GreenStream

Climate and Green Finance MRV

Task A6.2 of project “Green Financial System for Kazakhstan”

Final Report

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Content

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1. Executive Summary

Climate finance and its tracking have become important topics as countries seek to mobilize resources to climate change mitigation and adaptation needs. It is clear that public resources by themselves are insufficient to meet the large needs and that private financing needs to be mobilized for this purpose as well. Within an international context, the discussion about climate finance is also driven by the international climate negotiations and agreements under the UN Framework Convention on Climate Change (UNFCCC) whereby developed countries have committed to providing to developing countries significant financial support along with technology and capacity building in order to enable the latter to implement climate change mitigation and adaptation action. The target of USD 100 billion of annual international climate finance has been established, but discussions continue on the types of finance that should count towards this target.

This report reviews the current documents and discussions on tracking climate finance, in particular the relevant UNFCCC decisions as well as approaches from the multilateral development banks (MDBs), the OECD and the UNFCCC's Standing Committee on Finance. The report also covers the current status of the monitoring and reporting on climate and green finance in Kazakhstan. This report also provides a gap analysis of the components that would need to be added and the contributions that especially the financial sector can make in this regard. The report supports the Astana International Financial Centre in taking a leadership role in the development and set-up of the Green Financial System and the adoption of international disclosure standards.

Key findings of the report are:

1. At present there is no systematic MRV system in place to track green finance and green investments in Kazakhstan, with the exception of international climate finance flows. A large proportion of domestic private and public expenditure will need to be tracked in order to complete the MRV system.

2. The UNFCCC provides an overall framework for reporting on climate finance

3. The OECD Development Assistance Committee and the Joint Multilateral Development Banks have developed robust approaches to tracking green finance on a project or programme level.

4. At the macro level, the key audiences for reporting on Kazakhstan's green finance and investment are the following:

Audience	Key Interests
Government of Kazakhstan	Demonstrate fulfillment of international commitments Highlight green economy achievements
Ministry of Energy	Ensure adequate funding for strategic green policies

AIFC	Meet targets for development of Green Financial System
UNFCCC	Track fulfillment of NDCs, especially climate finance commitments
National Bank	Understand exposure of financial sector to climate and environmental risks

5. Key audiences that rely on the tracking of project-level data are the following:

Audience	**Key Interests**
Project sponsors	Qualify projects for green finance
International institutional investors	Integrity of portfolio
Development institutions	Demonstrate achievement of green targets

The project team recommends the following actions:

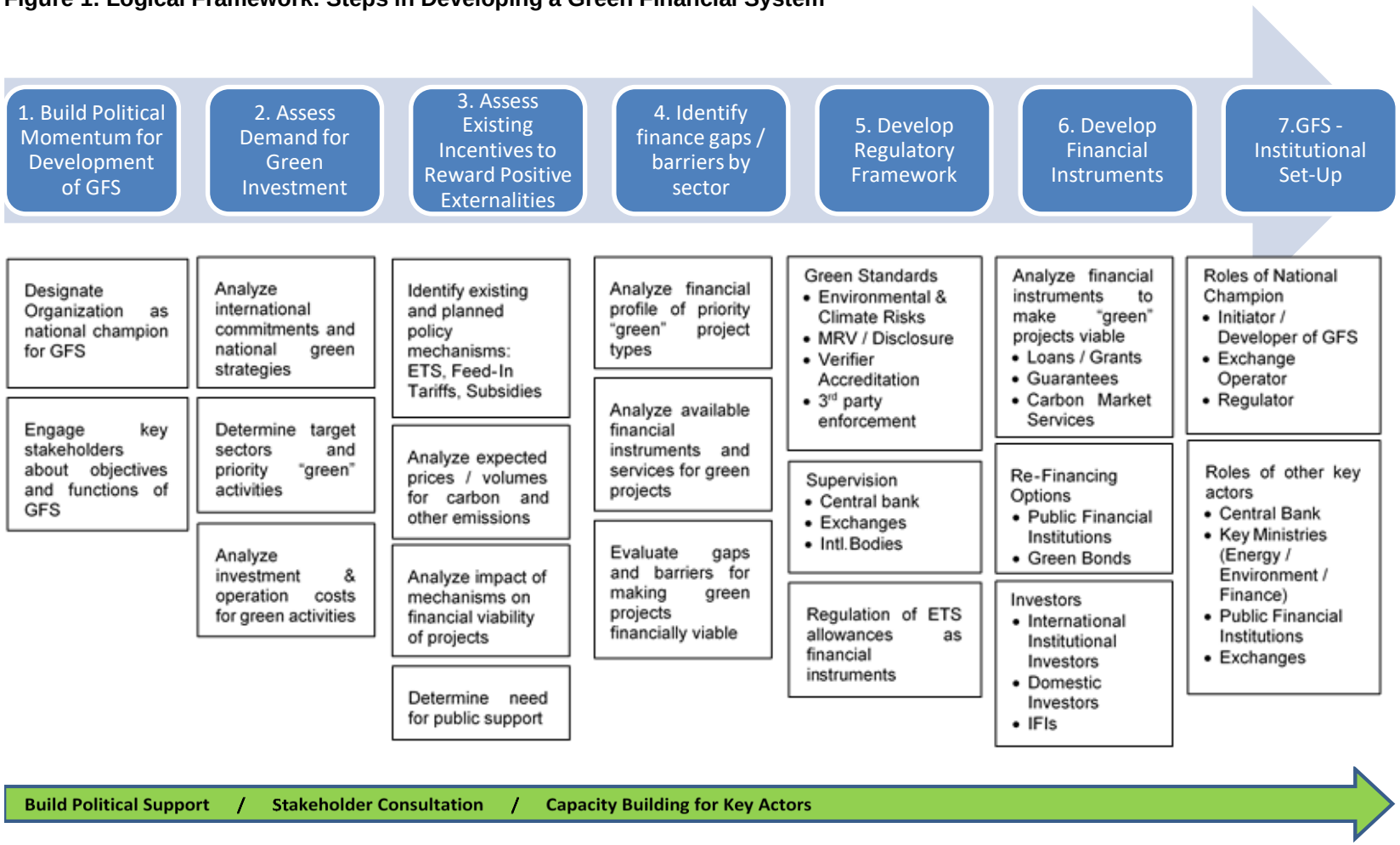
1. Key macro-level stakeholders, such as the Government of Kazakhstan, the Ministry of Energy, the Astana International Financial Center and the National Bank should be included in the design of the MRV system.
2. Build on existing regulatory capacities and data collection processes at the Statistical Office, the Ministry of Finance, the Ministry of Energy and the National Bank, in order to avoid redundant efforts and manage overall costs.
3. Ensure that the data collection and MRV system is country-driven by national strategic priorities and capabilities. Where possible, international initiatives, such as the UNFCCC and OECD, can be used to inform the process via best practices.
4. Adopt a bottom-up project-based approach for green finance. This could be based on the Joint MDB approach on reporting and require participating financial institutions to monitor and report their green finance. Categories of green investments should be localized to be in line with Kazakhstan green economy strategy and national development priorities.

2. Link to Overall Project and Logical Framework

The MRV of climate and green finance is closely linked to the Logical Framework developed as part of task A6.1 of this project. The focus of the Logical Framework is a dual one, both on what it takes to make individual green projects attractive and financially viable for project sponsors and what it takes to build an overall Green Financial System. The latter perspective is emphasized in the Flowchart below, which has been reproduced from Figure 3 of the Logical Framework document. MRV is a main factor to be addressed in step 5 “Develop Regulatory Framework”. The key questions are the definition of green projects, the disclosure of environmental and climate risks, and the monitoring and verification of environmental performance of green investment projects. Related to this are tasks, such as verifier accreditation and enforcement.

Going back to the stakeholder analysis provided in the Logical Framework document two main purposes of MRV for green investment can be distinguished. The first is ensuring the environmental integrity of individual green investment projects and the second is ensuring the accurate tracking of overall green investment flows on a macro level. Current ways of tracking environmental projects have primarily served the latter purpose by providing useful information to assess the overall level of green investment and the sources of finance for such projects, in particular as they relate to foreign versus domestic sources and public versus private sources. Going forward, different areas of green investment can be separated, in particular climate change-related versus non-climate change-related investments. The former can again be differentiated in mitigation and adaptation-related investments. Similarly, the sources of green finance can be differentiated, such as public versus private sources, international versus domestic sources. A further detailed reporting can be done with regard to financial instruments, such as green bonds, multilateral grant and loans, domestic development funding, commercial bank loans, etc.

