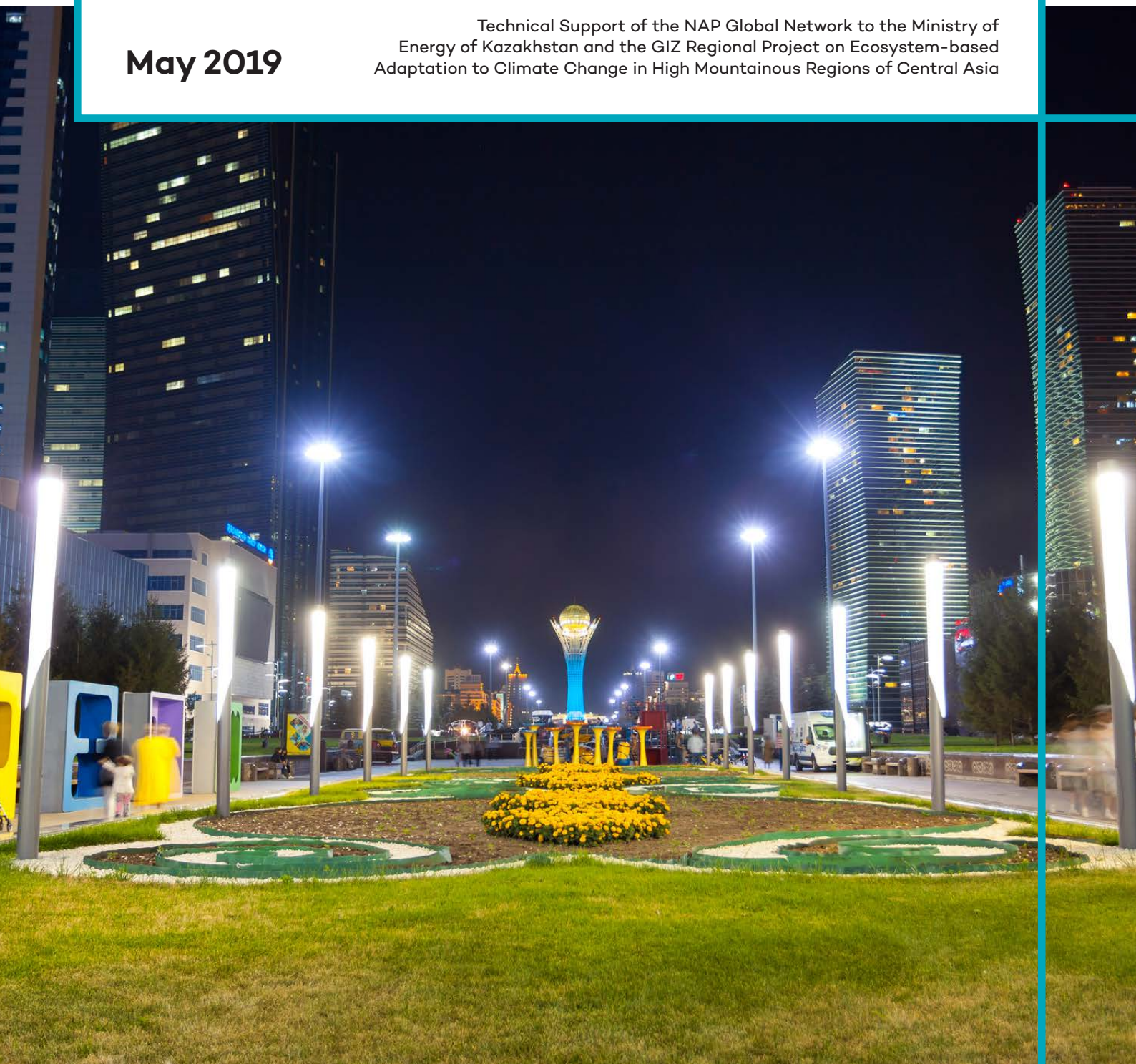


Entry Points for Vertical Integration of Climate Action in Kazakhstan

May 2019

Technical Support of the NAP Global Network to the Ministry of Energy of Kazakhstan and the GIZ Regional Project on Ecosystem-based Adaptation to Climate Change in High Mountainous Regions of Central Asia





© Government of Kazakhstan, 2019

All rights for commercial/for profit reproduction or translation, in any form, reserved.

Original text: English

Authors:

- Robert Bierkandt, robert.bierkandt@posteo.de
- Aliya Medebayeva, medebayeva@gmail.com
- Dana Yermolyonok, dana.yermolyonok@giz.de
- Dauren Oshakbayev, dauren@oshakbayev.kz

Berlin / Nur-Sultan
May 2019

The NAP Global Network was created in 2014 to support developing countries in advancing their NAP processes, and help accelerate adaptation efforts around the world. To achieve this, the Network facilitates sustained South-South peer learning and exchange, supports national-level action on NAP development and implementation, and enhances bilateral support for adaptation and climate-sensitive sectors through donor coordination. The Network's members include participants from more than 120 countries involved in developing and implementing National Adaptation Plans, as well as 11 donor members. Financial support for the Network has been provided by Austria, Canada, Germany and the United States. The Secretariat is hosted by the International Institute for Sustainable Development (IISD). For more information, visit www.napglobalnetwork.org.

Any opinions stated herein are those of the author(s) and do not necessarily reflect the policies or opinions of the NAP Global Network, funders or Network participants.




