the socio-economic development of Kazakhstan's industries, businesses and citizens and enabling the country to address and adapt to the existential threat of climate change.

To remain on the path of development success, therefore, Kazakhstan will need to embark on a second transformation towards a low-carbon future. This encompasses a set of important policy challenges, notably:

---

[30] Energy Information Administration; National Bank of Kazakhstan

[31] Asian Development Bank, Country Parnership Strategy 2012-2016; Energy Sector Assessment

[32] Kazakhstan's National Communications to the UNFCCC, II-VI; 2009 & 2013

[33] World Bank (http://data.worldbank.org)

- How to diversify the economy away from oil and minerals;
- How to reduce economy-wide greenhouse gas emissions and energy intensity;
- How to nurture new drivers of green growth whilst simultaneously strengthening institutions and policy frameworks.

3.2 Kazakhstan's Green Targets and Strategies

Kazakhstan has been an early and enthusiastic proponent of sustainable development**, aligning national strategic plans and programs with green economic objectives** to enable a transition to a green, low-carbon economy. These efforts are underpinned by ambitious low-carbon and sustainability targets and guided by the "Concept on Transition to a Green Economy" policy framework (Green Economy Concept, GEC) as well as Kazakhstan's nationally determined contribution (NDC) under the Paris Agreement, covering action in greenhouse gas (GHG) emissions, water, agriculture, energy efficiency, electricity and waste management.

Key items for green finance in Kazakhstan are:

- **National Development Strategy "Kazakhstan – 2050",** which sets the strategic goals, targets and measures for making Kazakhstan one of the top 30 economies by 2050. It defines, inter alia, the transition to a low carbon economy and power generation from alternative and renewable sources as strategic goals of the country. The document also sets the strategic target for the energy sector to achieve at least 50 percent of alternative and renewable energy sources in the country's total energy consumption. However, the Strategy "Kazakhstan – 2050" does not set specific targets for the transition to a low carbon economy.
- **"Concept on Transition to a Green Economy" (Green Economy Concept, GEC)** is the country's key policy framework, constituting a long-term plan for a transition to a green economy across all sectors of the economy through resource optimization, new technologies and production methods, renewable energy utilization and ecosystem management. It defines the following sectors for this transition: sustainable use of water resources; development of sustainable efficient agriculture; energy saving and increase of energy efficiency; power generation; waste management; reduction of air pollution; and conservation and effective management of ecosystems.
- Kazakhstan's **nationally determined contribution (NDC) under the Paris Agreement** targets a reduction in economy-wide emissions of greenhouse gas (GHG) emissions of 15% from 1990 levels by 2030, or up to 25% subject to access to international climate finance.
- **National Development Strategy "Kazakhstan – 2025"**, which will include action to implement the NDC and align the GEC and Paris Agreement targets, is under preparation and will be presented to the Government in 2018.

Other key policy instruments are the **State Program on Management of Water Resources** and **Program of Development of Regions** for the period until the Year 2020.

To implement the strategic goals and targets, Kazakhstan has passed progressive domestic legislation covering **laws on renewable energy and energy efficiency** and a number of secondary regulations to these national laws, and introduced an **emissions trading system** (see below).

Kazakhstan's **existing policies and legislation do not currently take into consideration the implementation of the NDC** to the Paris Agreement. For example, while the Green Economy Concept covers broad measures until the year 2050, more specific implementation measures cover only the period until 2020 under the the Action Plan for 2013-2020, including the adoption of the State Program on Water Management, establishment of the Council on Transition to a Green Economy and development of the legal framework for the transition to a Green Economy. The laws on renewable energy and energy efficiency do not contain any explicit references to climate change mitigation.

As for **climate change adaptation**, Kazakhstan does not yet have any legal and policy frameworks to address adaptation and the NDC makes no reference to the issue. In 2017, the Ministry of Energy initiated the drafting of the law on climate change adaptation, with adoption expected by September 2017. The draft concept outlines the planned development of legislation on climate change adaptation, climate change mitigation, the regulation of ozone-depleting substances, and waste management. A National Adaptation Plan is currently under preparation. It is worth noting that many issues associated with Kazakhstan's national security and development are in fact related to climate change adaptation, even though this adaptation dimension is commonly overlooked**.** According to the Third National Communication to the UNFCCC, Kazakhstan's agricultural and water sectors are the most vulnerable to climate change.[34] They are also linked: agriculture, which accounts for two-thirds of water consumption in Kazakhstan, has very low water use efficiency. Water is also a key resource for industry, mining and power generation. Several priority targets contained in the Green Economy Concept, especially those relating to agriculture and water management, could thus be categorised as climate change adaptation targets, although they are referred to as issues of national security.

According to the current World Bank Country Partnership Strategy for the Republic of Kazakhstan, Kazakhstan's development strategy addresses climate change through the promotion of low-carbon techniques and greater energy saving. However, the achievement of Kazakhstan's green economy objectives will **require measures to attract private investment** as well as a reform of permit regulations and their enforcement in a manner that provides appropriate incentives to industry.[35] The development of low-carbon sustainable energy and the promotion of energy efficiency is also addressed by the current EBRD Strategy for Kazakhstan[36] and the ADB Kazakhstan's Country Partnership Strategy.[37]

There is a new strategy **"Kazakhstan – 2025"** under preparation as well as **amendments to the Green Economy Concept**. These include action to implement Kazakhstan's current international commitments under the Paris Agreement and to align with the country's current economic challenges and opportunities.

3.3 Kazakhstan's Emissions Trading Scheme

[34] https://unfccc.int/files/national_reports/annex_i_natcom_/application/pdf/kaz_nc3,4,5,6_eng.pdf, page 7.

[35] Country Partnership Strategy for the Republic of Kazakhstan for the period FY12-FY17. World Bank's Report No. 67876-KZ as March 30, 2012, see at http://documents.worldbank.org/curated/en/859761468272382244/pdf/678760CAS0P1280Official0Use0Only090.pdf

[36] Strategy for Kazakhstan as approved by the Board of Directors at its meeting on 17 December 2013. The document of the European Bank for Reconstruction and Development, see at http://www.ebrd.com/where-we-are/kazakhstan/overview.html.

[37] Country Partnership Strategy. Kazakhstan. 2012–2016. Asian Development Bank. August 2012, see at https://www.adb.org/sites/default/files/institutional-document/33638/files/cps-kaz-2012-2016.pdf.

The success of the Green Financial System for Kazakhstan depends in large part on the ability of environmental and climate policies to provide sufficient incentives for green investments that compensate for the external environmental benefits the investments deliver. In the context of Kazakhstan, a key incentive mechanism is the Kazakh Emission Trading System (KazETS), a cap-and-trade scheme covering approx. 170 companies in the oil & gas, power and energy-intensive industrial sectors. It establishes a price of carbon that provides incentive for carbon-saving investments in these three sectors. In 2013, Caspi JSC (aka COMEX) was appointed by the government as the only national exchange platform for trading and auctioning emission allowances in Kazakhstan[38]. After three years of operation from 2013 to 2015, many features of the KazETS, including the allocation and trading of allowances, have been suspended for two years. During its years of operation, the Kazakh carbon market was characterized by little transparency, a very small volume of only 66 trades, as well as a very large price range from KZT 30 per tCO_2 to KZT 1650 per tCO_2. The lack of liquidity is especially apparent when comparing key indicators with the EU ETS:

Table 1: Comparison of EU ETS and KazETS key liquidity indicators

Liquidity indicator	**EU ETS performance**	**KazETS performance**
Transparent pricing	**Good** – exchange prices can be accessed for free (with 15 min delay). For those willing to pay, live prices are available.	**Poor** – no bids and offers are published, trade prices are published for free on comex.kz but volumes are not
Market depth	**Excellent**	**Poor** – non-existent
Narrow bid / offer spread	**Excellent** – prices often 1 €cent apart	**Poor** – non-existent
Low transaction costs	**Good** – although one exchange dominates so costs could arguably be even lower than they are.	**Unknown** – there is no publically available information on transaction costs
Low barriers to market entry	**Excellent** (but getting worse) – The EU ETS was designed to allow anyone to own carbon allowances, however financial regulation is about to place onerous requirements on some participants.	**Poor** – The only way to access the KazETS market is through the Caspi exchange.
Large number of market	**Excellent** – on average 21	**Poor** - There appears to be no

38 There is no official restriction on which or how many exchanges (there are more than 20 commodity exchanges in in Kazakhstan), can apply to list carbon credits however the ‘Caspi’ exchange was ‘selected’.

participants	participants are reported to bid in the daily auctions and up to 100 participants get involved in trading during a typical trading day. There are around 4-5,000 companies in the EU ETS, approximately half of those have a need to buy for compliance.	direct participation of installations on the Caspi exchange and only 8 brokers registered to deal in Kaz Allowances (source: http://comex.kz/en/brokers). The Kazakh ETS has around 140-170 installations (depending on phase, the lower number is expected from the re-start in 2018)
Standardised product	**Excellent** – the market has coalesced around a single spot and forward trading standard and OTC contract.	**Excellent** – there is only one product on one exchange with a single set of trading terms (this has other drawbacks however).