Figure 1: Logical Framework: Steps in Developing a Green Financial System



At the macro level, one can distinguish the following key audiences for data about green investments and green finance:

- The Government of Kazakhstan, to ensure that Kazakhstan lives up to its international commitments, especially those relating to the provision of climate finance. Moreover, a strong tracking system provides the opportunity to measure and highlight the country's green economy and green finance achievements.
- The Ministry of Energy, which is in charge of implementing national strategic policies in the areas of the Green Economy, Climate Change, Renewable Energy and Energy Efficiency, to ensure that these priorities receive adequate funding as well as to understand bottlenecks that the financial sector may pose for achieving the relevant targets;
- The AIFC, which may play a key role as National Champion in the implementation of the Green Financial System in Kazakhstan, to ensure that targets for the development of a Green Financial System are met;
- The UNFCCC, which is tracking the follow-up on the NDCs and especially the climate finance commitments.
- The National Bank, which serves as financial regulator, to understand the exposure of in key economic sectors of the economy climate and environmental risks

An effective macro-level MRV for green finance relies on the tracking of project-level data, in particular clear definitions for what constitutes green investment and reporting responsibilities. On the project level there are additional key audiences, including

- Project sponsors to ensure priority access to green finance by ex-ante qualifying projects as "green"
- International institutional investors to ensure integrity of their portfolio by ex-ante determining projects as "green" and ex-post monitoring and verifying the project's environmental performance
- Development institutions tasked with green investment to demonstrate the achievement of their environmental targets

3. UNFCCC guidance on reporting and tracking climate finance

Under the UNFCCC, countries are traditionally divided into two main categories: Annex I (developed) and non-Annex I (developing) countries. However, regarding obligations to provide finance, capacity building and technical support, countries are divided to Annex II and non-Annex II countries. In the UNFCCC text from 1992, being an Annex II country means that the country needs to "*provide new and additional financial resources to meet the agreed full costs incurred by developing country Parties in complying with their obligations*".[1] At the time, the Convention did not specify detailed rules or guidance for tracking climate finance flows, and these have been under negotiation in the Conferences of Parties (COP) meetings of the UNFCCC for the last 15 years.

Significant progress regarding the tracking of climate finance was made in 2010 at COP16 in Cancun. From then on, financial support provided has been included in developed countries' **Biennial Reports** (BR) and financial support received has been included as a part of developing countries' biennial update reports (BURs) under the UNFCCC.[2] Rules on the contents of the Biennial Reports and BURs were set by COP17 in 2011. Later on, a **common electronic tabular format** for the reporting was set up by the UNFCCC, based on decision 19/CP.18. This tabular format[3] was finalised in 2013, and the results of the tracking are collected to a database called "Biennial Reports Data Interface (BR-DI)[4]"**.** In the tabular format, developed countries need to indicate the amount of finance given, the finance allocation channels (multilateral and bilateral), and the allocation to mitigation, adaptation and cross-cutting activities. A definition of what counts as climate finance is not given in the guidelines, but the countries are asked to themselves explain in their biennial reports how they define funds as being climate-specific.[5] The first set of developed country Biennial Reports had to be submitted by January 2014, and after that every two years. The first BURs by developing countries were expected by end of 2014, but only 32 developing country Parties submitted their report by May 2016.

3.1 Paris Agreement decisions on transparency of climate finance

Under the Paris Agreement, which was adopted at COP21 in December 2015, climate finance reporting and transparency requirements have increased. The exact rules and guidelines are currently under development, and are expected to be ready by the end of 2018. Importantly, under the Paris Agreement, the country division to annexes (e.g. Annex I, Annex II) does no longer

[1] United Nations Framework Convention on Climate Change (1992). Available online at: https://unfccc.int/resource/docs/convkp/conveng.pdf

[2] UNFCCC (2015): Paris Agreement. http://unfccc.int/national_reports/items/1408.php

[3] Annex of Decision 19/CP.18

[4] UNFCCC National Reports. http://www4.unfccc.int/sites/br-di/Pages/Home.aspx

[5] Annex of Decision 19/CP.18

apply in the same manner as under the Kyoto Protocol; no annexes are mentioned in the Paris Agreement. Instead, the Paris Agreement refers to “developed” and “developing” countries, without specifying countries in each group. It is possible, and expected, that the country groupings, as well as individual countries’ status, change over time under the course of the implementation of the Paris Agreement. Therefore there can be changes over time to countries’ requirements to provide climate finance and to report on it.[6]

The Paris Agreement’s Article 9.7 requires developed countries to report every two years in a transparent and consistent manner on the amount of financial support for developing countries provided and mobilized through public interventions. Other parties are encouraged to do so. According to Article 13.10, developing countries are also encouraged to report biennially on the financial support needed and received, but the transparency framework provides flexibility for those developing countries that need it in light of their limited capacities (Article 13.2). The reported information, both from developed and developing countries, then goes through technical expert reviews. In a new development in Paris, qualitative and quantitative information on future, expected public finance flows shall also be reported biennially by developed countries, and other Parties are encouraged to report such information (Article 9.5). The information on projected finance will be considered during the global stocktakes, where the amount of expected finance is assessed on a global level (Article 9.6).[7]

The COP Decision accompanying the Paris Agreement (1/CP.21) commenced a work programme for developing the exact rules and guidelines on how the reporting on financial flows should be done. Paragraph 57 sets a timeline for SBSTA[8] to develop modalities for the accounting of financial resources provided and mobilized through public interventions in accordance with Article 9.7 for consideration by the COP24 in November 2018. Besides volumes of financial flows, the Decision 1/CP.21 aims to enhance developing country reporting on the use, impact and estimated results of the support received (paragraph 94(d)). This is important information for assessing the effectiveness of climate finance in contributing to the purposes of the Paris Agreement. The Decision states that flexibility shall be provided for developing countries regarding the scope, frequency and detail of the reporting, as well as regarding the scope of review. These flexibilities need to be reflected in the development of the reporting guidelines (paragraph 89).

The extent of UN guidance on reporting and assessing the use, impacts and results – and thereby the effectiveness – of climate finance remains to be negotiated as part of the modalities for the broader transparency framework. It is not clear yet how detailed this guidance will be, and whether a common definition on climate finance will be adopted at the UNFCCC level.

According to the Paris Agreement, finance should achieve a balance between mitigation and adaptation. However, neither the Paris Agreement nor the Decision 1/CP.21 define what constitutes a “balance” in this regard. The Paris Agreement distinguishes between public financial resources provided to developing country Parties and climate finance mobilized through public interventions by developed country Parties. Mobilization and provision of climate finance can

[6] Laine, A., Kulovesi K. et al (2016): Implementation of the Paris Agreement and tasks to develop its rulebook

[7] Paris Agreement. http://unfccc.int/paris_agreement/items/9485.php

[8] Subsidiary Body for Scientific and Technological Advice of the UNFCCC

mean different things in this context. Developed country Parties are currently working on a roadmap on how to provide such support.[9]

Previous UNFCCC documents referred to Annex II of the Convention regarding obligations to provide financial support. By contrast the Paris Agreement justrefers to developing countries but has not thus far specified which countries need to comply with the obligations regarding the provision of financial support and the related transparency and reporting requirements. The omission opens the possibility that some of the more developed Non-Annex II countries could be included in the list, but no decisions have been made on this. Kazakhstan is neither an Annex I nor an Annex II country under the UNFCCC and therefore does not have any obligations to provide financial support to developing countries for climate change-related purposes or to report on such support.

At the same time, Kazakhstan is the recipient of international support. As a result, Kazakhstan is required 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.