Secretariat hosted by:
Secrétariat hébergé par :



Financial support provided by:
Ce projet a été réalisé avec l'appui financier de :



On behalf of:
 Federal Ministry
for the Environment, Nature Conservation
and Nuclear Safety
of the Federal Republic of Germany

Entry Points for Vertical Integration of Climate Action in Kazakhstan

Technical Support of the NAP Global Network to the Ministry of Energy of Kazakhstan and the GIZ Regional Project on Ecosystem-based Adaptation to Climate Change in High Mountainous Regions of Central Asia

May 2019

Table of Contents

1. Introduction	1
2. Purpose and Approach of the Study	2
3. Current Framework Conditions in Kazakhstan	3
3.1 Climate Information	3
3.2 Institutional Arrangements.....	4
3.3 Capacities for Risk and Vulnerability Assessments (RVAs)	5
3.4 The National Planning System of Kazakhstan.....	6
3.5 Ongoing Adjustment of the Environmental Code	8
4. First Entry Point to Strengthen Vertical Integration: Integrating climate adaptation into high-level strategic documents	10
4.1 Implementation Process for Sustainable Development Goals (SDGs)	10
4.2 Update of the Green Economy Concept.....	12
5. Second Entry to Strengthen Vertical Integration: Integrating climate adaptation into sub-national development programs	13
5.1 The Sub-national Territorial Development Program.....	13
5.2 How to Integrate Climate Adaptation into the Sub-National Territorial Development Program	14
5.3 Enabling Factors for Sub-National Adaptation Planning	16
6. Conclusions and Recommendations	18
References	20
Annexes	21
Annex A. List of organizations and people interviewed	21
Annex B. Guiding questions.....	23

List of Figures

Figure 1. Climate-related institutional arrangement at the national level.....	6
Figure 2. The National planning system – Hierarchy of state documents.....	8
Figure 3. Structure of the coordination process for the implementation of Sustainable Development Goals (SDGs) in Kazakhstan.	12
Figure 4. The present sub-national Territorial Development Program, coordinated mainly by the Ministry of National Economy.....	15
Figure 5. Adjusted Territorial Development Program of the Ministry of National Economy	17

List of Acronyms

EbA	Ecosystem-based Adaptation
DEBP	Department for Economy and Budget Planning
GCF	Green Climate Fund
GIZ	German Organization for International Cooperation
GE	Green Economy
IPCC	Intergovernmental Panel on Climate Change
Kazhydromet	National Hydrometeorological Service of Kazakhstan
M&E	Monitoring and Evaluation
NAP	National Adaptation Plan
UNDP	United Nations Development Program
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
RAP	Regional Adaptation Plan
RVA	Risk and Vulnerability Assessment
SDG	Sustainable Development Goal
ToT	Training of Trainers

1. Introduction

In 2016, Kazakhstan ratified the Paris Agreement, which states that global warming must be limited to below 2°C (and ideally to 1.5°C) compared to the preindustrial era. In addition to mitigation efforts, the Agreement explicitly expresses the need for each country to engage in adaptation planning processes and implement mitigation actions.¹ It also calls for stronger and more ambitious climate action by cities and other sub-national authorities, local communities and Indigenous Peoples. At the same time it recognizes the need to enhance capacities at sub-national levels and strengthen and support the efforts of local communities and Indigenous Peoples in responding to climate change (UNFCCC, 2015).

Kazakhstan is currently initiating the development of its National Adaptation Plan (NAP) process, financed by the Green Climate Fund. This will involve sub-national engagement and collaboration between national and sub-national authorities, since the effects of climate change are often experienced on a local scale. This increased risk and uncertainty creates challenges for people's livelihoods and local development progress. The most effective approach to the NAP process will therefore involve a mix of top-down and bottom-up approaches, recognizing that much of the implementation of adaptation will occur at sub-national levels.

From 2017 to 2018, the GIZ Regional Project *Ecosystem-Based Adaptation to Climate Change for High Mountainous Regions of Central Asia* supported the Ministry of Energy and the provincial government of Eastern Kazakhstan Province in the development of a Regional Adaptation Plan (RAP) (DEBP & GIZ, 2018). The Government of Kazakhstan intends to use the RAP for Eastern Kazakhstan as a blueprint for sub-national adaptation planning processes with further vertical integration into the NAP framework. However, the regional adaptation plan for Eastern Kazakhstan lacks a clear implementation strategy to provide specific guidance on existing mechanisms and potential sub-national entry points to implement its adaptation priorities and measures.

This study aims to identify and analyze potential ways to use existing institutional mechanisms to strengthen sub-national level adaptation planning capacities to ensure the successful implementation of identified adaptation measures. For that, the study identifies two means of strengthening national and sub-national level links and enabling the integration of climate adaptation at the sub-national level: sub-national development programs and national strategic documents.

The study begins by describing the current framework conditions for climate information provision, climate risk and vulnerability assessment (RVA) and development planning in Kazakhstan. Sections 4 and 5 focus on potential entry points to enabling and strengthening adaptation planning and implementation at the provincial level.

¹ Paris Agreement, Article 7 (9) (UNFCCC, 2015).

2. Purpose and Approach of the Study

This study seeks to identify entry points that initiate and establish linkages between the national and the sub-national level for adaptation planning processes. Establishing these linkages is not a single step, but an ongoing iterative process to be reviewed continually for development. The findings of this study should facilitate communication among governmental bodies and international organizations, while presenting a guiding proposal for potential next steps.

Sub-national Kazakh executive bodies seeking to establish a climate adaptation planning process usually face three main challenges:

1. Collection of information related to climate trends and future climate change scenarios
2. Development of capacities on conducting a comprehensive RVA, elaboration and prioritization of adaptation measures
3. Accessing budgets for implementing adaptation measures.

In 2018, the provincial government of Eastern Kazakhstan developed a regional climate adaptation plan with the support of the GIZ program for Ecosystem-Based Adaptation (EbA). Climate information was collected from Kazakhstan's 7th National Communication to the UNFCCC and provided to sectoral departments by local and international experts, who helped them identify climate risks and appropriate adaptation measures. Additionally, Kazhydromet² provided support on the explanation of climate change scenarios. However, due to budget limitations, the provincial government has not yet been able to implement the identified adaptation measures.