In January 2018, the system is scheduled to be fully operational again, and this presents an opportunity for AIFC to support the functioning of the KazETS by trading KazETS Allowances at the AIFC Exchange (AIX). AIFC is currently in the process of setting up this exchange where stocks, bonds and commodities will be traded. The AIFC is acting in a special economic zone and is set up with the specific goal of attracting foreign investment to Kazakhstan by reducing the cost of doing business and lowering the barriers-to-entry. With its unique set-up, the AIFC can in particular use its rule-making capabilities to improve liquidity, help rebuild trust in the market's credibility and enable more efficient emissions trading. At the same time, it can facilitate the participation of foreign investors in the domestic carbon market.

The relevant special features of the AIFC are:

- **Favourable tax treatment**, there is a zero corporation tax for entities registered in the special economic zone for 50 years.
- **English Common Law and own courts & arbitration.** The use of common law dramatically lowers the barriers-to-entry for foreign companies. It also enables the use of the International Emissions Trading Association's (IETA's) benchmark trading agreements that govern bilateral Over-The-Counter (OTC) emissions trading. The same applies to the International Swaps and Derivatives Association master agreements (commonly used by financial institutions and trading houses) that have emissions trading annexes to enable companies to trade carbon emissions.

  The ICE exchange in London uses English common law to write and govern its emissions trading rules and general trading contracts. The use of English common law in AIFC enables the quick and efficient implementation of KazETS exchange trading documentation by the Astana International Exchange (AIX) by either adapting, or using as a guide, this existing material. Not only does this simplify AIX's job when setting up emissions trading, it makes life simpler for international companies because they can quickly assimilate, and sign-up to, trading documentation that is already familiar.

    - **Ability to make their own regulations** that can be different from Kazakhstan's. This would allow AIFC to take measures increasing market liquidity and minimize the administrative burden of regulation. For example, it could allow Over-The-Counter trading of carbon credits or the trading of EU ETS allowances. Furthermore, AIFC could use its rule-making ability to address issues such as market manipulation (e.g. via carbon position limits) or money laundering.

- **Close working relationships with International Financial Institutions (IFIs).** The World Bank and EBRD have been trail blazers in the context of international carbon markets. The close working relationship with IFIs can be harnessed by the AIFC to streamline emissions trading in the KazETS by leveraging their extensive experience of global emissions trading systems and the support that they have given to a wide variety of nascent emissions trading schemes and offset projects. The experience and capacity of IFIs in the carbon market space is invaluable and a close working relationship could feasibly lead to technical and/or financial support for further developing Kazakhstan's carbon market. By backing the KazETS, the IFIs can also play a critical role in enhancing the reputation and credibility of the system and attracting the wider international investment community.

The key to having the AIFC Exchange play a positive role in the KazETS is its contribution to increased liquidity of the KazETS-traded market. In terms of direct actions, AIFC should

- Allow OTC trading of KazETS allowances in AIFC in order to foster the demand for exchange trading, with mandatory reporting of trades to the exchange
- Consider appropriate position limits for speculative activity to avoid the risk market manipulation
- While the KazETS develops into a more vibrant market list EUAs in AIFC to give both local and international companies the opportunity to gain experience in emissions trading.
- Make anonymised trade data available to the public (including OTC activity)
- Consider consolidating Kazakh commodities trading on one effective platform to maximise participation in KazETS trading both nationally and internationally.

In addition, AIFC could support and encourage the following changes to KazETS law and regulations;

- Allow the limited use of imported offsets for compliance with the KazETS
- Allow the use of EUAs or CNETS allowances for compliance with the KazETS
- Allow the sale of KazETS allowances without proof of energy efficiency gains

3.4 Demand for Green Finance in Kazakhstan until 2030

Achieving Kazakhstan's NDC under the Paris Agreement and the targets embedded in the Green Economy Concept (GEC) will require large-scale mobilisation and intermediation of funding for green investments, particularly from the private sector. Public resources are finite and dependence on public investment in the long-run must be avoided to ensure sustainable green growth.

The NDC and GEC set a number of targets, some of which have quantifiable impacts on climate change mitigation and associated climate and green finance needs. The targets of the GEC are mostly sector-specific whereas the NDC target is cross-sector or economy wide, as shown schematically in Figure

12~~Figure 12~~. The new strategy under preparation, “Kazakhstan 2025”, aims to align the NDC and GEC targets.

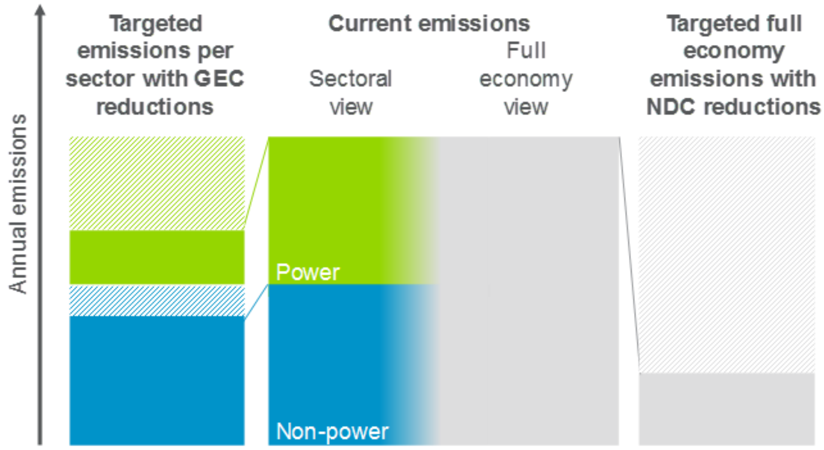

Figure 12. Illustration of the overlapping nature of the NDC and GEC targets

In terms of required emission reductions, analysis demonstrates that the NDC target requires much more substantial emission reductions compared to the 2030 baseline than the GEC targets: the NDC targets implies emission reductions of 132–169 $MtCO_2e$, while the GEC power sector targets result in a 23 $MtCO_2e$ emission reduction with no additional reduction expected from achievement of the GEC energy efficiency target. Assuming that the GEC power sector target is reached yielding emission reductions below baseline in 2030 of 23 $MtCO_2e$, the emissions reductions required from all other sectors to fulfil the NDC commitment would be around 109–146 MtCO2e.

- **Kazakhstan’s NDC under the Paris Agreement** targets an unconditional 15% reduction in economy-wide GHG emissions by 2030 compared to the 1990 base year. The conditional target aims to achieve a 25% reduction by 2030 compared to the 1990 base year. The corresponding absolute emission levels of the unconditional and conditional targets were evaluated assuming that emission reductions will come from the energy, industry, agriculture and waste sectors, i.e. not from land use, land-use change and forestry (LULUCF). The unconditional and conditional target emission levels in 2030 are 325 $MtCO_2e$ and 287 $MtCO_2e$, respectively, excluding LULUCF. When compared to the without measures (WOM) baseline for 2030, the emission reduction implied by the NDC is 132 $MtCO_2e$ and 169 $MtCO_2e$ for the unconditional and conditional targets, respectively. This is equivalent to a 29% or 37% reduction in emissions in 2030.
- **The GEC power sector target** aims at a 15% reduction in power sector emissions in 2030 compared to current levels which totalled 91 $MtCO_2e$ (using 2012 as the “current” level). A 15% reduction equates to an emission level of 77 $MtCO_2e$, or a 23 $MtCO_2e$ reduction in emissions in 2030 compared to the WOM baseline, or a 9 $MtCO_2e$ emission reduction compared to the GEC BAU level.

- **The GEC energy intensity target** aims at a 30% reduction in the energy intensity of GDP compared to the 2008 level which implies higher emission levels than under the 2030 WOM baseline, where energy intensity is assumed to be over 40% below the 2008 level. As the energy-related emissions in 2030 under the GEC target are greater than the baseline energy-related emissions, climate finance demand is not quantified for this target.

Achieving the 132 $MtCO_2e$ in emission reductions for the **unconditional 2030 NDC** target requires a green investment of between $US\$_{2016}$ 26–140 billion from now to 2030. Of this amount, an estimated that $US\$_{2016}$ 17 to 49 billion is needed for power sector investments and ~$US\$_{2016}$ 9 to 91 billion is needed for non-power sector investments. It is estimated that an additional ~$US\$_{2016}$ 20 to 39 billion are needed to meet the **conditional NDC target**. By contrast, the additional investments required to meet the full suite of GEC targets is expected to be US$2016 34–60 billion, which is equivalent to 1–2% of GDP.

Table 2 Additional investment estimates for the NDC and GEC targets using the different approaches shown in Ошибка! Источник ссылки не найден.~~Ошибка! Источник ссылки не найден.~~

Target	Approach	Abatement estimate (MtCO2e in 2030)		Additional investment estimate (billion $US\$_{2016}$ in 2030)	
		Min	**Max**	**Min**	**Max**
NDC	BUR-TIMES	132	169	140	179
NDC	NERA-BNEF	132	169	26	46
GEC	GEC	23	23	60	60
GEC	GEC-WB power	23	23	34	34
GEC	GEC-TIMES power	23	23	37	37

This demand assessment has significant implications for the design and implementation of the Green Financial System in Kazakhstan. In 2015 green investments can be estimated to total between US$500–600 million.[39] In comparison, average annual additional investments needs to achieve the NDC-related investments are about US$1–9 billion, which is equivalent to 1–5% of GDP per year. To achieve the GEC targets, annual average additional investments on the order of US$2–4 billion are needed, which is

[39] From 2013 to 2015 the Statistical Office reported an average of US$ 487 million in Investments in Environmental Protection across Kazakhstan's economy. The figure includes public and private as well as domestic and international investments in environmental protection. However, the measure is not comprehensive, as it does not cover green investments in renewable energy, energy efficiency and adaptation. According to the Green Economy Concept, the need for Green Investment in 2014 was USD 601 million, but it is not clear that all of this was actually provided. See Concept for Transition of the Republic of Kazakhstan to Green Economy, Astana 2013, page 11.

equivalent to 1–2% of GDP per year. Green investment needs of around 3% of GDP are slightly higher than, but comparable with, estimates of green finance needs on a global scale.