Reporting and tracking guidelines being negotiated by 2018

According to the Paris Agreement, the decisions on the modalities, procedures and guidelines for reporting are expected to be finalized at the first Conference of the Parties serving as the Meeting of the Parties to the Paris Agreement (CMA). At the time of the Paris negotiations this was expected to be held around the year 2020, when the Agreement was expected to enter into force. Due to an unprecedented willingness of countries to ratify the agreement quickly in 2016, the Paris Agreement reached its thresholds of entering into force[10] already in November 2016. By January 2017, 127 of the 197 UNFCCC Parties had ratified the agreement. The early entry into force meant that the first CMA was already held in November 2016 at COP22 in Marrakech. Given that the negotiations on the exact rules had not properly started, yet, it was decided that CMA1 will be continued at COP23 and COP24 in 2017 and 2018. At that time, the rulebook is expected to be finalised. Until the new reporting and accounting guidance is in place, countries will continue to report based on the existing requirements on Biennial Reports and BURs.

Developments at COP22 in Marrakech

The negotiations on the rules and guidelines for reporting on climate finance have been ongoing formally at two events in 2016: the Bonn UNFCCC sessions in May and the Marrakech COP22 in November. The issue of climate finance reporting and tracking has not yet progressed very much, as country groups have different views on issues, such as the flexibilities to be provided for developing countries. The EU noted in the negotiations a general agreement in parties' pre-COP submissions on three sets of guidelines to be defined: for reporting, technical expert review and multilateral consideration. On flexibility, some developed countries supported raising the issue of flexibility in the context of each element of the guidelines, but many developing countries stressed that differentiation should be embedded systematically in the structure of the framework,

[9] Laine, A., Kulovesi K. et al (2016): Implementation of the Paris Agreement and tasks to develop its rulebook

[10] At least 55 countries representing at least 55% of global GHG emissions ratifying the agreement

not as a varying aspect of each element.[11] Negotiation on these issues continued at the May 2017 climate conference in Bonn.

3.2 Lack of common definition of climate finance

There is no common agreement within the UNFCCC or the Paris Agreement on what counts as climate finance, for example in the context of the USD 100 billion annual target. Under the current reporting framework, each country can decide what to include, which has led to inconsistencies in the reporting. A reason for this lack of agreement has been in the different views of developed and developing countries on this issue; developing country groups would like to see mostly public finance included in the definition, and developed countries would like to include private finance as well.

There is no common understanding on what types of private finance could be counted towards the USD 100 billion goal. As a consequence, estimates of the current climate finance flows vary significantly. For example, the Climate Policy Initiative (CPI) employs a very broad definition of climate finance, even including recipients in developed countries. It reports that in 2014 total global climate finance was USD 391 billion, of which 62% or USD 243 billion came from private sources.[12] By comparison, the OECD only considers financing mobilised from developed countries for the benefit of developing countries, which is estimated at 61.8 USD billion in 2014, i.e. short of the 100 USD billion goal.[13] The World Resources Institute provides its own estimates ranging from USD 31 to 155 billion in the medium growth / medium leverage scenario depending on which of the following four categories are included: Developed Country Climate Finance, Leveraged Private Sector Investment, Multilateral Development Bank Climate Finance, Climate-related ODA.[14]

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. Information on climate finance effectiveness would serve as valuable input for the global stocktake. The Paris Agreement calls for considering enhanced reporting by developing countries on the use, impacts and results of support received as part of the modalities, procedures and guidelines for transparency. However, it is unclear whether and when detailed UNFCCC guidance will be elaborated.[15]

A variety of financial instruments are used to provide climate finance, including grants, concessional and non-concessional loans, equity, loan guarantees, insurance, and debt-for-nature swaps. Currently under the UNFCCC, there is no consensus on the scope of financial instruments that should be counted as climate finance, because there are differing views on this by developed and developing countries. Developing countries would like to see climate finance, especially for adaptation, to be delivered mostly through grants, while developed countries see

[11] Earth Negotiations Bulletin (2016): COP22 summary. http://www.iisd.ca/download/pdf/enb12689e.pdf

[12] Climate Policy Initiative (2015): Global landscape of climate finance http://climatepolicyinitiative.org/publication/global-landscape-of-climate-finance- 2015/

[13] OECD (2015): Climate Finance in 2013-14 and the USD 100 billion goal. https://www.oecd.org/environment/cc/OECD-CPI-Climate-Finance-Report.pdf

[14] M.I. Westphal, P. Canfin, A. Ballesteros,and J. Morgan (2015): Getting to $100 Billion: Climate FinanceScenarios and Projections to 2020. https://www.wri.org/sites/default/files/getting-to-100-billion-final.pdf

[15] Laine, A. et al (2016): Implementation of the Paris Agreement and tasks to develop its rulebook

the definition of climate finance encompassing all these instruments. Including a broad range of financial instruments in a monitoring system would give countries a more complete picture of climate finance flows, but the lack of data could prove to be a challenge for some countries, especially for instruments other than grants and loans. Monitoring systems that start with grants and loans, but are flexible to add additional instruments in the future, would be a good way for developing countries to start tracking climate finance.[16]

In addition to the lack of a common definition and scope, there are also other challenges in the tracking of climate finance, especially in developing and emerging countries. These challenges include e.g.

- Inconsistent markers, indicators, and codes to characterize financial data (e.g., by sector and activity)
- Insufficient institutional arrangements, including unclear roles and responsibilities of different ministries
- Insufficient technical processes and systems to identify and record climate finance expenditures
- Lack of information on climate finance provided by non-government actors
- Lack of capacity to monitor different financial instruments
- Limitations on the availability of private financial data
- Lack of transparency and predictability on the part of development partners contributing climate finance
- Limited use by development partners of developing country national systems and different administrative requirements by each development partner.[17]

Monitoring of private finance leveraged by public finance

Monitoring private finance, in particular the amount of private finance leveraged by public finance, is perhaps the greatest challenge in climate finance tracking. The idea behind leveraging private investments by using public money is to attract investments from private individuals and organisations in projects that would otherwise not have received private funding or would not have existed at all. However, it is difficult to say how much of these investments would have been made regardless of the project receiving public funding. 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 are incentives for all the public sources (e.g. different countries) involved to state that the private capital was leveraged through their own funding commitment. Also, the private sector is a large network of varying organisations and individuals that do not have the same reporting responsibilities as public financing sources.[18]

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[16] Tirpak, Dennis, Louise Brown, and Athena Ronquillo-Ballesteros. 2014. "Monitoring Climate Finance in Developing Countries: Challenges and Next Steps." Working Paper. Washington, DC: World Resources Institute. Available online at http://www.wri.org/sites/default/files/wri13_monitoringclimate_final_web.pdf.

[17] Tirpak, Dennis, Louise Brown, and Athena Ronquillo-Ballesteros. 2014. "Monitoring Climate Finance in Developing Countries: Challenges and Next Steps." Working Paper. Washington, DC: World Resources Institute. Available online at http://www.wri.org/sites/default/files/wri13_monitoringclimate_final_web.pdf.

[18] Laine, A. et al (2016): Implementation of the Paris Agreement and tasks to develop its rulebook

3.3 UNFCCC Standing Committee on Finance

The Standing Committee on Finance (SCF) is a UNFCCC body, established at COP16 in Cancun, in order to assist the COP in improving coherence and coordination in the delivery of climate change financing, rationalization of the Financial Mechanism, mobilization of financial resources and measurement, as well as monitoring, reporting and verification (MRV) of support provided to developing country Parties.[19]

The SCF prepared in 2016 its own biennial assessment and overview of climate finance flows, which were presented at COP22. The work combined a literature review and data collection with virtual and informal technical meetings. External contributors included international financial institutions as well as other organizations that produce and aggregate data on climate finance flows, such as multilateral development banks, bilateral development finance institutions, international organizations, research institutions and think tanks, private sector financial institutions, academia and civil society organizations. The 2016 SCF biennial assessment identifies areas for further improvements in the UNFCCC reporting guidelines, the formats for developed and developing countries and the climate finance tracking and reporting of data producers and aggregators. Challenges were encountered by SCF in collecting, aggregating and analysing information from diverse sources. The limited clarity regarding the use of different definitions of climate finance limits comparability of data also in the SCF report. For example, there are no internationally agreed methods for reconciling financial support provided with support received. Also, MDBs and IDFC do not have a standard procedure to review their climate finance data. In addition, BRs are not reviewed in time for aggregating data for the biennial assessment and overview of climate finance flows.[20]