Three key lessons can be drawn from this pilot exercise on adaptation planning in Eastern Kazakhstan Province:

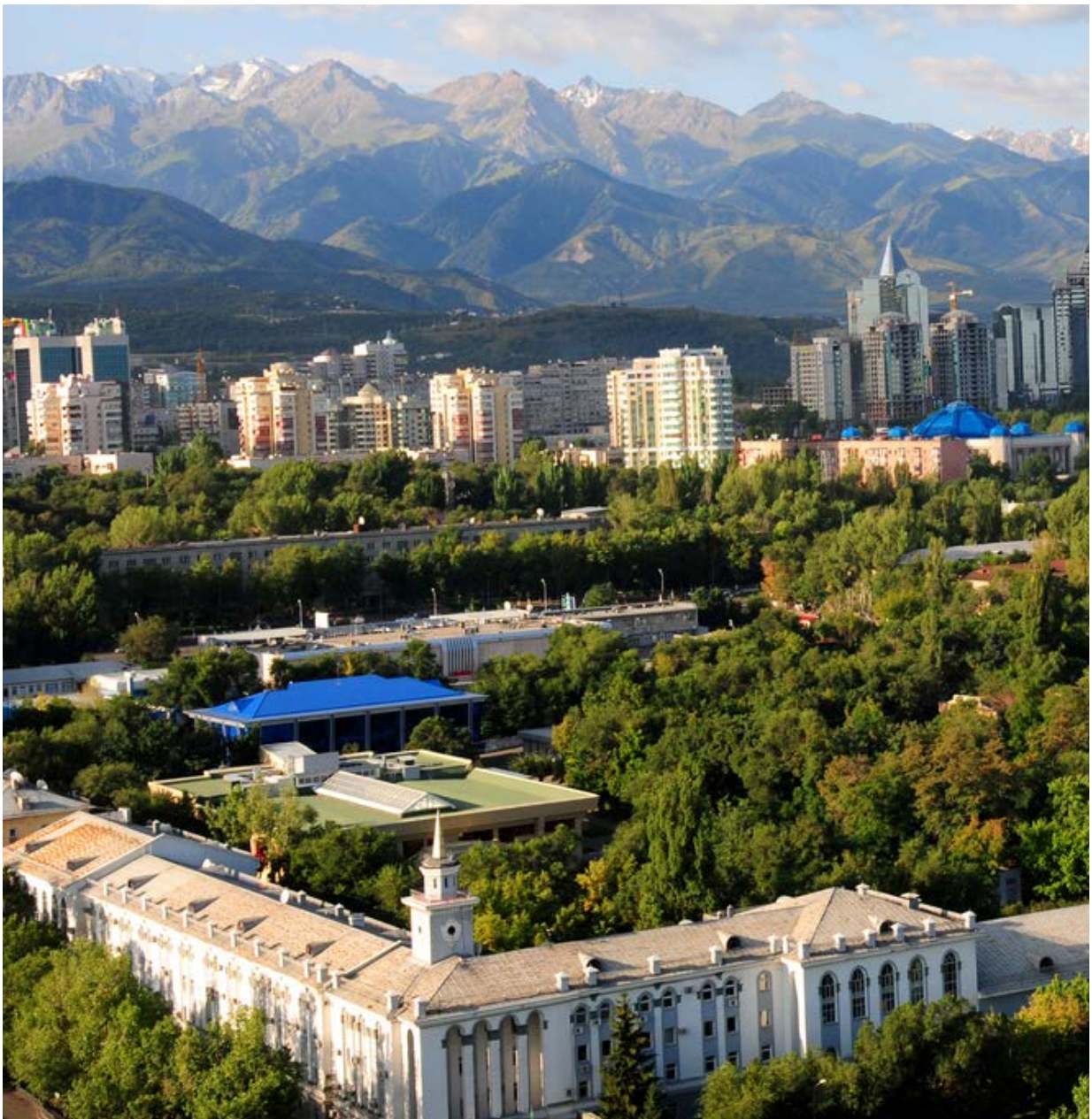
1. Although existing information on climate change scenarios is limited, though it is sufficient to conduct RVAs.
2. In order to conduct an RVA, as well as the elaboration of adaptation measures at the sub-national level, capacity development is necessary.
3. Available financial resources through budgets are crucial to ensuring the implementation of any climate adaptation planning.

The central challenge is the integration of climate-related finance for the implementation of sub-national adaptation measures. Hence, the study investigates how to use existing planning and budget mechanisms for current development programs to implement identified adaptation measures. However, access to climate information and sufficient capacities for risk assessment and adaptation planning are required to convince budget planners.

² National Hydrometeorological Service of Kazakhstan (www.kazhydromet.kz).

This study is based on interviews with 17 representatives from private and public sector organizations in Kazakhstan and international organizations. (Annex A). A semi-structured interview guide (Annex B) explored the demand for—and incorporation of—climate adaptation measures in their activities and assessed opportunities and barriers for the systematic implementation of adaptation measures at the sub-national level. Identified entry points and recommendations of this study are based on the analysis of these interviews and a review of relevant documents.

The study proposes two entry points to create strategic linkages between the national and provincial levels in Kazakhstan to enable sub-national adaptation planning. First, fostering the integration of climate adaptation into high-level national strategic documents. Second, the integration of climate risks and adaptation measures into sub-national development programs, which are coordinated by the Ministry of National Economy.



3. Current Framework Conditions in Kazakhstan

Certain enabling factors need to be in place in Kazakhstan for vertical integration to take place (Dazé, Price-Kelly & Rass, 2016). This includes the sharing of information (especially climate information), institutional arrangements for the planning, implementation and monitoring of climate action, and capacity development. In this section we examine current framework conditions in Kazakhstan before presenting intervention options.

3.1 Climate Information

Information on past, present and future climate is essential to assess risks for society, environment and economic activities. Among the Central Asian states, Kazakh institutions possess great capacity regarding available information products compared to other countries in the region.

Past and Present Climate

Information on changing climate trends can be found in *Kazhydromet's Annual Bulletin of Monitoring Over Climate State and Climate Change in Kazakhstan*, which is available on the Kazhydromet website. The most recent report was done for the year 2017. Each report describes anomalies for temperature and precipitation within the year addressed. In addition, each report updates past trends for changes of a) annual, seasonal and monthly average temperatures and b) annual, seasonal and monthly cumulative precipitation over the whole country.

However, a map for absolute values for the current climate (1981–2010), i.e., temperature and precipitation, is not included in the report and needs to be purchased from Kazhydromet.

Future Climate

The research department of Kazhydromet, located in Almaty, provides climate change scenarios for temperature and precipitation. Projections are based on data from the NASA Earth Exchange database (NEX), where the results of 21 global climate models, which all participated in the CMIP5 (Coupled Model Intercomparison Project – Phase 5) project of the Intergovernmental Panel on Climate Change (IPCC), have been downscaled to a resolution of 25x25 km.