As a result, new mechanisms to raise funds from both domestic and international sources are needed, and companies may need significant new incentives to make green investments profitable. The Green Finance System should target investments from particular sectors which require the most funding and where emission reductions can be achieved at relatively low-costs. For example, the GEC estimates that up to 75% of the total green finance needed to meet this suite of targets will be in renewable, fuel switch to gas, and energy efficiency investments. Moreover, a recent study suggests that Kazakhstan's transportation, heat supply and building sectors offer promising areas for green investments requiring little or no public support.[40]

As for **climate change adaptation**, it is mentioned only briefly in the Green Economy Concept and not at all in Kazakhstan's NDC. However, the Green Economy Concept's targets on sustainable water use and achieving sustainable and high-productivity agriculture have a **strong adaptation dimension**.

There are currently **no national or local cost estimates specifically for climate change adaptation** for Kazakhstan. [This may be due to the lack of recognition of the adaptation dimension of high-priority targets relating to water stress management and sustainable and high-productivity agriculture.] The draft concept of the law on climate change adaptation indicates that no additional funding from the national budget is needed for the implementation of the proposed legislative amendments, as these measures had been foreseen to be implemented under different titles already.

The Green Economy Concept has identified **water saving measures in agriculture, industry and municipalities** and estimated the cost to be US$8.5 billion until 2030, of which US$3.3 billion would need to be funded by public investment. Additional **supply-enhancing measures in irrigation infrastructure, reservoir management and groundwater extraction** would be needed to fully close the water gap. However no cost estimates are currently available. Much of such needed investment can be considered as adaptation investment, where adaptation is understood not as a limited environmental issue but rather as a cross-cutting economic theme comprising various important economic activities relating to businesses, infrastructure, agriculture, water and energy. In addition to initiatives that take place under the general headings of agriculture and water infrastructure, there have been a number of **initiatives specifically designed for climate change adaptation** measures. International financial sources have been utilised in various projects relating to **agriculture, land management and resource efficiency**. These projects represent at least US$ 750 million[41] of financing (including international financing and co-financing from various sources, including Kazakhstan) associated with climate change adaptation.

[40] Asian Development Bank. Economics of Climate Change Mitigation in central and West Asia, February 2017.

[41] This is based on a rough calculation including figures from the B1 Report and information on irrigation project loans from EBRD, the World Bank and the Islamic Development Bank.

3.5 Tracking Climate Finance in Kazakhstan

Reporting on climate and green finance is done for many important audiences. In Kazakhstan, the key clients for the tracking of climate finance information are:

- **Ministry of Energy** who is in charge of implementing key programmes in the areas of the Green Economy, Climate Change, Renewable Energy and Energy Efficiency. The Ministry needs to confirm whether the financial sector is on track to provide needed funds and needs to be aware of any possible bottlenecks and barriers.
- **AIFC** who has responsibility for the development of the Green Financial System needs to track the participation of the financial sector in the Green Financial System and evaluate the success of the GFS.
- **International institutional investors** who are looking for opportunities for green investments have a general interest in understanding the size of the opportunity for green investments in Kazakhstan. They are in particular interested in robust monitoring, verification and reporting processes on the use of proceeds in line with the green standards to which they are prescribing.
- **UNFCCC** who are tracking the follow-up on the NDCs, including the provision, the receipt and the use and results of climate finance.

Regarding the provision of climate finance and the relevant reporting and verification requirements under the **Paris Agreement**, Kazakhstan wishes to be treated as a developing country. Kazakhstan is the recipient of international support and the achievement of the upper range of its NDC is conditional and dependent on international support. As a result, Kazakhstan is requested to provide information on needed and received financial, technology transfer and capacity-building support. This information has been included in the Kazakhstan's 2016 Biennial Report. Under the Paris Agreement, the requirements on what and how to report is changing for all countries, including the introduction of new "verification" systems such as the global stocktake and broader Technical Reviews.

There are three main green investment flows in Kazakhstan, namely **foreign investments by multilateral development banks and donor organisations, assignments from the national budget and investments by public and private companies** for environmental protection. The second flow is based on financing from the national budget as well as specific budget programmes implemented by the Ministry of Energy and the Ministry of Investments and Development. Currently major green investment flows are coming to Kazakhstan through international financial institutions with established objectives on green investments such as the Climate Investment Funds, European Bank for Reconstruction and Development or the European Investment Bank.

The institutions that are currently involved in the tracking of climate finance are the **Statistical Committee**, the **Ministry of Energy** and **Ministry of Investments and Development**. The Ministry of Energy prepares the Biennual Reports under the UNFCCC and also provides information on a number of relatively small nationally-funded programs supporting the Green Economy Concept, Climate Change Mitigation and Renewable Energy. Similarly, the Ministry of Investments and Development reports on a nationally-funded programme for Energy Efficiency. The Statistical Committee is reporting on the total public and private investments in environmental protection.

Although Kazakhstan has developed the indicators of "a Green Economy of the Republic of Kazakhstan", the **statistical data on green investment flows are not consistent with the broad definition of the term climate finance** by the Climate Policy Initiative or the understanding of climate mitigation and adaptation related finance flows in the OECD Statistics. However, the Statistical Committee is currently working on **preparing the indicators in accordance with OECD Green Growth Indicators**. There are no other sources of information in the public domain that can be used to get aggregate figures on domestic climate finance in renewables and energy efficiency and even on green finance in its broadest definition (investments in all green infrastructure).

As far as the financial industry is concerned, **the multilateral development banks** have been a **reliable sources on climate finance. Climate-related development finance** from members of the Development Assistance Committee and climate funds are also reported to the OECD DAC Common Reporting Standard.[42] By contrast, the **domestic financial sector does not provide any such reporting**.

There are also currently **no specified line items for climate change adaptation** either in the national or in the local budgets. The absence of policy and legal frameworks in Kazakhstan for climate change adaptation does not allow to identify public programmes with appropriate objectives. Thus, there is no accounting of domestic financial flows for climate change adaptation in Kazakhstan. Even at the level of national companies their data on green investments are not easily available.

Due to the identified information gaps, it is **not possible to present a full picture of the climate finance flows** in Kazakhstan. Data on international climate finance flows from MDBs or bilateral donors to Kazakhstan is available but there are no established information flows on domestic or private international climate finance. This information gap needs to be closed by the **development of legal and institutional frameworks and the methodologies for gathering and processing data compatible with accepted international definitions of climate finance**.

3.6 Kazakhstan's Financial Sector: Overview and Capacity Assessment

Kazakhstan's key financial institutions consist of a large banking sector, a growing pension system and the National Bank which in addition to its monetary policy duties also serves as financial regulator and investment manager of the country's external financial assets (National Fund) and domestic pension funds. The other important public sector institutions that support the financial sector are the Sovereign Wealth Fund Samruk-Kazyna and state-owned development institution, Baiterek. Kazakhstan's financial markets comprise foreign exchange and securities markets covering Government, equity and corporate debt securities as well as related repo agreements. These are traded principally on Kazakhstan's largest exchange, the Kazakhstan Stock Exchange (KASE).

- **The National Bank of Kazakhstan** plays a lynchpin role within the financial sector, serving as financial regulator, setting monetary policy as well as managing the country's pension fund and external financial assets. Currently the National Bank has no formal role and is not active in the promotion of green or climate finance in Kazakhstan.
- **Sovereign Wealth Fund Samruk-Kazyna** plays a central role within the economy and its importance has grown over time. Starting in 2018 Samruk-Kazyna will enhance ESG disclosure with consolidated reporting on sustainable development

[42] Available on line at http://www.oecd.org/dac/stats/climate-change.htm

based on Global Reporting Initiative principles. However, the Fund is not placing a strategic priority on green investments. Instead, the Fund will defer to its subsidiaries to determine the economic viability and attractiveness of green investments on a project by project basis.

- **Baiterek National Managing Holding** is an important institution aimed at promoting economic diversification and sustainable development. Baiterek is supporting the green economy through individual lending and support programs but the institution has made no explicit priority to green economic development and environmental disclosure policies and practices are limited.
- **The banking sector** in Kazakhstan is an important source of financing for development. However, Kazakhstan's banking sector is shallow in both absolute and relative terms and is also suffering from the residual effects of the global financial crisis. The recent path of banking sector reform and rehabilitation has been positive and there is appetite for green investment projects. But, to date, Kazakhstan's banking sector has played a limited role in green economic development.
- **Kazakhstan's pension funds**, which are controlled by the state under the Unified Accumulative Pension Fund, represent a substantial and growing potential source of long-term capital. However, the current management structure has proved problematic with inherent conflicts of interest in the National Bank controlling both the supply and demand of securities. Looking forward, Kazakhstan's pension fund is expected to play an increasingly important role in the domestic capital markets. As with other key financial institutions in Kazakhstan, the Unified Accumulative Pension Fund's role in green economic development has been very limited.
- **Kazakhstan's domestic capital market** today is illiquid and largely inactive, following a period of rapid growth and activity in the early to mid-2000's. The domestic securities market is not currently a major source of long-term capital. Kazakhstan's largest securities exchange, KASE, is a member of the Sustainable Stock Exchanges Initiative and has published detailed guidance for issuers on preparing ESG reports. However, the exchange currently plays a limited role in advancing the country's green economy agenda.
- **Astana International Financial Center (AIFC)** is a new financial institution established by Kazakhstan's President to stimulate further development of the country's financial sector. The AIFC will provide an international center for financial intermediation, physically located in but institutionally independent from Astana and Kazakhstan. Green finance is one of the major strategic directions for the development of the AIFC and the Center is pro-actively promoting a green economic agenda, both domestically and as a hub for the region.