At its 14th meeting in October 2016 the SCF agreed (as in its previous two meetings) to approach the issue of MRV for financial support beyond the biennial assessment and overview of climate finance flows, and its response to the mandate contained in 9/CP.21[21]. The SCF has an ongoing 2016-2017 work plan on this issue, thus results of this work are not yet available. At COP22, the SCF invited multilateral climate funds, MDBs, other financial institutions and relevant international organizations to continue working to further harmonize methods for measuring climate finance and to advance comparable approaches for tracking and reporting on impacts.[22]

3.4 Climate finance sources currently being tracked under the UNFCCC

According to the 2016 OECD report "Enhancing transparency of climate finance under the Paris Agreement – lessons from experience"[23], the most tracked categories of climate finance include public bilateral and multilateral direct flows. On the other hand, there are significant gaps in tracking mobilized private finance, either directly or indirectly, such as through policy

[19] http://unfccc.int/cooperation_and_support/financial_mechanism/standing_committee/items/6878.php

[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] "UNFCCC secretariat to explore ways of creating links to other reporting software and platforms to facilitate the importation and exportation of activity-level data, and to inform the Standing Committee on Finance to take this into consideration in its workplan"

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

[23] Ellis, J., Moarif, S. (OECD, 2016): Enhancing transparency of climate finance under the Paris Agreement – lessons from experience. Available online at: http://www.oecd.org/environment/cc/Enhancing-transparency-of-climate-finance.pdf

interventions. In Table 1 below, these categories and their level of tracking under the UNFCCC are visualized.

Table 1. Current coverage of collection, reporting and review of climate finance provided and mobilized (source: OECD, 2016)

Category / source	Collected by			Included in National Reports to UNFCCC			Reviewed/assessed under current UNFCCC provisions		
	Annex II	Other Annex I	Other	Annex II	Other Annex I	Other	Annex II	Other Annex I	Other
Public, bilateral (direct)								n/a	
Public, multilateral (direct)								n/a	
Export credits									
Mobilized private, bilateral (direct)									
Mobilized private, multilateral (direct)									
Mobilized private (indirect, e.g. via policy interventions)									

Legend: Systematic; Partial; Occasional; None

4. Other international criteria and approaches for climate finance tracking

4.1 OECD work on climate finance tracking and reporting

OECD-DAC Climate Markers (Rio markers)

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 data is accessible publicly in the Creditor Reporting System (CRS)

database. Since 1998, the DAC has used the so-called Rio markers, which track the fulfillment of financial objectives of the Rio Conventions, including the UNFCCC. The Rio marker for climate change mitigation has been in use since 1998, but in December 2009 the DAC approved a new marker for climate change adaptation, providing a more complete picture of climate-change related aid. The markers were established in collaboration with the UNFCCC, and are used by Annex II countries of the UNFCCC in their reporting of official financial flows.[24] The eligibility criteria for the Rio Marker for mitigation is presented below in Table 2.

Table 2. Eligibility criteria for the Rio Marker for mitigation

Definition	An activity should be classified as climate-change mitigation related (score Principal or Significant) if: • It contributes to the objective of stabilisation of greenhouse gas (GHG) concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system by promoting efforts to reduce or limit GHG emissions or to enhance GHG sequestration.
Eligibility Criteria	The activity contributes to: a) the mitigation of climate change by limiting anthropogenic emissions of GHGs, including gases regulated by the Montreal Protocol; or b) the protection and/or enhancement of GHG sinks and reservoirs; or c) the integration of climate change concerns with the recipient countries' development objectives through institution building, capacity development, strengthening the regulatory and policy framework, or research; or d) developing countries' efforts to meet their obligations under the Convention. The activity will score "principal objective" if it directly and explicitly aims to achieve one or more of the above four criteria.

The OECD DAC scoring system for climate markers involves the following decision tree to be applied to all projects/programmes, depicted in Figure 1 below.

[24] OECD (2011): Handbook on the OECD-DAC Climate Markers. http://www.oecd.org/dac/stats/48785310.pdf

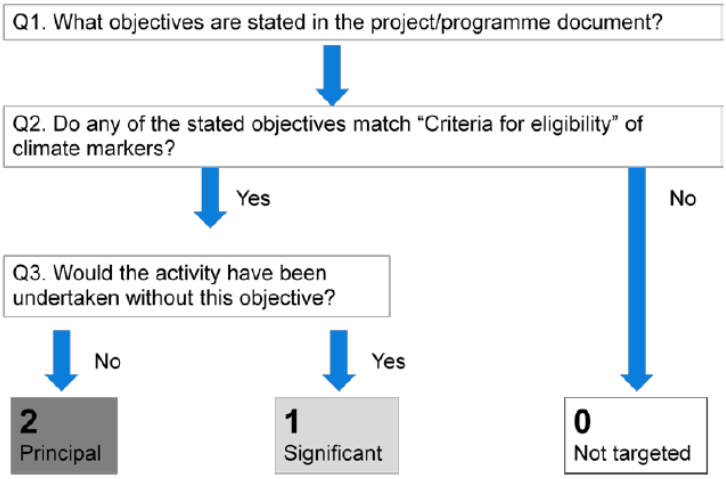

Figure 1. Decision tree for OECD DAC scoring system for climate markers

MRV framework for climate finance

The OECD has also been developing a more comprehensive MRV framework for climate finance in the past decade. In its report "Financing climate change mitigation: Towards a framework for Measurement, Reporting and Verification" (2009), they define the concepts of mitigation-specific and mitigation-relevant finance as follows:

- *"**Mitigation specific support**" aims to achieve greenhouse gas mitigation in developing countries as its main objective. This type of support may also target related reporting requirements (e.g. preparation of national greenhouse gas inventories or National Communications, including a description of national mitigation policies and measures). It may include public or private finance, technology support or capacity building pertaining to the Clean Development Mechanism under the Kyoto Protocol.*
- *"**Other mitigation-relevant support**" includes financing for development more generally. However, it refers to the key sectors that shape future greenhouse gas emissions as well as mitigation potential and costs of mitigation in developing countries. Relevant financial support includes, for example, potentially large portions of bilateral and multilateral official development assistance in energy and/or water infrastructure, waste management, agricultural or forestry sector development. It also includes collaborative research and development (R&D) initiatives that do not target climate change per se (e.g. in the energy and agricultural sectors). Finally, private sector flows, in the form of foreign direct and domestic investment, are helping to shape the pace and profile of future developing country emissions, and thus mitigation potential.*[25]

The OECD has also worked on methods to estimate **mobilised private and public climate finance**. In the 2013 report "Comparing Definitions and Methods to Estimate Mobilised Climate

[25] OECD (2009): Financing climate change mitigation: Towards a framework for Measurement, Reporting and Verification. Available online at: http://www.oecd.org/env/cc/44019962.pdf

Finance*"* the organisation suggests that a number of factors can complicate the tracking of climate finance and result in double counting. One such factor is that it is difficult to identify the single point in the climate finance supply chain where tracking should ideally take place. This is because climate-related activities in developing countries can have several project stages (e.g. feasibility study, infrastructure development, project development) and involve multiple actors at each stage. Each intermediary may play a role in mobilising climate finance, and therefore picking one, such as an MDB or a national development bank, as "the" place to assess and estimate mobilisation would risk under-counting finance mobilised in some cases and double-counting it in others.[26]

According to OECD, there are three methodological aspects related to defining this "point of estimation", where the tracking of mobilisation takes place. These are (1) the assumed time horizon of the mobilisation effect (the period of time, over which an instrument or mechanism is considered to be mobilising climate finance), (2) when mobilisation is estimated (*ex ante* or *ex post* basis) and (3) where mobilisation is estimated along the chain of financial providers.[27] There is still no global consensus on this issue, but the MDBs have created their own reporting methods, which are described below.