Kazhydromet's climate change scenarios were published in the 7th National Communication of Kazakhstan (Ministry of Energy, UNDP & GEF, 2017). Here, Kazhydromet's analysis compares changes in temperature and precipitation for the medium-term (2040–2059) and long-term future (2080–2099) to the baseline (1980–1999) for two emission scenarios. Each scenario represents a different concentration pathway for future emissions. The first scenario—representative concentration pathway (RCP) 4.5—assumes determined global climate action to reduce future emissions. In contrast, RCP 8.5 in the second scenario assumes a global business-as-usual scenario for energy use under economic and population growth.

There are two sources of uncertainty for future climate projections. First, the use of different emissions scenarios as described above. Second, the spread among the results from the 21

global climate models that have been used. All models use the same laws of physics but different assumptions on system properties, such as the number of layers in the atmosphere or ocean, or different parametrization of physical processes, all of which can lead to different results. Results that are presented as “uncertainty ranges” show what could happen rather than what will happen. Kazhydromet represents the results as averages over all 21 model results. This has the advantage of making the results more accessible for decision-makers; however, it can lead to neglect of the uncertainty resulting from model differences, and therefore reduces the range of possibilities.

In the 7th National Communication, the geographic distribution of future changes is presented in maps of the annual average of both temperature and precipitation. In contrast, the geographic distribution of seasonal changes is given only for precipitation.

3.2 Institutional Arrangements

The Ministry of Energy is the institution authorized to conduct and coordinate activities aimed at mitigating greenhouse gas emissions and adapting to climate change. It coordinates all climate change-related activities of ministries and state bodies, which are responsible for agriculture, emergencies, water management and health. It needs to ensure that all activities are aligned with state bodies’ own specific strategies. Further, the Ministry of Energy is responsible for the implementation of obligations from international treaties.

The Ministry of Energy submitted Kazakhstan’s nationally determined contributions (NDCs) and submitted the 7th National Communication to the UNFCCC in 2017. It developed a long-term (through 2050) green economy concept in 2013 that indicates mitigation efforts and includes an action plan through 2020. An update of the green economy concept and a new action plan is envisioned for 2021. However, no separate strategy for a national adaptation planning process has been developed and approved yet.

By mid-2019, UNDP will complete a readiness and preparatory support project, financed by the Green Climate Fund (GCF). A proposal has been submitted by UNDP to the GCF to help the Ministry of Energy elaborate a NAP for Kazakhstan.

There are currently no institutional arrangements for adaptation planning, implementation and M&E. However, in cooperation with USAID, the Ministry of Energy is drafting amendments for the environmental code to clarify the responsibilities for various steps within the planning, implementation and M&E phases. This elaboration of the amendments to the environmental code is described in Section 3.5.

In February 2019, the Ministry of Energy initiated a round table with the Ministry of National Economy and other stakeholders to discuss the integration of climate adaptation into sub-national development planning. The Ministry of National Economy plays a crucial role in making investments and economic activities climate-resilient. In 2019, the Ministry of National Economy will start to work with GIZ on policy advice for climate-resilient economic development. This collaboration has great potential to support the incorporation of climate risk into economic development strategies and strengthen inter-ministerial communication on climate adaptation issues.