During the Inception Phase of this project, the specific potential of Kazakhstan's financial sector to support the Paris Agreement and other sustainability commitments, has undergone a capacity assessment which seeks to measure the sector's key levels of activity towards the green economy. The assessment demonstrates that the current capacity of the financial sector to support the Paris Agreement is limited. Table 3 presents a summary of the assessment.

Table 3. Summary Assessment of the Financial Sector's Capacity to Support the Green Economy

	Level 1 **Voluntary Measures**	***Level 2*** **Process Integration**	***Level 3*** **Green Investments**	***Level 4*** **Green Products**
Assessment	◔ ▪ Limited adoption of key voluntary measures. Local membership of the Sustainable Stock Exchanges Initiative but no adoption of Principles for Responsible Investing by investors or Equator Principles by banks ▪ No membership of green knowledge and capacity networks such as Sustainable Banking Network ▪ Basic environmental and climate change related reporting and disclosures. A key state-owned enterprise is moving towards ESG reporting based on Global Reporting Initiative principles starting in 2018 ▪ No central tracking and monitoring of green investment projects	◔ ▪ No integration of climate change aspects into regulatory or monetary policy (systemic risk assessment, prudential standards, environmental disclosure rules) ▪ No green finance roadmap ▪ Local exchange has published detailed guidance for issuers on preparing Environmental, Social and Governance reports. However, such reporting is not a listing requirement and no voluntary issuer reports have been published yet ▪ Limited integration of environmental or ustainability aspects into governance, strategy or risk management processes. A key state-owned enterprise is moving toward a sustainable development management system using a risk-based approach	◔ ▪ No mandate for green investments among nationally managed funds or enabling policies for banking sector to support investments in the sector ▪ Several state-owned enterprises across different sectors have made or are currently assessing green investments. However, no formal guidance or mandate on green investments ▪ Banks provide limited financing to green investment projects in renewable energy and energy efficient housing sectors ▪ Multilateral Development Banks have provided credit lines and financing for green investment or economy projects	○ ▪ No dedicated relevant green products as issuer/originator or purchaser/investor such as green funds, green bonds, green housing deposit and mortgage, green securitizations ▪ No guidelines issued for green bonds, green insurance or other products

3.6.1 Astana International Financial Center (AIFC)

The Astana International Financial Center is a new financial market established by Kazakhstan's President[43] in 2015 to stimulate further development of the country's financial sector. The AIFC will provide an international center for financial intermediation, physically located in but institutionally independent from Astana and Kazakhstan. Over time, the AIFC will establish its own court and regulatory system, based on English Law as well as a new exchange The Center aims to become one of the world's top-30 financial centers by 2020.

The governance structure of the AIFC includes the Management Council (the supreme authority), Astana Financial Services Authority (the regulator of the AIFC financial services), AIFC Authority which is responsible for the development of the overall development strategy, promotion of the AIFC in the global markets, attraction of potential participants to the AIFC as well as the authorities dealing with the settlement of disputes on the AIFC activities (AIFC Courts and Astana International Arbitration Centre) and the AIFC Governor.

The declared key strategic directions for the development of the Astana International Financial Center are the development of:

- Capital market with a broad range of financial instruments;
- Regional center for asset management;
- Regional hub for Islamic finance;
- Favorable conditions for FinTech startups, including modern infrastructure, flexible regulations and investment promotion;
- Private banking sector in conjunction with the development of the asset management market and expertise;
- "Green" financial products and services as the follow-up of the EXPO-2017 "Future Energy" in Astana.[44]

Green finance is one of the major strategic directions for the development of the AIFC and the Center is pro-actively promoting a green economic agenda, both domestically and as a hub for the region. In accordance with the Resolution of the Government No. 393 of 30 May 2015 the AIFC is assigned the tasks to develop a concept on launching and development of green financing in cooperation as well as relevant legal framework and financial tools with the view to present them during the EXPO-2017.[45] This role was reconfirmed by Kazakhstan's President in the 2017 annual address to the nation. According to the President of EBRD, "The AIFC also has great potential to boost momentum for the development of a green financial system."[46]

---

[43] Decree of the President of Kazakhstan No. 24 of 19 May 2015, at http://adilet.zan.kz/rus/docs/U1500000024.

[44] See the web site of the Astana International Financial Center at http://aifc.kz/.

[45] See the Information and Legal System of Legal and Normative Acts of the Republic of Kazakhstan "Adilet" at http://adilet.zan.kz/rus/docs/P1500000393.

[46] http://astanatimes.com/2016/05/ebrds-vision-for-astana-international-financial-centre/

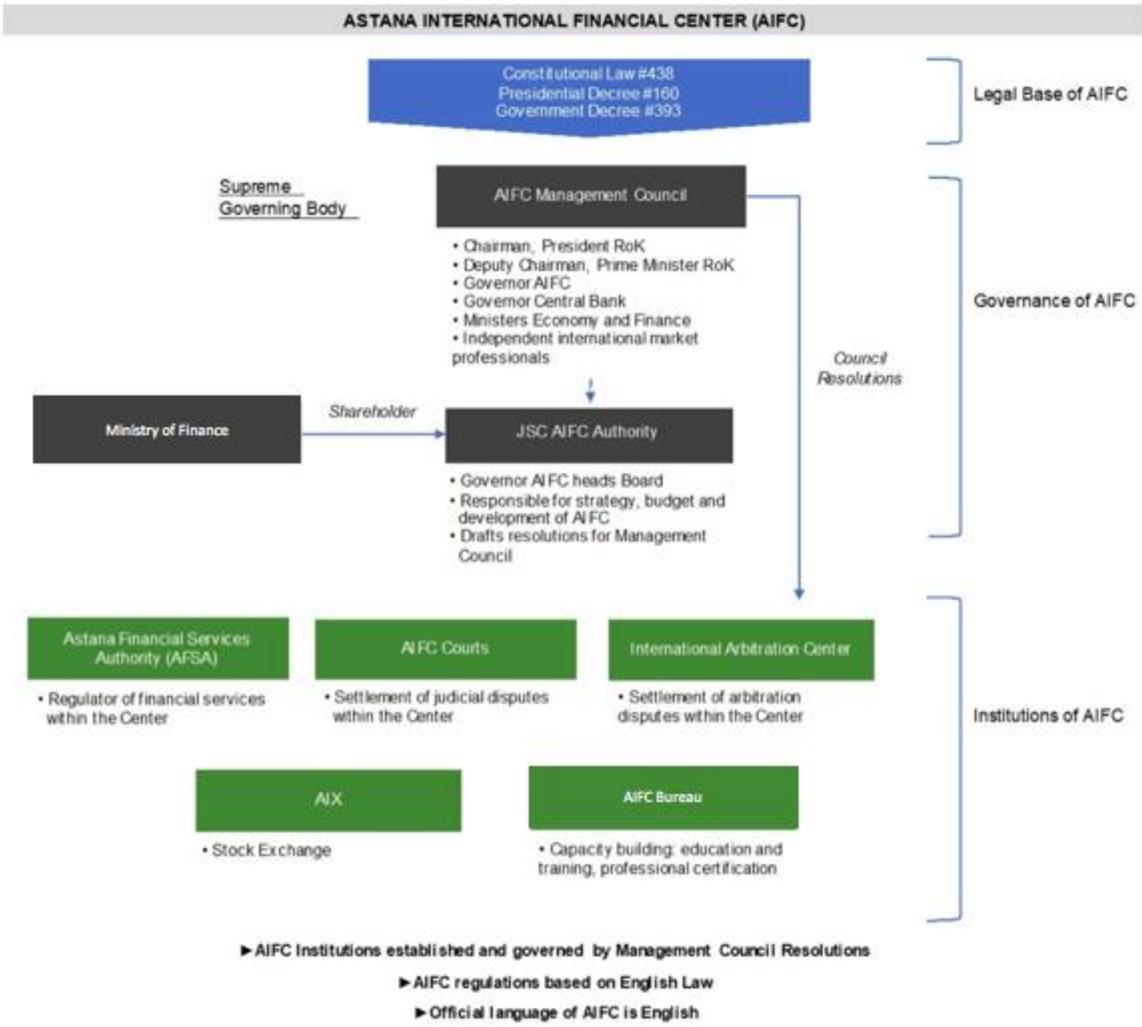

Figure 13. AIFC Institutional Structure

3.7 Interest of International Investors in Kazakhstan's GFS

During the Astana Economic Forum on June 15/16, 2017 the project team conducted interviews with 104 premium or VIP participants of the Forum in order to gauge the appetite of international investors to contribute to Kazakhstan's green financial system and the conditions under which such an engagement can take place. 29 of the interviewees were representing Kazakhstan's financial, government and industrial sectos. The remaining 75 were from abroad, especially Europe (26), Asia (24), North America (12), and Russia (6).