4.2 Joint MDB approach for climate finance reporting

The group of Multilateral Development Banks – EBRD, African Development Bank (AfDB), Asian Development Bank (ADB), European Investment Bank (EIB), Inter-American Development Bank (IDB) and the World Bank Group have prepared joint annual reports on climate finance since 2011.[28] To do so they have established the following set of principles for MDB **Mitigation Finance Tracking**:

- *An activity will be classified as related to climate change mitigation if it promotes "efforts to reduce or limit greenhouse gas (GHG) emissions or enhance GHG sequestration"*
- *Reporting according to the Principles does not imply evidence of climate change impacts and any inclusion of climate change impacts is not a substitute for project-specific theoretical and/or quantitative evidence of GHG emission mitigation; projects seeking to demonstrate climate change impacts should do so through project-specific data.*[29]
- *The Principles include the following guidelines on data, reporting and eligible activities: Where data is unavailable, any uncertainty is to be overcome following the principle of conservativeness where climate finance is preferred to be under-reported rather than over-reported;*
- *The Principles are activity-based as they focus on the type of activity to be executed, and not on its purpose, the origin of the financial resources, or its actual results;*
- *Project reporting is ex-ante project implementation at the time of board approval or financial commitment*

[26] Caruso, R., Ellis, J. (OECD, 2013): Comparing Definitions and Methods to Estimate Mobilised Climate Finance

[27] Caruso, R., Ellis, J. (OECD, 2013): Comparing Definitions and Methods to Estimate Mobilised Climate Finance

[28] Multilateral Development Banks (2017): 2016 Joint Report on Multilateral Development Banks' Climate Finance

[29] Common Principles for Climate Mitigation Finance Tracking (2015)

- *The Principles require mitigation activities to be disaggregated from non-mitigation activities as far as reasonably possible. If such disaggregation is needed and not possible using project-specific data, a more qualitative / experience-based assessment can be used to identify the proportion of the project that covers climate mitigation activities, consistent with the conservativeness principle. This is applicable to all categories, but of particular significance for energy efficiency projects.*
- *Mitigation activities or projects can consist of a stand-alone project, multiple stand-alone projects under a larger program, a component of a stand-alone project, or a program financed through a financial intermediary.*

According to the principles, a bottom-up project-based approach to climate finance accounting chosen. Climate finance is counted at the stage when the project is approved and the finance committed, and the eligibility of finance depends on the type of the project activity. The guidelines list activities that can be counted as climate finance in nine categories: renewable energy, lower-carbon and efficient energy generation, energy efficiency, agriculture, forestry and land-use, water and wastewater, transportation, low-carbon technologies, non-energy greenhouse gas reductions such cleaner industrial production and carbon capture and storage and cross-cutting issues such as support for the development of carbon markets, policies and regulations, and emissions monitoring systems.[30] Examples of the listings are the following:

- *Regarding renewable energy and transport projects ensuring modal shift, both new and retrofit projects are included.*
- *Greenfield energy efficiency investments are included only in the few cases when they enable preventing a long-term lock-in of high carbon infrastructure.*

With regard to climate change adaptation finance, in 2015 the group of Multilateral Development Banks published their **Common Principles for Climate Mitigation Finance Tracking**[31] (Version 1 in April 2015, version 2 in June 2015) as well as their **Common Principles for Climate Change Adaptation Finance Tracking**[32] (July 2015). The MDB approach is aligned with the OECD Rio Markers, and data is shared annually.[33]

For **Tracking Adaptation Finance**, the MDBs have adopted these common principles:

- *Adaptation finance tracking relates to tracking the finance for activities that address current and expected effects of climate change, where such effects are material for the context of those activities;*

[30] http://www.worldbank.org/en/news/feature/2015/04/03/common-principles-for-tracking-climate-finance

[31] Common Principles for Climate Mitigation Finance Tracking (2015). Available online at: http://www.eib.europa.eu/attachments/documents/mdb_idfc_mitigation_common_principles_en.pdf

[32] 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

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

- *Adaptation finance tracking may relate to activities consisting of stand-alone projects, multiple projects under larger programs, or project components, sub-components or elements, including those financed through financial intermediaries;*
- *Adaptation finance tracking requires adaptation activities to be disaggregated from non-adaptation activities as far as reasonably possible. If disaggregation is not possible using project-specific data, a more qualitative or experience-based assessment can be used to identify the proportion of the project that covers climate change adaptation activities.*

The MDBs have also proposed a common approach for **tracking climate co-finance** in their common briefing document from December 2015.[34] The approach defines how to report on climate co-financing flows that are invested alongside each MDB's climate finance activities, and harmonize definitions and indicators for estimating co-financing alongside MDB-managed resources for climate-related projects.

The common MDB approach makes the following definitions:

- *Climate Finance is defined as the amount of financial resources that are contributed to climate change mitigation and/or adaptation activities, as defined by the Joint Reports on MDB's Climate Finance*
- *Includes those financial sources which are managed by the MDBs such as trust funds, international climate funds, etc.*

Climate Co-Finance (CCF) is defined as the amount of financial resources contributed by external entities alongside the climate finance invested by MDBs. It encompasses financial resource providers that are government or government-affiliated, as well as private ones. It includes all forms of financial instruments, including grants, loans, equity, guarantees, etc. Broader support programs that do not provide resources directly into the financing package for a given project or program are not included.

Guiding principles governing the reporting of CCF include the following:

- *Causality*: CCF does not imply a causal relationship as to who catalyzed whom in a particular investment, but rather measures the amount of co-financing that has been invested alongside contributions made by MDBs.
- *Climate Finance attribution*: total co-financing for each project is prorated for the same climate component percentage as the data set used for the 2014 "Joint Report on MDB's Climate Finance", resulting in CCF.
- *Conservativeness principle*: Following the Joint Report on MDB's Climate Finance guidelines, CCF follows the conservativeness principle that under-reporting is preferable to over-reporting.
- *Source of data*: Aligned with the data set from MDBs in the Joint Report on MDB's Climate Finance, data is sourced from information available to the Board of Directors of the

[34] MDBs (2015): Tracking Climate Co-Finance: Approach Proposed by MDBs Briefing Document. Available online at: http://www.bei.org/attachments/documents/mdb_tracking_climate_cofinance_en.pdf

relevant MDB, at the time of project approval by the Board. CCF estimates therefore represent ex-ante project conditions.

- *Public and Private sources*: CCF is segmented into public and private sources, based primarily on the shareholding structure of the external institution providing the co-financing.
- *Double counting*: CCF does not double count co-finance reported by different MDBs from the same source (including from other MDBs themselves as well as external entities), and as such overall co-finance reported subtracts or "nets out" resources already reported. Once co-finance is reported for one year, it cannot be counted in the next year if additional MDB finance is placed without additional co-finance. In order to avoid double-counting, MDBs either group all investments under the first year of reporting, or split the co-finance over a number of years, depending on the type of project and available information.[35]

However, there are limitations to CCF tracking, as the reported numbers do not capture indirect co-financing through credit lines to financial intermediaries, equity investments, corporate finance loans, leasing financing, technical assistance, or policy-based instruments that could not be clearly identified in the appropriate documents. For financial intermediaries and equity investments, the MDBs are working together to develop an approach that determines co-financing levels using multiplier methods.[36]

[35] MDBs (2015): Tracking Climate Co-Finance: Approach Proposed by MDBs Briefing Document. Available online at: http://www.bei.org/attachments/documents/mdb_tracking_climate_cofinance_en.pdf

[36] MDBs (2015): Tracking Climate Co-Finance: Approach Proposed by MDBs Briefing Document.

5. Climate Finance MRV in Kazakhstan

5.1 Kazakhstan's Reporting Obligations under the UNFCCC and Biennual Reports

Kazakhstan is neither an Annex I nor an Annex II country under the UNFCCC.[37] Nevertheless, the country is submitting National Communications and Biennial Reports in line with the requirements for Annex I countries, as it has submitted a notification that it intends to be bound by Article 4, paragraph 2(a) and (b), of the Convention.[38] The 2014 Biennial Report[39] did not include any information about climate finance, only the note that as a country that is not included in Annex II of the UNFCCC, the Republic of Kazakhstan has no obligation to provide financial and technological support for developing countries not included in Annex I.