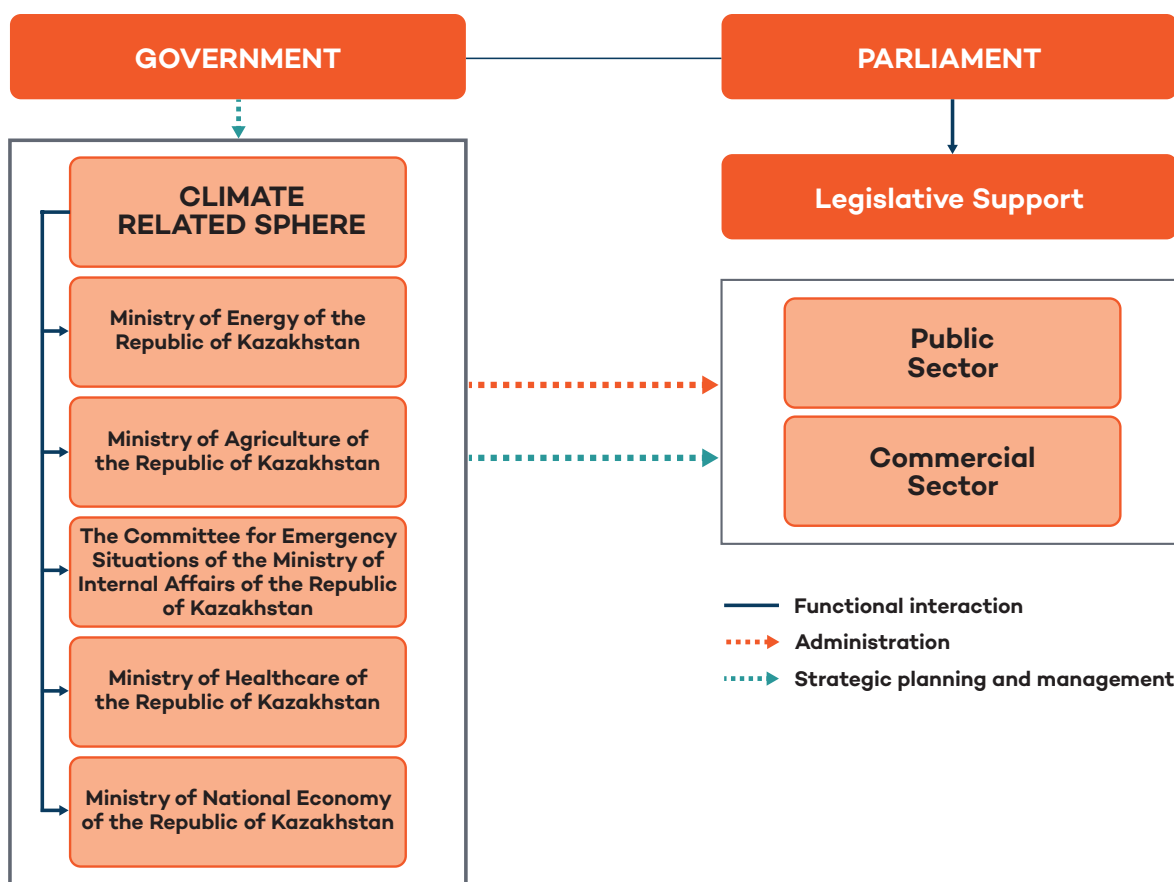


Figure 1. Climate-related institutional arrangement at the national level

3.3 Capacities for Risk and Vulnerability Assessments (RVAs)

Adaptation planning is based on a risk and vulnerability assessment (RVA). These assessments entail translating climate information into the risks resulting from the interactions of vulnerabilities and exposure with climate impacts (GIZ & EURAC, 2017; GIZ, adelphi, & EURAC, 2017). This information is then used to identify suitable adaptation interventions, i.e., adaptation measures intended to reduce vulnerability and enhance adaptive capacity and resilience to potential climate impacts. RVAs help support awareness of climate change impacts among policy-makers and decision-makers, as well as communities and other stakeholders. However, a list of potential responses and options for actions is perceived as much more useful for decision-makers. Hence, the “translation” of climate information into risks, vulnerabilities and action lists is critical for adaptation planning.

To our knowledge, there are currently no Kazakh institutions that systematically assess climate risks and vulnerabilities. International organizations usually hire international experts for such purposes.

In order to conduct a vulnerability and risk assessment, two types of knowledge need to come together in addition to climate information:

-
1. Expert knowledge of the system under consideration (e.g., sensitivity of a specific crop to climatic conditions)
 2. Methodological knowledge on how to conduct a risk assessment.

While expert knowledge is available among scientific institutions, NGOs, academic bodies or ministries, there is a lack of methodological knowledge on how to conduct the actual RVA.

There are various methods of conducting risk and vulnerability assessments as well as identifying adaptive measures. The USAID's C5+1 adaptation team has already conducted a training in 2018 on assessing vulnerabilities and potential climate impacts. For this, USAID tailored a Vulnerability Assessment Guide for the Kazakh context that takes into account available information on current climate and climate change scenarios (USAID & Abt Associates, in press). Another method, developed by GIZ in cooperation with the EURAC research institute, has been applied in Central Asia, but only by international experts. Both methods are applicable at the national level but face difficulties in application at the provincial level due to limited expert knowledge on the considered systems.

3.4 The National Planning System of Kazakhstan

The national planning system³ presents a framework for activities of public authorities and other development actors, which intend to improve the socioeconomic development of Kazakhstan. Governmental development programs, such as the Territorial Development Program, represent second-level documents and are defined for mid-term review (five years). These governmental development programs need to be aligned with high-level strategic documents, which serve as guiding roadmaps for ministries to achieve the goals of the overarching strategy. The national planning system comprises three levels.

High-level documents define the long-term vision of the country with key priorities and guidelines. These documents reflect key national indicators and other metrics that determine the development of the country in the long term. Mid-level documents contain target indicators and metrics for development of sectors and industries that aim to achieve key national targets. Ministry-level documents define how to achieve first- and second-tier goals. This category includes the 5- or 10-year development strategies of national management holdings and companies. Third-tier documents contain target indicators and activity indicators of central state bodies, e.g., the Strategic Plan for Development of the Ministry of National Economy or Ministry of Energy. All state bodies are required to provide strategic plans.

³ On national planning system in *Republic of Kazakhstan*, Government decree #790, 29 November 2017. <http://adilet.zan.kz/rus/docs/P1700000790>

THE NATIONAL PLANNING SYSTEM

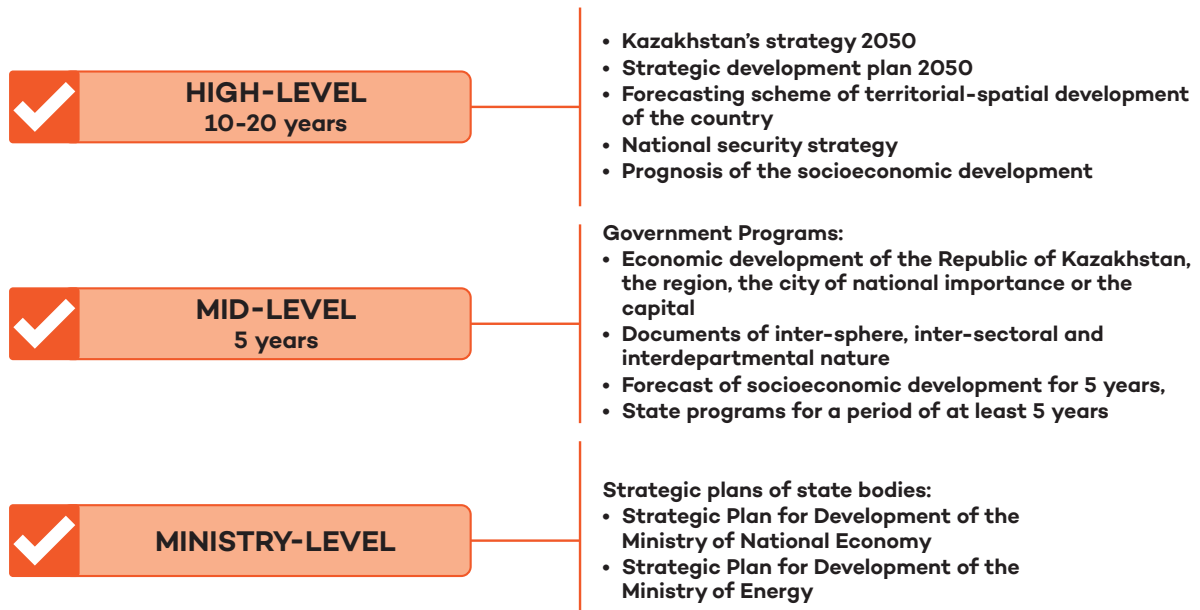


Figure 2. The National planning system – Hierarchy of state documents



Strategic development goals that are directly or indirectly related to climate change are defined in the following documents:

Table 1. Selected policy documents that address climate change issues

Document level	Document	Goals and indicators	Responsible state body
1st level	Strategy of Kazakhstan 2050 ⁴	Provision of drinking water to the population in 2020.	Presidential Administration
1st level	Strategic Development Plan of the Republic of Kazakhstan by 2025 ⁵	The importance of adaptation to climate change is mentioned as an identified priority area of green economy and environmental protection.	Presidential Administration
2nd level	Conception of the transition of the Republic of Kazakhstan to "Green economy" ⁶	Increasing the labour productivity in agriculture by 2020.	Ministry of Energy of Kazakhstan
2nd level	Government program from 2014 to 2019 "Nurly Zhol" ⁷	Modernization of housing and utilities infrastructure and systems of heat, water supply and sanitation, creation of the effective transport and logistics infrastructure.	Ministry of National economy of Kazakhstan
3rd level	Strategic Plan of the Ministry of Agriculture of Kazakhstan ⁸	Cultivation of at least two or three varieties with different maturation periods. Restoration of irrigation and drainage networks to provide demanded water.	Ministry of Agriculture of Kazakhstan
3rd level	Strategic plan of the Ministry of Energy of Kazakhstan ⁹	Improvement of hydrometeorological monitoring.	Ministry of Energy of Kazakhstan

⁴ <https://strategy2050.kz/ru/multilanguage/>

⁵ <http://adilet.zan.kz/rus/docs/U1800000636>

⁶ https://greenkaz.org/images/for_news/pdf/npa/koncepciya-po-perehodu.pdf

⁷ <http://adilet.zan.kz/rus/docs/U1500001030>

⁸ https://moa.gov.kz/documents/1550634831390_ru.docx

⁹ <http://energo.gov.kz/index.php?id=23894>

3.5 Ongoing Adjustment of the Environmental Code

In a 2018 message to the nation, the President of Kazakhstan pointed out the need to address development opportunities that arise in an era of profound and rapid technological, economic and social changes (Astana, January 10, 2018).¹⁰ Subsequently, the government moved to improve the management of natural resources, the environmental friendliness and efficiency of enterprises, creating incentives to move businesses to “green technologies” and adjusting the current environmental code.¹¹

The Ministry of Energy was instructed to coordinate the development of a new version of the environmental code¹² for the Republic of Kazakhstan with the support of the ministries for industry and development, finance, national economy and justice, the National Chamber of Entrepreneurs (Atameken) and sub-national executive bodies from relevant cities.

The goal for the new code is to prevent climate change impacts from harming the country’s economic development and public health. To achieve these goals, the Ministry of Energy has included new articles on climate change adaptation as amendments in the environmental code and other relevant amendments.

The articles on climate change adaptation in the proposed amendments outline an eight-step process for adapting to climate change:

- 1) Collection of climate and climate impact information
- 2) An assessment of vulnerability to climate change
- 3) Planning to adapt to climate change
- 4) Development of measures to adapt to climate change
- 5) Implementation of measures to adapt to climate change
- 6) Monitoring and evaluation of the effectiveness of measures to adapt to climate change
- 7) Reporting on the impacts of climate and the effectiveness of adaptation measures
- 8) Adjustment of plans and measures for adaptation to climate change that are based on the results of monitoring and evaluation

¹⁰ www.akorda.kz/ru/addresses/addresses_of_president/poslanie-prezidenta-respubliki-kazahstan-n-nazarbaeva-narodu-kazahstana-10-yanvarya-2018-g

¹¹ www.adilet.gov.kz/ru/articles/obshchenacionalnyy-plan-meropriyatiy-po-realizacii-poslaniya-glavy-gosudarstva-narodu-0

¹² Environmental code of the Republic of Kazakhstan, http://adilet.zan.kz/rus/docs/K070000212_

4. First Entry Point to Strengthen Vertical Integration: Integrating climate adaptation into high-level strategic documents

This section describes the integration of adaptation efforts into high-level national strategic documents as an entry point for action. Such documents determine the framework for all governmental planning for decades to come. Explicitly mentioning the need to adapt to climate change in high-level national documents that cover a 10- to 20-year horizon provides strategic direction for the elaboration of more near-term climate-resilient development strategies. This can be regarded as a success for the integration of climate adaptation into sub-national development planning, described in this study's next section. The hierarchy of national planning documents is presented in Section 3.5. This section describes the current processes for implementing SDGs and the update of the green economy concept as suitable means for mainstreaming climate adaptation into high-level strategic documents.

4.1 Implementation Process for Sustainable Development Goals (SDGs)

Kazakhstan is committed to the achievement of the SDGs by 2030. Meeting this goal will require policy changes across all sectors and levels. This process offers opportunities to adjust high-level strategic documents as well as relevant legal acts. Figure 3 illustrates the coordination process for implementing the SDGs in Kazakhstan. The Ministry of National Economy was made responsible for their implementation. The secretariat for coordination is installed within the Institute for Economic Research, which is connected to the Ministry of National Economy. To elaborate the policy changes concretely, the ministry established interagency working groups for five key thematic areas, covering peace, people, planet, prosperity and partnership. Each group is coordinated by a designated ministry as national coordinator and meets once per quarter to develop and consolidate a common position on policy changes. The Ministry of National Economy will collect proposals from all five working groups and present options for policy changes to the coordination board chaired by the Deputy Prime Minister of Kazakhstan and meets twice a year.

If proposed policy changes receive approval from the coordination Board, they will be promulgated within the protocol of the coordination board. This protocol of the coordination board represents an act and serves as the legal basis for implementing changes and additions to policies and legal acts.