The key survey results were as follows:

- Of the interviewees that already have investments in Kazakhstan, more than half (26 of 48) have experience with green investment in Kazakhstan and almost all (45 of 48) have an interest in participating in green investment in the future. The figures are similar if only international investors are concerned; 48% (15 of 31) have experience with green investment in Kazakhstan and almost all (29 of 31) have an interest in doing so in the future.
- Of the interviewees that already have experience with green investments, either in Kazakhstan or somewhere else, almost half (25 of 51) have such experience in Kazakhstan and the vast majority (46 of 51) has an interest in green investments in Kazakhstan in the future. Again, the figures are similar if only international investors are concerned; 40% (15 of 37) already have green investment experience in Kazakhstan and 90% (33 of 37) have an interest in doing so in the future.
- 13% of interviewees judge financial market appetite for green finance in Kazakhstan as high and a further 35% as moderate. The remainder believe that there is some or low appetite. The numbers are slightly more optimistic for international interviewees. 14% see a high market appetite and another 40% see a moderate one.
- Opinions among interviewees on which financial instruments is considered most attractive were almost evenly spread as shown by the below chart. 50% of respondents (42 of 84) mentioned at least one form of green bonds, whether project, corporate or sovereign.

- Almost all (95 of 104) interviewees had an informed opinion on the main barriers preventing investment in Kazakhstan's green economy. More than half of respondents (49 of 95) mentioned regulatory risk as a key factor. Other reasons mentioned by more than 20 respondents each were insufficient policy incentives for green investment, lack of green finance expertise and immaturity of Kazakhstan's financial markets.

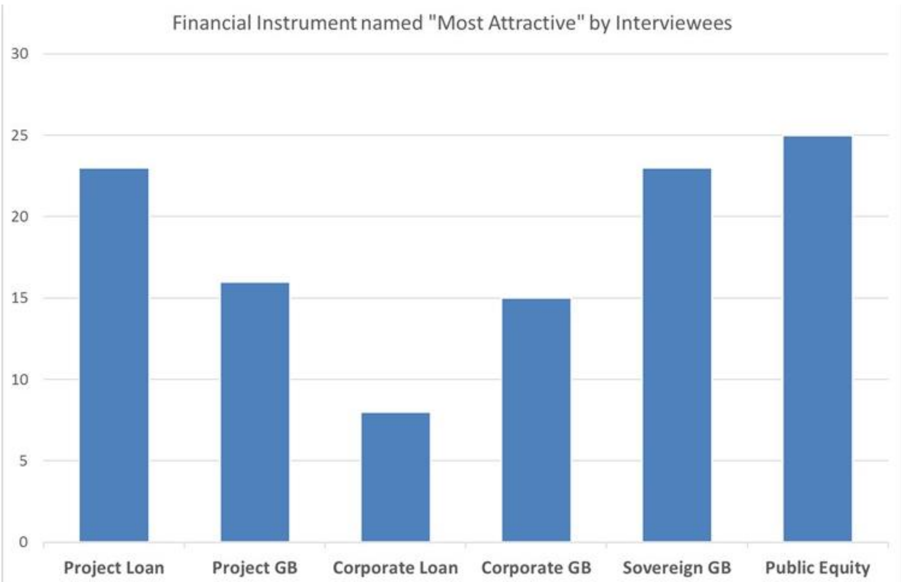

Figure 14. Most Attractive Financial Instruments

4. Implementing a Green Financial System for Kazakhstan

4.1 Key Messages

- **The transition to a green economy and closing the green investment gap will require that the financial system in Kazakhstan is aligned with financing needs associated with the targets under the Green Economy Concept and the NDC.**
- **Closing the investment gap will not only require effective enabling policies, public funding and support from international climate finance but also a large-scale mobilization of private investment.**
- **To achieve these goals, the Astana International Financial Centre (AIFC) has important roles in providing incentives and restructuring the investment landscape to support green investments.**
- **The roles of AIFC is defined as a:**
  - **National Champion for the Green Financial System**
  - **Centre of Excellence**
  - **Green Finance Hub**

4.2 Legal and Regulatory Basis for the GFS

Kazakhstan's legal and regulatory framework for the financial sector is a multi-tiered system of strategic policy documents, laws and regulations, promulgated by either the government or the National Bank, acting as the regulator of the financial system. Within in its own territory, AIFC has their own rule-making ability where they can issue regulations that are different from those applicable at the national level.

Currently, there is no special consideration for green finance in any of the legal or regulatory documents.

Within the AIFC territory, the AIFC has rule-making powers and can therefore serve as an innovator where regulations can be road-tested during the Initiation Phase (2017-2018) and the Deepening Phase (2019-2021) before they are applied nationwide.

Moreover, the AIFC in cooperation with other major stakeholders would create frameworks for specific financial instruments, likely starting with a Green Bond Framework. The framework would include the procedures for creating and issuing a green bond in Kazakhstan, the eligibility criteria for issuers and projects as well as the monitoring and verification standards for the use of proceeds. In many instances, AIFC would rely on international standards, such as the Green Bond Principles or the Green Bond Standards, and modify them accordingly in order to fit local conditions and priorities.

4.3 Phases of Implementation

The key recommendations for the development of the Green Financial System in Kazakhstan can be structured in three successive phases; the Initiation phase (2017-2018), the Deepening phase (2019-2021) and the Expansion Phase (2022-2025), as illustrated in Figure 15.

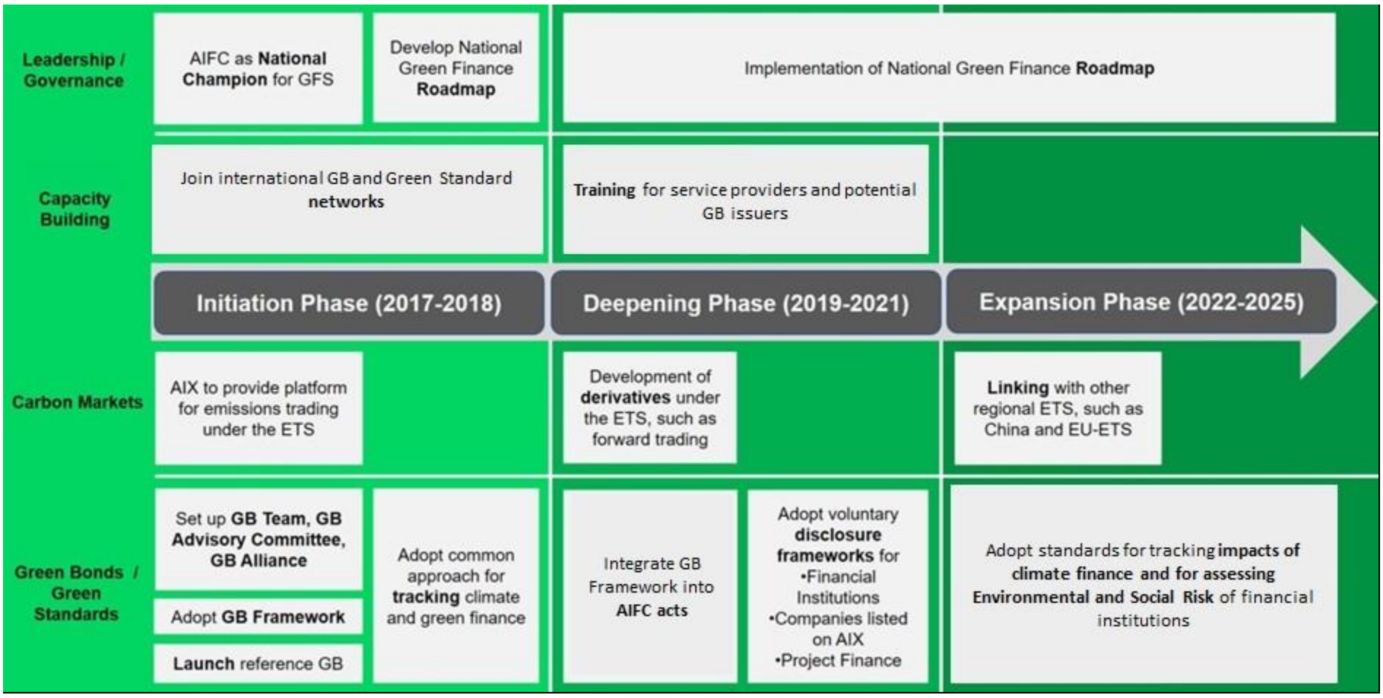

Figure 15. Road Map at a Glance

The focus of the Initiation phase is to lay the groundwork and build momentum for the Green Financial System in Kazakhstan. As a result, the focus is on establishing the governance structure of the system, building institutional support, carrying out enabling activities and supporting effective market mechanisms, including demonstration financial instruments. All of these actions should support each other. A key to the overall success of the project is to establish a national champion for the Green Financial System, a role for which the Astana International Financial Center is uniquely qualified. During the initiation phase, AIFC's capacity can be further enhanced by building partnerships with international organizations in the areas of green finance and by representing the financial sector in key national green development bodies and mechanisms. A further focus of the initiation phase is the launch of concrete actions on a benchmark financial instrument, i.e. the issuance of a green bond and to explore synergies with the AIFC's other strategic pillars, i.e. developing local capital markets, asset management and private banking sectors. This entails a number of enabling activities, such as developing a localized definition of what kind of investments qualify for green finance, adopting relevant international standards to create a national Green Bonds Framework and mobilizing the domestic and international financial community. Finally, to further establish AIFC as a leader in green finance is to launch carbon trading under the Kazakh ETS at the AIFC Exchange (AIX) and promote the domestic carbon market.