The 2016 Biennial Report[40] was prepared by the Ministry of Energy of the Republic of Kazakhstan with the support of the UNDP/GEF project "Development of Kazakhstan's 7th National Communication and Biennial Report".[41] The report does not provide information about the provision of public financial support according to the Common Tabular Format. As Kazakhstan is not an Annex II country of the UNFCCC, it has no direct obligation under the UNFCCC to provide financial and technological support for developing countries. Nevertheless, the report provides information on funds received for climate-related purposes in Kazakhstan as well as on the voluntary financial support Kazakhstan is providing to developing countries for purposes related to climate change. The highlights of the report include the following information:

- Kazakhstan is not a donor country to the GEF but receives GEF funding for projects in the areas of sustainable development, environmental management and climate change. Since 2007, Kazakhstan has received funding for 28 projects, a total of USD 90 million in grants and USD 397 million in co-financing.

[37] Following the ratification of the Kyoto Protocol by Kazakhstan on 19 June 2009, and its entry into force for Kazakhstan on 17 September 2009, Kazakhstan became a Party included in Annex I to the Convention for the purposes of the Protocol, while remaining a Party not included in Annex I to the Convention for the purposes of the Convention. See the Report of the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol on its fifth session, held in Copenhagen from 7 to 19 December 2009, Part One: Proceedings, Paragraph 91. The document is available at the UNFCCC website http://unfccc.int/resource/docs/2009/cmp5/eng/21.pdf.

[38] Nevertheless, for Kazakhstan is preparing Biennial Reports in line with Annex I countries, as the Government of Kazakhstan submitted a notification dated 23 March 2000 that, in accordance with Article 4, paragraph 2(g), of the Convention, Kazakhstan intends to be bound by Article 4, paragraph 2(a) and (b), of the Convention.

[39] The document is available at the UNFCC website https://unfccc.int/files/national_reports/biennial_reports_and_iar/submitted_biennial_reports/application/pdf/br1_kazakhstan_eng.pdf

[40] The document is available at the UNFCCC website https://unfccc.int/files/national_reports/biennial_reports_and_iar/submitted_biennial_reports/application/pdf/br-text_eng_kz.pdf

[41] The GEF contributed US$ 852,000 for project to run from 2014-2017. Strengthen the capacity to collect information on an ongoing basis for inclusion in the next NC. http://www.kz.undp.org/content/kazakhstan/en/home/operations/projects/environment_and_energy/promotion-of-energy-efficient-lighting-in-kazakhstan11.html

- Kazakhstan pays approx. USD 3.5 million per year in mandatory membership fees to UN and other international environmental organizations, plus voluntary contributions USD 465000 in 2014.
- Kazakhstan provides climate finance to developing countries, especially Afghanistan. During the 2013-2014 reporting period USD 7.5 million in bilateral financial aid to developing countries. While there is no explicit breakout of the share that is used for climate change purposes, it is estimated that 30% of the aid is for climate change adaptation-related emergencies.
- Under the heading technology development and transfer, Kazakhstan is reporting on international support for several low-carbon development projects, including:
    - Action Plans for Sustainable Energy Development under the Covenant of the European Mayors adopted in 9 Kazakh cities (Aksu, Astana, Lisakovsk, Petropavlovsk, Satpayev, Taraz, Temirtau, Zhezkazgan and Karaganda).
    - UN Economic Commission for Europe is supporting capacity building for transition to a green economy. From 2015 to 2018 the Commission is routing a total of € 7.1 million via the UNDP for this purpose.
    - The US Agency for International Development (USAID) is funding the Kazakhstan Programme on Climate Change Mitigation in order to support the implementation of policies and measures to reduce greenhouse gas emissions at the project, corporate and national levels.

5.2 Upcoming reporting requirements for Kazakhstan under the Paris Agreement

The status of Kazakhstan within the Paris Agreement's classification of "developed" and "developing" countries is currently still ambiguous. Kazakhstan's Nationally Determined Contribution (NDC) presents an unconditional economy-wide absolute emission reduction target with 100% emission coverage (-15 % in GHG emissions from 1990 levels by 2030[42]), However, regarding the provision of climate finance and the relevant reporting and verification requirements, Kazakhstan wishes to be treated as a developing country.[43]

Even though biennial reporting under the UNFCCC continues under the Paris Agreement, the requirements on what and how to report is changing for all countries. There are also new "verification" systems such as the global stocktake and broader Technical Reviews. New reporting rules for countries, such as Kazakhstan, that do not provide climate finance to developing countries under the Paris Agreement (such as Kazakhstan) are currently under negotiation and are expected to be prepared by the end of 2018. These include the following:

- Developing countries are encouraged to report biennially on the **financial support needed and received**. There will be flexibility provided for countries that need it in the light of their capacities.

[42] Kazakhstan's Nationally Determined Contribution (NDC): http://www4.unfccc.int/ndcregistry/PublishedDocuments/Kazakhstan%20First/INDC%20Kz_eng.pdf

[43] Task A.4. report: Review of the ability and potential of Kazakhstan's financial sector to support the Paris Agreement

- Besides volumes of financial flows, developing country reporting is going to be increased on the **use, impact and estimated results of the support received**. Flexibility will be provided for developing countries in the scope, frequency and level of detail of reporting.
- Developed countries need to provide qualitative and quantitative information on **future, expected public finance flows** biennially, and developing countries are encouraged to report such information. The information on projected finance will be considered during the global stocktakes.

Regarding the verification of the reported information, both the developed and developing country reports will be assessed in Technical Expert Reviews, but developing countries are given some flexibility in the scopes of the reviews. In the light of these new reporting requirements and guidance, Kazakhstan needs to consider the best ways to monitor and report the amount of support needed and received, the use and impacts of the climate finance received by the country.

5.3 National-level green investment flows

This section summarises the available data on national green investment flows in the 2013-16 period. There are three main green investment flows in Kazakhstan, namely assignments from the national budget, investments by public and private companies for environmental protection, and foreign investments by multilateral development banks and donor organisations. The first flow is documented in the national budget as well as specific budget programmes implemented by the Ministry of Energy and the Ministry of Investments and Development. The figures of the domestic and international flows for environmental protection and green investments are based on data collected, processed and published by the national Statistical Committee (Table 3). For the international investments there are a variety of sources including reporting from the MDBs

Table 3. Reported environmental and green investment flows in Kazakhstan, USD mln

Type of investment flow	Source of information	Years, USD mln			
		2013	2014	2015	2016
Total public and private investments in environmental protection	**Statistical Committee**	**509.43**	**577.55**	**373.80**	-
Total domestic public and private investments in environmental protection	Statistical Committee	343.72	344.89	238.22	-
Total foreign investments in environmental protection	Statistical Committee	165.71	232.66	135.58	-
National Budget programme for the implementation of the Green Economy Concept	Ministry of Energy	-	-	0.27	0.47
National Budget programme for climate mitigation measures	Ministry of Energy	-	1.00	0.62	0.47
National Budget programme for subsidizing purchases of renewable energy installations from domestic manufacturers	Ministry of Energy	-	0.06	-	0.07
National Budget programme for energy efficiency	Ministry of Investments and Development	0.76	0.97	1.17	1.23

The Statistical Committee of Kazakhstan presents the data on total green investments as an indicator of the transition to “a green economy” and breaks out investments for each sector of Kazakhstan’s economy. The data are based on the statistical reporting on capital investments for environmental protection by public and private companies. The capital investments for environmental protection are defined by the Order of the Statistical Committee No. 288 of 30 November 2015 as investments for measures on construction and reconstruction of industrial and municipal wastewater treatment installations, improvement of quality of surface water sources, land protection, establishment of natural protected areas and others.[44] Therefore, the reported data does not cover investments in climate change mitigation, renewable energy and energy efficiency. See the data in Table 4 below for each sector.[45]

[44] See the Information and Legal System of Legal and Normative Acts of the Republic of Kazakhstan “Adilet” at http://adilet.zan.kz/rus/docs/V1600014570#z8.

[45] See the website of the Statistical Committee, at http://www.stat.gov.kz/faces/wcnav_externalId/Ind_Green_Economy?_afrLoop=15738596545955043#%40%3F_afrLoop%3D15738596545955043%26_adf.ctrl-state%3D2h9umorze_125.