ARCHITECTURE OF THE COORDINATION PROCESS FOR THE IMPLEMENTATION OF SDGs IN KAZAKHSTAN

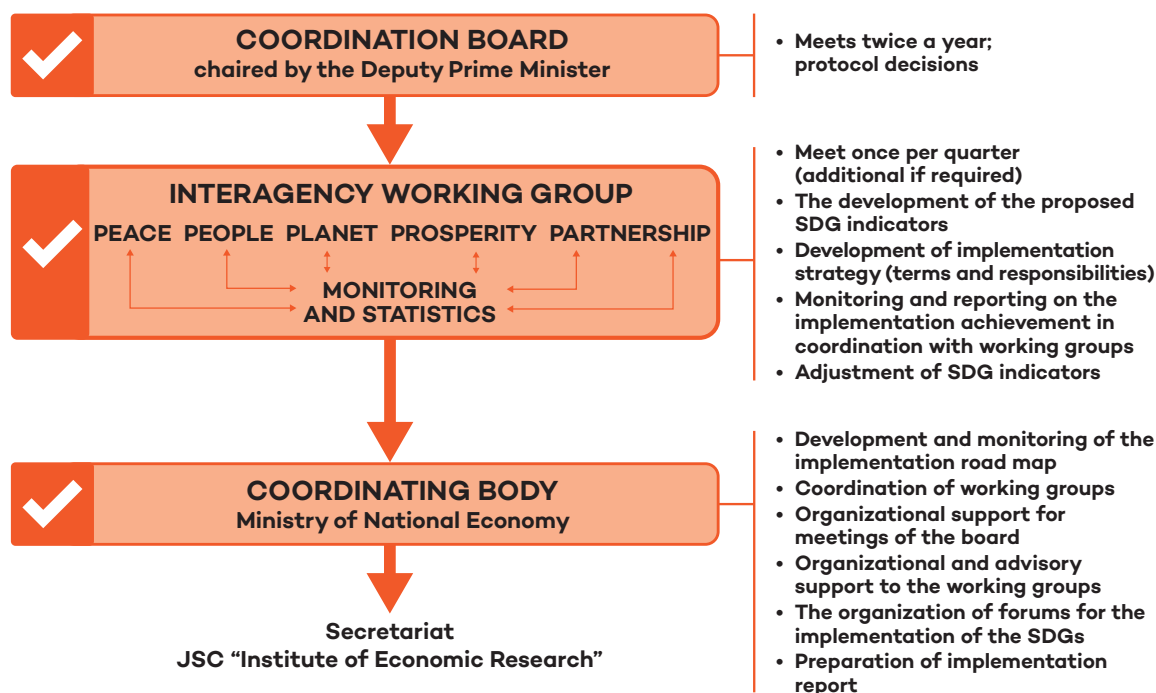


Figure 3. Structure of the coordination process for the implementation of Sustainable Development Goals (SDGs) in Kazakhstan.

Source: Author figure based on materials from the working groups.

Although climate change can be related as a cross-cutting theme to all five areas, it is most dominant in the “planet” group, which covers the sustainable use of terrestrial ecosystems and water resources, as well as climate change. The thematic focus of the planet working group relates to five SDGs: clean water and sanitation (SDG 6), responsible consumption and production (SDG 12), climate action (SDG 13), life below water (SDG 14) and life on land (SDG 16). This working group is coordinated by the Ministry of Energy as the main state body responsible for climate change issues.

As national coordinator of the “Planet Working Group,” the Ministry of Energy can play a critical role in coordinating national and sub-national executive bodies and strengthening mainstreaming of adaptation into sub-national development plans. Specifically, consideration should be given to establishing a framework requiring mandatory linkage of development measures to RVAs. Further, a budget needs to be made accessible for conducting general sectoral RVAs as well as specific studies investigating the climate sensitivity of planned development measures.

The Ministry of Energy needs to approve the methodology for planning, implementation and M&E through changes in legislation and can authorize sub-national executive bodies to cover specific elements of NAP process. Once sub-national executive bodies are officially responsible for adaptation planning aspects, they can apply for budgeting in order to conduct their duties.

4.2 Update of the Green Economy Concept

In 2013, the Ministry of Energy issued a concept on how to transition the Republic of Kazakhstan to a green economy (GE).¹³ The GE concept lays the foundation for a comprehensive systematic transformation of the economy and addresses short- (2013–2020), mid- (2020–2030) and long-term (2020–2030) periods. An update of the concept is planned for 2020, which presents a window of opportunity to shape and support Kazakhstan’s pathway for climate resilience through 2050.

Conceptualized efforts for a green economy transition mainly address the mitigation of greenhouse gas emissions to reduce global warming. However, we propose that greenhouse gas mitigation and climate change adaptation efforts not be separated. Under a climate-resilient approach, as we understand it, all investments for a green economy transition are connected to climate proofing (such as, for example, ensuring that green energy generation investments are not threatened by changing water cycles that may cause increased flooding of investment sites). Accordingly, an updated green economy concept should include consideration of climate risks and the reduction of vulnerabilities. The incorporation of these issues would facilitate further mainstreaming of climate adaptation issues across both horizontal and vertical levels of government, specifically in lower-hierarchy programs and documents.

The current green economy concept focuses on four main thematic areas: (1) improving efficiency of the use and management of resources (water, land, biological, etc.); (2) modernization of existing and construction of new infrastructure; (3) cost-effectively reducing environmental pressures by improving air quality and the well-being of the population; (4) improving national security, including water security.

The implementation of this concept is intended to be achieved via modifications of existing and new policy documents, including the program for the development of agriculture for 2013–2020 (Agribusiness 2020), the program for the development of territories, strategic plans of state bodies, and sectoral programs (Zhasyl Damu 2010–2014). As part of the concept, a binding action plan for the short-term period from 2013 to 2020 was established and approved by the Prime Minister. This action plan, which will be updated, can play a crucial role in implementing enabling factors to help the sub-national level engage in adaptation planning successfully.

¹³ https://greenkaz.org/images/for_news/pdf/npa/koncepciya-po-perehodu.pdf

5. Second Entry to Strengthen Vertical Integration: Integrating climate adaptation into sub-national development programs

The Territorial Development Program of the Ministry of National Economy presents a promising and suitable entry point to integrate climate change considerations into sub-national development planning.

5.1 The Sub-national Territorial Development Program

Currently, all provinces in Kazakhstan have a Territorial Development Program that assigns clear responsibilities for planning, implementation and monitoring. They provide a clear methodology that can be applied by line ministries at provincial level and allocate funding for the implementation of planned measures.