During the Deepening Phase, some of the initial actions with regards to green standards and disclosure frameworks that have been carried out within the AIFC territory can be rolled out to the national level. In the Green Bonds area, the ability to handle more bond issues can be scaled up and a pool of service providers can be trained with capacity building programmes. The national carbon market and functioning of carbon exchanges can be further supported with reforms of the Kazakh ETS that enhance the liquidity, transparency, and efficiency of the market. At the same time, new financial instruments can be launched, targeting different sectors of the Kazakh economy that are in need of green investment, such as renewable energy, energy efficiency, waste, transportation, and buildings. Sector-specific development programs can be supported by the National Fund and operated under the leadership of Baiterek or the Development Bank of Kazakhstan.

During the Expansion Phase, the Green Financial System can be further developed to not only serve the needs of Kazakhstan but of the greater Central Asia region. The financial instruments and infrastructure platform elements for which this is possible should be carefully selected in order to avoid excessive transaction costs. In a similar vein, for the Kazakh ETS, there may be an opportunity for linking the trade in allowances to other regional schemes, such as the European ETS. AIFC should retain its position as national champion for the Green Financial System providing thought leadership, coordination, capacity building and some critical infrastructure, such as the AIFC Exchange (AIX).

4.4 Institutional Architecture of GFS

An important focus of this project and a key element of a successful green financial system is the design of a framework for the structure of green finance that can mobilize a diverse array of investment channels and sources as well as increase efficiency of financial flows. Figure 16 depicts the overall architecture with particular attention paid to the currently envisaged and potential role of the AIFC.

As the project's Logical Framework points to, at the results level, efforts to develop a green financial system need to provide a comprehensive framework, including not only the technical structure of financial instruments and regulatory mechanisms, but also the institutional structure that supports green finance.

The architecture is made up of the markets, practices and institutions that governments, businesses and individuals use when they carry out green financial activities. Building a strong and stable architecture that reflects Kazakhstan's local conditions and requirements will improve the effectiveness of the system, reduce vulnerabilities and frictions.

The starting point for the architecture is a recognition that Kazakhstan's financial sector capacity and development stage are different from other, more mature economies. For instance, Kazakhstan is more likely to be subject to sharp currency swings, terms-of-trade and asset price shocks, and higher stocks of non-performing loans. Securities markets are limited in depth and liquidity and overall price discovery is weak. There is a higher corresponding risk, therefore, of swings in investor confidence. At the same time, the expectations placed upon Kazakhstan's financial sector are greater. The sector must fund a faster pace of development in a more uncertain prevailing environment, providing funding to a full spectrum of investments including high-risk opportunities.

With these factors in mind and the current state of green finance in Kazakhstan four supporting pillars for a strong and stable architecture are proposed, as follows:

1. Capacity Building:

- Broadly, the central role of education and communication in fostering cultural change towards green finance
- To increase inclusion in green finance, human capital and talent development through targeted education and training; professional certification programs to train the next generation of green finance professionals and entrepreneurs
- To increase the knowledge base, visibility and expertise of policymakers in green finance through policy dialogue and professional workshops and training
- To raise the level of technical expertise, the precision of green finance data and promote grass roots innovation in green finance markets through higher education and advanced research and modelling
- To raise the level of visibility of green finance and proficiency among market practitioners through links to the international community of green finance professionals and knowledge sharing platforms and networks

2. Policy and Regulation:

- Effective implementation and enforcement mechanisms that increase the market confidence in and resilience of the green finance sector

3. Finance:

- A central role for the banking sector in intermediating investment into the green economy and executing public sector green finance programs such as interest subsidies and risk mitigation instruments
- A growing role for the securities markets and nascent asset management sector in channeling investment into green finance, including both domestic and international sources of investment
- A key role also for the revamped Emissions Trading Scheme in encouraging efficiency in meeting green economy targets and enhancing the profitability of green investments

4. Monitoring & Reporting:

- Robust reporting and assessment standards to enhance the credibility of green finance and investment, providing greater transparency over environmental risks such as stranded assets, extreme weather and climate impacts and greenhouse gas emissions
- Standardized reporting methodologies and tools to improve data collection at national, regional and sectoral levels and corresponding measurements of green investments and their impacts

Figure 16. Green Financial System Architecture

4.5 Role & Functions of AIFC

Overview

Based on analytical work relating to green financial system architecture and in an effort to address underlying barriers to green finance in Kazakhstan identified in previous reports, three centers of gravity is recommended for the AIFC, the “3C’s”, as follows:

Figure 17. Recommended Centers of Gravity for the AIFC

By design, there are a number of key attributes that provide AIFC with a unique domestic status:

1. The Center is enshrined in Constitutional Law providing a robust, clear and stable legal base.
2. The Governance of the AIFC is set at the highest political level, with Management Council membership comprised of the President, Prime Minister, National Bank Governor and Ministers of Economy and Finance along with the Governor of the AIFC and senior independent international market professionals. This provides the Center with a strong political mandate and authority.
3. The regulatory framework within the territory of the AIFC is based on principles of English Common Law and enforcement is provided by the Center’s own Courts and dispute resolutions mechanisms which reside outside the domestic legal system and will employ expatriate officers. This regulatory independence provides the AIFC with regulatory predictability and stability. Thus, the AIFC operates as a ‘special financial zone’ akin to Dubai’s International Financial Center.

These features, which are aimed at positioning the AIFC as an international financial center and providing confidence to attract a criticial mass of international investors and financial services companies also provide an opportunity to advance green finance, one of the AIFC's strategic priorities.

The AIFC's inherent flexibility and adaptability allows the Center to take a principal role in developing norms and standards of green finance, without the burden of addressing conflicting domestic legacy legislation. Its high national status and political authority gives the AIFC a strong platform to drive the national green finance agenda. In addition, the AIFC's orientation towards international sources of capital and knowledge also position the Center to take a leading role in market and product development.

Thus a central role for the AIFC within the Green Financial System Architecture is as depicted in Figure 18.

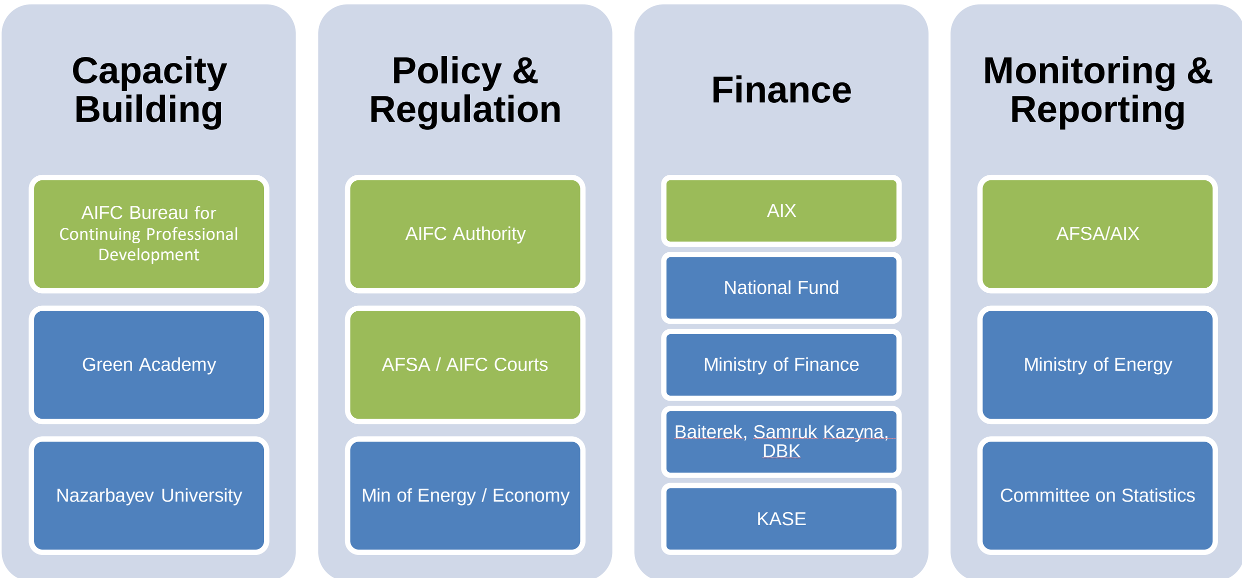

Figure 18. AIFC Role within the Green Financial System Architecture

The following recommendations are predicated on the AIFC having a sufficient level of human and financial resources to ensure effective implementation.

Role 1: National Champion

In general, no one blueprint exists for designing the optimal institutional architecture for a green financial system. Each country, of course, has different internal dynamics, systems and levels of development and institutional arrangements will necessarily differ as well.

However, one commonly effective approach is to select a central authority to serve as a National Champion to drive the domestic green finance agenda and facilitate cross-sectoral cooperation whilst implementation remains with the relevant line ministries, agencies and local bodies.

A green financial system requires concerted efforts at multiple levels from national ministries to local and municipal authorities as well as across multiple sectors, from energy generation, transportation and waste management to construction, agriculture and water. Having a strong national champion to enhance institutional coordination therefore provides important support to the operations of a green financial system.

In addition, a green financial system requires a national agenda with clearly defined targets and objectives. Having a national champion which serves as a focal point of political influence provides important support to drive the agenda and unlock necessary resources.