Table 4. Investment aimed at environmental protection in Kazakhstan in 2012-2015 by sector

Investment aimed at environmental protection, USD mln				
	2012	2013	2014	2015
Total	**503.94**	**509.43**	**577.55**	**373.80**
Agriculture, forestry and fisheries		0.71	0.45	0.98
Industry – Total	452.75	436.22	472.42	281.62
Mining and quarrying	245.77	255.12	297.32	111.92
Manufacturing industry	115.30	44.30	92.73	75.56
Power supply, gas, steam and air conditioning	89.98	133.42	72.52	90.50
Water supply; Sewage system; Waste	1.70	3.38	9.85	3.64
Building		4.64	0.81	0.09
Wholesale and retail trade; Vehicle repair	0.01	0.35	0.01	0.01
Transport and storage	0.26	0.03	0.14	0.27
Accommodation and food services	0.00	0.00	0.01	0.00
Information and communication	0.01	0.03	0.04	0.20
Financial and insurance activities			0.00	0.05
Operations with real estate			0.00	0.00
Professional, scientific and technical activities	30.10	12.91	46.55	37.76
Administrative and support services		4.39	2.10	0.01
Public administration and defense; Compulsory social security	19.41	47.06	54.83	46.40
Education			0.01	0.00
Health and social services		0.00	0.00	
Art, Entertainment and Recreation				
Provision of other types of services	1.40	2.90		5.23

In addition to the investments in environmental protection, data is available on budgetary assignments for specific programmes by key ministries, namely the Ministry of Energy (climate change mitigation and renewables) and the Ministry for Investments and Development (energy efficiency). Their current strategic plans include a number of budget programmes dealing with climate change mitigation, renewables and energy efficiency. It is notable that the amounts dedicated to these programs are still very limited and significant parts of the budgetary assignments are earmarked for the development and implementation of legal frameworks and regulatory tools. Prominent examples are the national carbon registry, the GHG inventory for the ETS, or the State Energy Registry. The only direct investments for the transition to “a green economy” from the national budget are provided by the Ministry of Energy for subsidizing the purchase of renewable energy equipment from domestic manufacturers and for the implementation of the Concept of transition to “a Green Economy”, including the implementation of 3 pilot projects on solar energy. Also, a budget programme of the Ministry for Investments and Development after 3 years of financing the development of a legal framework and the State

Energy Registry has been switched since 2016 to financing of sectoral measures on energy efficiency in industry, energy, municipal services and transport sectors.

It should be noted that in Kazakhstan the role of local governments in green finance remains very limited and most of the local budgets do not contain any funds for green investments. Also, currently there are no specified line items for climate 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.

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. In addition to the direct funding provided, co-financing of relevant projects by project developers, commercial banks and domestic development funds is considered. Additional funding is provided to such projects by IFIs without explicitly expressed priorities on green investments, for example by the Asian Infrastructure Investment Bank.

Green Finance for Kazakhstan from Climate Investment Funds (CIF)

The Climate Investment Funds (CIF) include four key programmes, i.e. the Clean Technology Fund, the Pilot Program for Climate Resilience (PPCR), the Scaling Up Renewable Energy in Low Income Countries Program (SREP), and the Forest Investment Program (FIP). As an upper middle-income country Kazakhstan has so far received funding only from the CTF.

In 2009, the Government of Kazakhstan prepared its investment plan for the CTF, one of four programmes under the Climate Investment Funds. In April 2013, the Government of Kazakhstan submitted the updated Investment Plan to the Clean Technology Fund. The Government of Kazakhstan has requested funding from the Clean Technology Fund in the total amount of USD 200 mln to catalyse USD 1 bn of further investments in renewable energy, district heating and energy efficiency projects. The 2013 Revised Investment Plan covers two thematic areas: i) renewable energy development (USD 116 mln); ii) municipal energy efficiency and district heating modernization (USD 84 mln). The database of approved projects includes 6 projects from Kazakhstan in the amount of USD 108.8 mln.

Table 5 CTF funding for green investments in Kazakhstan

Source of funding	**Implementing MDB**	**Project Description**	**Status**	**CTF Funding million US$**	**Co-Financing million US$**
Clean Technology Fund	EBRD	Energy efficiency in district heating	Approved in October 2014	34.0	160.0
	EBRD	Renewable and energy efficiency projects by KAZREFF[46]	Approved in October 2015	29.5	95.0
	EBRD	Waste-to-energy projects	Approved in December 2012	22.4	80.6
	EBRD	Yereymentau wind power plant	Approved in November 2014	20.7	0
	EBRD	Energy efficiency in rail transport	Approved in November 2013	1.0	28.4
	IFC	Advisory services for investments in renewables	Approved in June 2014	1.2	2.7
Total				108.8	366.7

[46] EBRD's Kazakhstan Renewable Energy Financing Facility.

Green Finance for Kazakhstan from the Global Environment Facility (GEF)

Kazakhstan is not a donor country to the GEF but receives GEF funding for projects. Altogether, Kazakhstan has received funding for 33 national projects,[47] with a total of US$ 104 million in GEF funding and US$ 577 million in co-financing. Most of the funding was in the areas of Climate Change, Land Degradation, Biodiversity and Persistent Organic Pollutants. Kazakhstan has been supported by the GEF since 1996 and from 2007-2016 received an average of US$ 8 million per year in GEF funding, which was used to mobilize approximately US$ 50 million in additional co-financing for green investments.[48] Some of the key projects are listed in Table below.

Table 6 Selected GEF funded projects for green investments in Kazakhstan

Implementing Agency	Project Description	Approved in	GEF Funding, million US$	Co-Financing million US$
UNDP	City of Almaty Sustainable Transport	2010	4.9	76.5
UNDP	Nationally Appropriate Mitigation Actions for Low-carbon Urban Development in Kazakhstan	2013	5.9	65.3
UNDP	De-Risking Renewable Energy Investments	2016	4.5	32.5
UNDP	Sixth Operational Phase of the GEF Small Grants Programme in Kazakhstan	2016	2.6	4.7
EBRD	Reducing GHG Emissions through a Resource Efficiency Transformation Programme (ResET) for Industries in Kazakhstan	2011	7.1	45.0

[47] This includes funding for one project under the Special Climate Change Fund (SCCF). See https://www.thegef.org/country/kazakhstan

[48] Own calculations based on data from https://www.thegef.org/country/kazakhstan

Green Finance for Kazakhstan from Multilateral Development Banks

The European Bank for Reconstruction and Development

The European Bank for Reconstruction and Development launched in 2015 the Green Economy Transition (GET) approach to focus on investments that deliver environmental benefits. This approach seeks to increase the share of green financing from an average of 24% of EBRD annual business investment in the 10 years up to 2016 to 40% by 2020.[49] In Kazakhstan, EBRD has provided a total of € 1.738 billion to 79 GET projects since January 2006, including € 234 million to 18 climate adaptation projects since 2012[50]. The below table shows a number of recent projects on renewables, energy efficiency and climate mitigation in power generation and distribution, cement production, municipal waste management, municipal public transport, district heating and street lighting. The projects have been selected by the Consultant on the basis of the study of the Banks' portfolio for 2013-2016 for impacts in energy efficiency, promotion of renewables and reduction of GHG emissions, namely the sections on Transition Impact of Project Summary Documents as presented on the Bank's web site. Only projects were selected that were not already listed under the CTF.

The European Investment Bank

The European Investment Bank (EIB) has committed at least 25% of its lending portfolio to low-carbon and climate-resilient growth. The Bank signed three financing contracts on green projects in Kazakhstan: one on 27 June 2013 with the "KazAgro" National Management Holding in the amount of EUR 150 mln and two on 24 November 2016 with the Damu Fund in the amounts of EUR 150 mln and EUR 50 mln. The agreement with KazAgro finances loans for climate change adaptation projects in the agri-food sector promoted by rural micro, small and medium enterprises. The agreements with the Damu Fund is on lending to small and medium-sized enterprises and investing in projects eligible under the Bank's External Lending Mandate Climate Strategy and the one for EUR 50 mln is already financed by the EIB.

[49] See the website of the European Bank for Reconstruction and Development at http://www.ebrd.com/what-we-do/get.html.

[50] In 2012 the EBRD started tracking climate adaptation finance separately.