To be successful, a national champion requires the following essential attributes:

1 Clear Mandate

- To facilitate effective communication and cooperation across different ministries and sectors, the national champion must have a clear and established mandate

2 Political Authority

- To ensure effective leadership, influence over key stakeholders, facilitate institutional coordination and catalyze necessary resources for the GFS the national champion must have a high level of political authority

3 Adequate Resources

- The national champion must have adequate resources to effectively engage with a multitude of stakeholders, including public, private and civil society as well as to ensure independence in decision-making

Given the AIFC's unique institutional status, strong political support and commitment as well as a clear mandate to develop green finance, it is recommended that the AIFC Authority serve as a national champion for Kazakhstan's Green Financial System.

To initiate this role it is recommended that AIFC take several initial concrete actions, which are elaborated further below, namely: adopting and championing a National Roadmap for Green Finance and joining key national Green Econonmy implementation mechanisms.

Recommended Action: National Roadmap for Green Finance

National roadmaps are an important building block for developing a green financial system. Roadmaps are strategic implementation programs developed and implemented by national authorities that seek to align financial system development with sustainability goals. Thus, roadmaps establish political capital and provide guideposts for transformation.

Many countries around the world, Kazakhstan included, have individual aspects of a strategy for green finance or invest in specific tools, but these are not connected up or synchronized. A roadmap provides the process to strategically link these elements together. Also, as a collection of ambitions and goals, roadmaps set the overall speed and tone of change.

There are good recent examples to consider, including:

- China's State Council adopted the wide-ranging "Guidelines for Establishing the Green Financial System" in 2016

- OJK, Indonesia's financial regulator, developed a "Roadmap for Sustainable Finance" in 2014 which outlines actions for the financial sector over a 5-year horizon

- MATTM, Italy's Ministry of Environment and Sea, launched a "National Dialogue on Sustainable Finance" in 2016 to identify options that would improve the take up of sustainability factors across the financial sector

- France's Directorate General of the Treasury launched a "White Paper on Financing Ecological Transition" which investigated options that would mobilize sources of finance for green transition

Of course, in each case above, they differ in features, steps and emphasis but the examples share a common purpose, cutting across multiple sectors to develop a strategy for the system as a whole.

An official National Roadmap for Green Finance would support Kazakhstan's existing national strategic plans, specifically "Kazakhstan 2050", "100 Concrete Steps" and the "Concept on Transition to Green Economy". Further, a Roadmap would support implementation of Kazakhstan's Paris Agreement commitments, as the Agreement requires countries to develop actual plans for meeting submitted Nationally Determined Contributions.

Recommended Action: Green Economy Implementation

Implementation of Kazakhstan's Green Economy Concept currently contemplates a number of mechanisms, including the Council on Green Economy Transition under the President, the Green Bridge

Partnership Programme and the to be established International Center for Development of Green Technologies and Investment Projects.

It is recommended that the AIFC join these key mechanisms as the National Champion for green finance maintaining responsibility for and representing the financial sector. The extent of the AIFC's involvement would necessarily be defined on a case by case basis. For instance, the AIFC could:

- Establish and chair a working group on Green Finance under the Council on Green Economy Transition;
- Develop a program for green finance innovation under the International Center for Development of Green Technologies and Investment Projects;
- Develop a new priority for green finance under the Green Bridge Partnership Programme.

Assessment

Rationale	Barriers Addressed	Recommendations for Action
• High level political authority of AIFC with Management Council chaired by the President and Prime Minister Vice Chair • AIFC has clear mandate to develop green finance as one of six strategic priorities • As an important national initiative grounded in Constitutional Law it is expected AIFC will have sufficient resources	• Current lack of institutional champion for green finance and weak institutional capacity • Limited cross-sectoral coordination of green economy agenda • Limited awareness of green finance among domestic market participants and broadly among policymakers	• Development of National Roadmap to establish a clear path, support implementation of green economy concept and mobilize public and private stakeholders behind forward looking plans • Join Council on Green Economy Transition under the President, establish and lead committee on green finance; join other key implementation mechanisms for Green Economy Transition and advance green finance agenda

Role II: Center of Excellence

Although substantial progress has been made around the world and momentum appears to be accelerating[47], green finance remains a relatively new and immature field. In addition, no single country has yet developed a green financial system by adhering to a strict, formulaic development pathway. Instead, there are many different initiatives and interventions that illuminate specific areas of green finance policy. This project has attempted to collect and categorize many of these with particular relevance for Kazakhstan, spanning regulatory measures, as well as public and private sector interventions.

At the same time, knowledge of green finance is diffuse, disseminated among a multitude of countries and actors.

As a result, it is critical to develop knowledge sharing and capacity building mechanisms. These provide nodes and linkages with international networks and the rapidly evolving market tools and innovations. At a domestic level, thse mechanisms provide the basis for cultural change across the financial sector, a key building block for aligning the sector with sustainability objectives.

Towards this end, an effective role can be played by knowledge and capacity building platforms such as a Center of Excellence.

The key attributes necessary for an effective platform are as follows:

1 Education & Training

- To strengthen human capital resources and build capacity among professionals and policymakers the center should provide structured education and training programs and opportunities
- To embed sustainability into the financial culture the center should also establish professional certification programs

2 Knowledge Sharing

- To empower policymakers, regulators investors and industry professionals, among other stakeholders with the right information, the center should provide a repository of up-to-date information and a platform for peer learning and knowledge sharing

3 Performance Measurement

- To ensure accountability and transformation remains on track progress towards achieving a green financial system should be measured
- Beyond green investment flows, factors to consider also include the shift in regulations and actions by market participants (voluntary measures, process integration)
- The results from this regular monitoring provides important feedback for policymakers to make adjustments and supports AIFC's role as National Champion

[47] UNEP, "The Financial System We Need: From Momentum to Transformation" 2nd Edition, October 2016

Given the AIFC's overlapping objectives for human capital development and institutional capacity building as well as its unique domestic position between the public and private sectors, it is recommended that the AIFC Bureau establish a Center of Excellence for Green Finance.

Recommended Action: Talent Development Program

Talent development is important to ensure a critical mass of qualified professionals who understand both technical green finance principles and have an adequate awareness of green finance more broadly. It is recommended that the AIFC Bureau develop structured education and training programs committed to cultivating a new cadre of green finance professionals, in both the public and private sectors, and to creating and disseminating cutting edge knowledge, concepts and tools which advance the understanding and practice of green finance. The AIFC Bureau should establish a Working Group inviting key stakeholders from academic institutions and market players to examine harmonization of domestic training programs. This recommendation along with the training programs are subjects to the necessary resources being made available.

Specific offerings of the talent development program could include:

- A professional certification (certificate of professional achievement) in sustainable finance developed in conjunction with Nazarbayev University or other leading higher education institution for entry and mid-level professionals. The certificate would cover the fundamentals of sustainable finance, including, among other modules: Economics of sustainability management; Environmental reporting and monitoring; ESG investing and responsible investment; Financing the green economy and green infrastructure; Global environmental markets (including carbon)
- Provision of structured green finance trainings and workshops in collaboration with a training provider, higher education institution or international advocacy organization such as UNEP Finance Initiative's ESRA. Trainings would cover different levels from introductory to advanced; multiple fields from banking, insurance, and investment to climate finance; and different channels from in person to online
- Provision of "train the trainer" assistance to financial institutions to increase the level of green finance literacy of their professionals and incorporate green finance principles into internal training programs. Similarly, provision of support to academic and higher education institutions to incorporate green and sustainable finance into their educational content and curricula
- High level focus group discussion and seminars for senior policymakers to be held in collaboration with relevant line ministries, agencies and other official bodies
- Provision of a secondee program in collaboration with an international higher education or advocacy organization to build and strengthen cross-border linkages

Recommended Action: Knowledge Network

Given the pace of development and innovation within the green finance sector, it is important to have mechanisms that connect domestic institutions to international learning networks as well as to monitor and disseminate the latest developments and advancements in green finance.

It is recommended that the AIFC establish a Knowledge Network for Green Finance, which would serve as a locus for up to date information on green finance and related topics. The key features of this network could include:

- Active membership and collaboration with key international international green finance and investor network, such as the Sustainability Banking Network, the Carbon Disclosure Project, the Investor Network of Climate Risk and the GreenInvest platform
- Development of an integrated green finance information system which collates and disseminates up to date information on green finance from official, government sources as well as key market indicators and publishes the information electronically and possibly also at regular intervals in a digest or report of key indicators
- Conduct joint research on green finance in collaboration with national and international research centers. This research would not be aimed at academic analysis but instead on higher level policy and market development issues and their potential impacts on Kazakhstan
- Development of a high-level national Green Finance Dialogue, which would bring together key stakeholders among financial institutions, investors, experts, international organizations, public officials, among others to discuss and nurture support for the green economy transition and encourage the flows of capital into the low carbon economy
- Development of practical Toolkits on green finance issues in collaboration with international organizations such as the OECD, EU and UNEP. The toolkits could cover such topics as green public procurement, environmental risk management

Recommended Action: Performance Monitoring Framework

According to UNEP, “What you can’t measure, you can’t properly manage and improve”. To ensure that green financial system objectives are achieved and positive feedback loops are created in the policymaking process, it is critical to establish robust performance monitoring mechanisms.

It is recommended that the AIFC develop and manage a Performance Monitoring Framework to measure progress of the financial system towards green finance. The outputs of this framework would provide timely feedback to policymakers ensuring a postive process of policy adjustment and refinement. The framework would draw upon international best practice and expertise but be grounded in national conditions. Key aspects could include:

- Collaborating with the Statistical Committee to accurately track annual investment and financial flows into the green econonmy. Such tracking would be consistent with international definitations and standards, such as those promulgated by the UNFCC, and would show aggregate as well as relative levels of financial flows (for example, new green financial flows and the share of green financial assets compared with total assets)

- Monitoring the policy and regulatory measures taken towards green finance and the status of their implementation
- Monitoring the actions taken by financial sector institutions and actors, including voluntary commitments and the integration of climate change aspects into business processes (Levels 1 and 2 of this project's capacity assessment methodology)
- The results of these monitoring activities could be shared periodically in an annual report and disseminated for discussion and dialogue at an annual Green Finance Forum

Assessment

Rationale	Barriers Addressed	Recommendations for Action
• AIFC's unique position as a fulcrum between public and private sectors allows broad engagement with financial actors • AIFC's strong international focus facilitates connectivity with knowledge and learning networks • AIFC Bureau for Continuing Professional Development has mandate to train next cadre of finance professionals, regulators and policymakers	• Weak local links to green knowledge and peer learning networks • Capacity shortfalls among financial market professionals who have limited expertise in assessing climate related risk • Poor visibility and awareness of green finance issues among regulators and policymakers	• Provide education and training modules for market professionals and public servants • Develop professional certification program for green finance to embed change with public and private actors • Establish peer learning and knowledge sharing platforms to disseminate best practices, facilitate policy dialogue and provide connectivity with international networks • Provide international secondee program to foster cross-border collaboration • Develop a performance monitoring framework to improve data collection and orient public policy

Role III: Green Finance Hub

Substantial amounts will be required from the international capital markets in the coming years to facilitate the transition to a green economy. At the same time, market innovations and growing investor awareness has led to rapid growth in the pool of assets available for investment in green businesses, projects and products.

In Kazakhstan, a large-scale mobilization of private capital will be required to meet the ambitious NDC and green economy targets. Green finance presents a large opportunity for Kazakhstan to expand its equity, bond and project finance markets, providing a variety of benefits from increased employment to growth in the asset management, derivative, insurance and banking industries.

Given Kazakhstan's ambitious green economy targets, the level of domestic financial resources as well as the international vision for the AIFC, Kazakhstan is uniquely placed to be a regional leader in green finance. Furthermore, it if does not take the opportunity, others will.

It is therefore recommended that the AIFC, particularly its International Exchange (AIX) and Asset Management institutions, take steps to play the role of a hub for green finance.

Key enablers include:

1 Disclosure & Standards

- Establishing a benchmark for environmental reporting and standards which reliably assure investors that funds are providing positive environmental impacts, including green labelling
- Ensuring transparency from the Center's participants about the financial risks and opportunities from climate change

2 Product Development

- Promotion and development of key market mechanisms such as Kazakhstan's Emissions Trading Scheme and innovative financial tools such as risk mitigation, credit enhancement and aggregation/securitization of green investments
- Supporting development of demonstration financial products to accelerate the GFS, such as promoting a green bond market through a Green Bond Framework including best practice guidelines and standards as well as strategic issuance

Recommended Action: Environmental Disclosure & Reporting

An important step towards a green financial system for Kazakhstan is greater prominence for sustainability within the strategies, policies and selection of investments by financial sector institutions. Increased visibility, awareness and availability of information on sustainability is a key element in facilitating the development of liquid markets for quality green assets.

Therefore, it is recommended that the AIFC take a leading role in developing and upholding environmental reporting standards and reporting frameworks. More precisely, sustainable development considerations should be built into the core architecture of the AIFC's financial standards regime, covering systemic risk, governance, transparency and risk/materiality.

Recommendations for specific standards and frameworks to be adopted are as follows:

I. Green finance definitions:
   a. Definition of Green Finance based on the “List of activities eligible for classification as climate mitigation finance” included in the Common Principles for Climate Mitigation Finance Tracking by Multilateral Development Banks

II. Disclosure Standards:
   a. Voluntary adoption of the recommendations by the Task Force for Climate Disclosures by financial institutions located in the AIFC
   b. Voluntary adoption of the Equator Principles for project finance by financial institutions located in the AIFC
   c. Develop voluntary ESG disclosure guidance for companies listed on the Astana International Exchange based on the Sustainable Stock Exchanges Model Guidance and Reporting Guide

III. Climate Finance Tracking:
   a. Adoption of a tracking process in participating financial institutions based on Multilateral Development Bank Common Approach. The tracking can be a time-consuming task. Therefore, the scope and purposes of the tracking should be communicated early on to relevant stakeholders in order to win their buy-in.

These standards and frameworks will provide a benchmark for green reporting and disclosure in Kazakhstan and, although in the immediate term will apply only to the AIFC territory, it is intended that they will be rolled out across Kazakhstan’s domestic financial sector.

Recommended Action: Emissions Trading System

Input and resource costs influence decisions on usage and the merits of investments in achieving greater efficiency. Often, key resources such as energy are not priced in a manner that reflects true economic costs, resulting in market externalities such as higher emissions. The re-launch of Kazakhstan’s Emissions Trading Scheme calls for improving governance of resources, including pricing. If the vision for Kazakhstan’s ETS is fully realized it could provide valuable support to drive demand for green and sustainable projects.

Given the AIFC’s unique institutional status, international orientation and credibility, it is recommended that the AIFC provide the destination for Kazakhstan’s Emissions Trading System. By launching the AIX Exchange as a platform for the trading of KazETS allowances AIFC can impact the transparency, liquidity and efficiency of Kazakhstan’s carbon market both directly and indirectly.

Recommended direct AIFC actions are:

- Allowing Over-The-Counter (OTC) trading of KazETS allowances at the AIFC Exchange. This takes advantage of the lower transaction cost of OTC trades and hence makes it attractive for more companies to engage in carbon trading. For transparency reasons, all OTC trades should be reported to the AIX exchange.
- Listing EUAs at the AIX. The EU ETS is the world’s most liquid carbon market. Trading EUAs in Kazakhstan could serve several purposes:
   a Familiarise Kazakh companies with the trading of carbon.

b Facilitate the use of the EUA market as a dirty hedge in times of low liquidity in the KazETS

c Generation of liquidity in the KazETS, as companies trade spreads between the 2 markets.

d Facilitating EUA trading would allow a greater variety of companies to access EUA trading (e.g. companies that are set up to trade in the AIFC that are not transacting EUAs in Europe). This would bring carbon business and profit to the AIFC

- Make anonymised trade data available to the public (including OTC activity) in order to enhance the transparency of the market. This will allow companies to form informed expectations about the future price of carbon and to make informed decisions on carbon mitigation activities.
- Imposing appropriate position limits for speculative activity in order to avoid the risk of market manipulation.
- In the interest of liquidity, consolidate KazETS allowances trading on one effective platform (AIX) to maximise participation in KazETS trading both nationally and internationally.

In addition, as platform for carbon trading AIFC would be in a position to indirectly, via the Ministry of Energy, impact KazETS law and regulation. The key recommendations that would improve liquidity and efficiency in KazETS allowances trading are:

- Allowing the sale of KazETS allowances without requiring proof of energy efficiency gains, which has shown itself to be a major barrier-to-entry for potential sellers.
- Allowing the use of EUAs for compliance with the KazETS. EUAs could serve as a carbon credit of last resort, giving confidence to participating companies that they can always buy the carbon they need for compliance.
- Allowing limited use of imported offsets for compliance with the KazETS
- In the long-term, removing the free allocation of KazETS allowances to Kazakh power generators and holding regular open auctions instead should be considered. In the EU ETS a similar measure has been the key to increasing liquidity, as power companies have a regular demand for allowances.

Recommended Action: Demonstration Green Finance Products

The AIFC is the successful product of an institutional effort to catalyze private finance. In order to build a bridge between supply and demand systems for green finance, it is recommended that the AIFC support development of demonstration financial products to crowd in private capital for the green economy and accelrate the green financial system.

Specifically, it is recommended that the AIFC begin by promoting development of a long-term green bond market by developing a Green Bond Framework that covers e.g. local eligibility criteria, process and reporting guidelines and market building activities and a strategic benchmark issuance. This recommendation, as above, is comprehensively explored in a separate note on the topic.

It is also recommended that ther AIFC consider promoting and assisting in the development of innovative financial products to catalyze prinvate sector investment and demand, including: risk mitigation and credit enhancement tools to address underlying investment risks and bankability of green economy projects; investment aggregation and securitization structures to diversify project risks, provide scaleable investment vehicles to attract a wider universe of investors and allow greater recycling of domestic capital. Here it is envisaged the AIFC would play a supporting role to domestic financial institutions, such as Baiterek, as well as multilateral development banks in the development of these structures, providing information on green project pipelines, guidance on best practice and a destination for possible syndications.

Assessment

Rationale	Barriers Addressed	Recommendations for Action
• AIFC's unique institutional arrangements position the center to serve as a hub for green finance • AIFC's clear twin mandate to develop green finance and serve as a national and regional financial hub	• Weak disclosure and reporting frameworks • Limited market development for green finance • Lack of access to long-term capital for green projects	• Initiate development of a green bond market through localized best practice guidelines for green bond issuance on AIX • Establish benchmark disclosure and reporting frameworks • Promote relevant international green standards • Provide venue for Kazakhstan's re-launched Emissions Trading System on the Astana International Exchange • Promote and assist in development of innovative financial products to catalyse private investment