Table 7. Select green projects by multilateral development banks in 2013-2016, USD mln

Source of funding	Implemented	Type of project	Status	Amount, USD mln
European Investment Bank	KazAgro	Climate change adaptation projects in the agri-food sector	Approved in July 2013	158.9
	Damu Fund	Green projects by small and medium-sized enterprises	Contract signed in November 2016	211.9
Subtotal EIB				***370.8***
European Bank for Reconstruction and Development		Renewable energy projects and modernization and strengthening the electricity grid to integrate renewables	Approved by Board in 2016	211.9
		Burnoye Solar Plant Extension	Passed concept review in 2016	50.0
		Kulan Solar Power Plant	Approved by Board in 2016	24.0
		Gulshat Solar Power Plant	Concept reviewed in 2016	30.0
		Installation of bulk heat meters in multi-flat residential buildings (energy efficiency)	Approved by Board in 2016	33.4
		Natural gas supply infrastructure construction and connection for the population of the City of Taldykorgan (climate mitigation)	Concept passed review in 2016	13.8
		Modernisation of street lighting infrastructure for selected cities in Kazakhstan (energy efficiency)	Approved in July 2016	53.0
		Completion of construction and grid connection of the 11MW cogeneration gas-engine based power plant in the City of Atyrau (energy efficiency)	Approved in 2015 Disbursing	5.9
		Burnoye solar power plant	2015 Repaying	74.2
		Solid Waste Modernisation Framework (waste-to-energy)	Signed in 2014	158.9
		Refurbishment of a cement plant in the City of Shymkent (energy efficiency and climate mitigation)	Approved in 2014	21.2
		Electricity distribution in the Kyzylorda region (energy efficiency and climate mitigation)	Disbursing	19.1

		Rehabilitation of tram public transport through modernisation of the tram fleet and selected tram infrastructure in the City of Pavlodar (energy efficiency)	Signed in 2014	16.9
		Acquisition of new compressed natural gas ("CNG") buses in the City of Kyzylorda	Signed in 2013	18.8
		Modernization of generating assets as well as upgrade of the existing electricity distribution networks (energy efficiency and climate mitigation)	Repaying 2013	119.3
Subtotal EBRD				***935.7***
Asian Infrastructure Investment Bank		Gulshat PV Solar Power Plant	Approved concept in 2016	69.1
Subtotal AIIB				***69.1***

In addition, various bilateral and multilateral foreign donor organizations and governments provide green financing to Kazakhstan, often for capacity building activities. According to the OECD DAC statistics for 2013-2016, the largest foreign donors for green projects in Kazakhstan were the European Commission (USD 11.8 million) and USAID (USD 7.5 mln), followed by the French Ministry for the Economy and Finance, the Ministry of Foreign Affairs of Norway, the Australian Government, KOICA (Korea) and JICA (Japan).

Green investments in climate change adaptation

No national or local cost estimates for climate change adaptation have been conducted in Kazakhstan. 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. The currently agreed approach to planning and financing climate adaptation measures is to identify climate change adaptation measures among those measures that are currently financed and implemented under different programmes, in particular those for the agriculture and the water sector.

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 available at his time. 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, energy.

The key measures within the agricultural sector that are contained in the Green Economy Concept are:

- Adoption of water-saving irrigation techniques (such as drip irrigation)
- Move to more water-efficient crops, for example by reducing the areas for rice and cotton
- Metering of water consumption and water tariffs that reflect costs as well as water scarcity

These would be supplemented by water saving measures in industry and municipal water networks. In addition to initiatives that take place under the general headings of agriculture and water infrastructure there have been a few initiatives specifically designed as climate change adaptation measures. The projects displayed in **Error! Reference source not found.** and 9 are the exception, as they have relied on international funding.

In addition to initiatives that take place under the general headings of agriculture and water infrastructure there have been a few initiatives specifically designed as climate change adaptation measures. The projects displayed below are the exception, as they have relied on international funding.

Table 8. Financing of adaptation projects in Kazakhstan

Source of funding	Project Description	Approved in	Amount Million US$	Co-Financing Million US$
Asian Development Bank	Irrigation Rehabilitation Project[51]	planned	250	
EBRD	South Kazakhstan Water Supply Project[52]	2016	180	21.4
Islamic Development Bank	Rehabilitation of Irrigation and Drainage Project[53]	2016	249.57	
World Bank	Second Irrigation and Drainage Project[54]	2013	102.9	240.1
European Investment Bank	Climate change adaptation projects in the agri-food sector. Implemented via KazAgro National Management Holding	2013	158.9[55]	N.A.
GEF / UNDP	Community-Based Adaptation Programme, Kazakhstan: Small-scale demonstration projects (10 projects)	2009	0.4	0.5
GEF / UNDP	Supporting Sustainable Land Management in Steppe and Semi-arid Zones through Integrated Territorial Planning and Agro-environmental Incentives	2015	1.9	9.5
GEF / UNDP	Rangeland Ecosystem Management-under CACILM Partnership Framework, Phase 1	2008	0.95	2.9
GEF / World Bank	Forest Protection and Reforestation	2005	5.0	58.8

In addition, from the OECD DAC data it is possible to see bilateral commitment data on aid related to climate change adaptation, based on the Rio Markers. Table 6 provides the following amounts of development aid finance towards adaptation (principal score in Rio Markers) have been received by Kazakhstan from developed countries in 2010-2015. Clearly these are minor in comparison to the investments by multilateral development banks.

[51] https://www.adb.org/projects/50387-001/main#project-pds

[52] http://www.ebrd.com/work-with-us/projects/psd/south-kazakhstan-water-supply-project.html

[53] http://www.isdb.org/irj/servlet/prt/portal/prtroot/tenderuser.TenderEndUser?Title=GENERAL%20PROCUREMENT%20NOTICE%20_%20GPN

[54] http://projects.worldbank.org/P086592/second-irrigation-drainage-improvement-project?lang=en

[55] OECD. Environmental Lending in EU Eastern Partnership Countries. 2016, p.47/48.

Table 9. Bilateral ODA flows to Kazakhstan for climate change adaptation in 2010-2015[56]

Adaptation finance to Kazakhstan from OECD DAC data (Rio Markers), USD mln						
	2010	**2011**	**2012**	**2013**	**2014**	**2015**
Total	**0.07**	**0.05**	**0.02**	**0.06**	**0**	**0.01**
Ireland			0.02			
Japan						0.01
Korea	0.01			0.05		
United Kingdom				0.01		
United States	0.06	0.05				

[56] http://www.oecd-ilibrary.org/development/data/creditor-reporting-system/aid-activities-targeting-global-environmental-objectives_9c778247-en

6. Assessment

Although Kazakhstan has developed the indicators of "a Green Economy of the Republic of Kazakhstan", the statistical data on green investment flows have so far not been consistent with the broad definition of the term climate finance by the Climate Policy Initiative or the Joint MDB guidelines discussed above, or the understanding of climate mitigation and adaptation related finance flows in the OECD Statistics. However, work is ongoing in Kazakhstan to improve this situation; the Statistics Committee is working on indicators in accordance with the OECD Green Growth indicators, together with the OECF staff.[57] For green finance other than climate finance, the Green Bonds Principles could be a good starting point to develop the MRV system in Kazakhstan. 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).

With respect to climate change adaptation, no separate aggregate national-level data for green investments is available for Kazakhstan. The currently agreed approach to planning and financing climate adaptation measures is to identify climate change adaptation measures among those measures that are currently financed and implemented under different programmes, for example in the agriculture and the water sector.

Since the climate adaptation is considered under the Paris Agreement as a nationally driven process, the need to have criteria of climate adaptation projects and relevant investment flows exists both in the international and national contexts.

The available data on the financial flows of the thematic Budget Programmes on climate change mitigation, renewables and energy efficiency present a small part of the actual climate finance in Kazakhstan. In essence, they cover the budgets of public authorities serving as regulators for the emission trading system, the scheme on energy efficiency and subsidies for purchases of small renewable installations from domestic manufacturers. Meanwhile public and private companies make direct domestic investments for projects on renewables and energy efficiency in Kazakhstan which are not captured by the current national statistics.

It can be concluded that the identified information gaps do not allow to present a full picture of the climate finance flows in Kazakhstan. There are data on the international climate finance flows to Kazakhstan but there are no established information flows of data on the domestic 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 the definition of climate finance.

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 Biennial Reports under the UNFCCC and also provides information on a number of relatively small nationally-funded programs supporting the Green Economy Concept,

[57] Information received from AIFC on 14.8.2017.

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.