The Territorial Development Program for East Kazakhstan was established in 2015 for the five-year period from 2016 to 2020. The Ministry of National Economy plays a key national-level role for the program. It requires provincial governments to develop action plans based on a provided methodology, along with indicators to monitor planning and implementation. As illustrated in Figure 4, the provincial Department of Economy and Budget Planning is responsible for coordinating all line departments at the regional level, which provide development measures according to the methodology and indicators of the program. At the same time, these regional line departments coordinate with their national-level counterparts. For example, the provincial department for agriculture coordinates with the national Ministry of Agriculture.

The Ministry of National Economy provides guidelines to the provincial governments, which include lists of sectoral indicators. Proposed development measures have to be aligned with these indicators and need to be based on a strengths/weaknesses/opportunities/threats (SWOT) analysis for each sector in the province. The Ministry of National Economy then approves the measures and allocates a budget for the implementation of measures within the framework of the program and monitors implementation.

The current design of the Territorial Development Program does not consider climate risks in its assessment process, which may result in investments being undermined by the impacts of climate change.

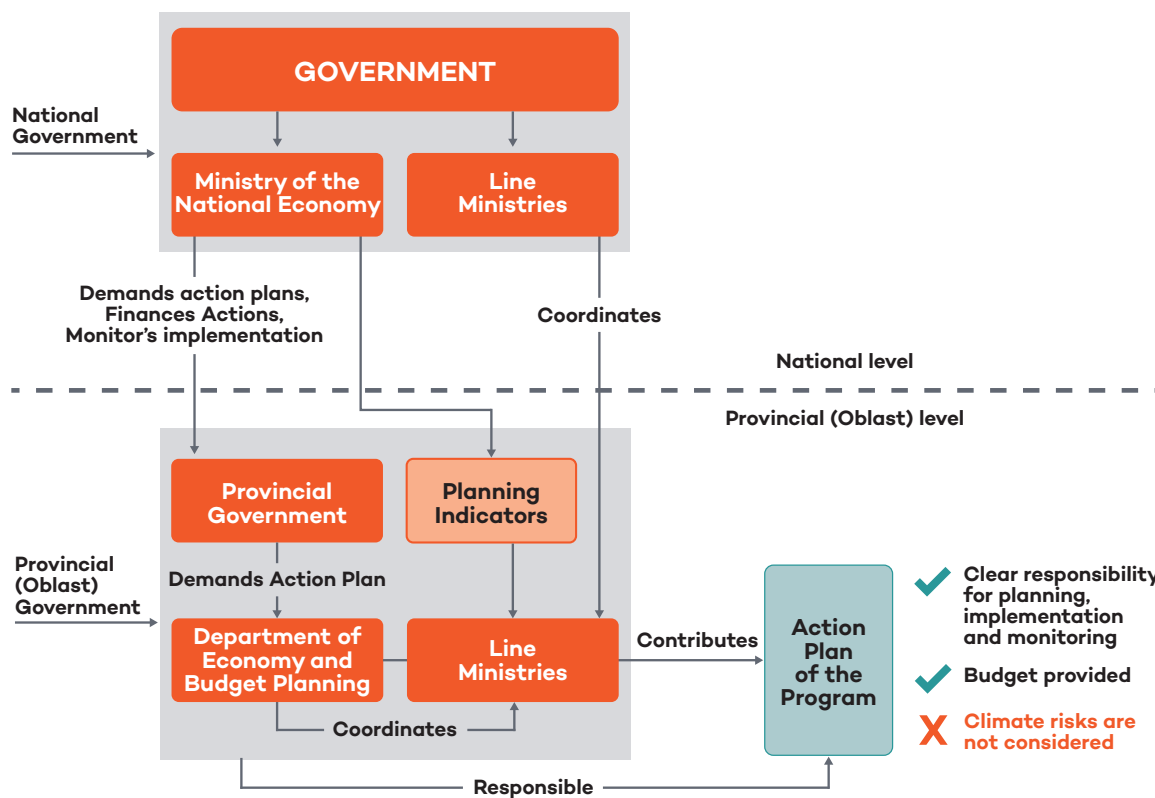


Figure 4. The present sub-national Territorial Development Program, coordinated mainly by the Ministry of National Economy

5.2 How to Integrate Climate Adaptation into the Sub-national Territorial Development Program

This section describes how the existing territorial development program for provincial level planning can be used as an entry point to enable climate adaptation planning at the sub-national level.

An adjusted Territorial Development Program requires that climate risks be taken into consideration during the development planning, implementation and monitoring phases. This will enable climate-resilient development at the sub-national level. Furthermore, sub-national entities require the necessary financial resources, information and capacity to plan and implement their efforts.

As illustrated in Figure 4, the Ministry of National Economy plays a key role regarding the Territorial Development Program. On the other hand, the Ministry of Energy is the authorized body for climate adaptation processes in Kazakhstan. If the Ministry of Environment intends to use the territorial development program as a mechanism for adaptation at the sub-national level, it needs to initiate the adjustment process that involves the Ministry of National Economy. Any adjustment to the Territorial Development Program relies on the approval of the Ministry of National Economy.

If the Ministry of Economy aims to integrate consideration of climate risks and opportunities into the current development program to ensure climate-resilient development, there are at least two options to explore to adjust the present Territorial Development Program. A combination of both options should also be considered:

Option 1: For all priority sectors (currently agriculture, forestry, water, disaster risk reduction and health) for climate change adaptation, *climate opportunities and threats* need to be considered within the SWOT analysis by line departments. In other words, they need to justify if and how development measures account for climate threats within the priority sectors.

Option 2: A new *indicator for climate opportunities and risks* is added to the guidelines of the Territorial Development plan. This indicator needs to be quantified and specific, e.g., X% of the budget on development measures needs to be allocated to measures that address climate opportunities or risks; or, Y opportunities or risks need to be identified and Z measures that address them.

If Option 1 or 2 (or both) will be implemented within the framework of the Territorial Development Program, development planning for all provinces in Kazakhstan will need to consider and account for climate risks.

Next to the Ministry of Economy and the Ministry of Finance, other line ministries are involved in development planning and need to be involved in the dialogue around any adjustments that consider climate-resilient measures. A dialogue among these stakeholders needs to be initiated and led by the Ministry of Energy as the authorized body for climate change issues in Kazakhstan.

Figure 5 illustrates the proposed institutional arrangement for integrating climate adaptation into the current sub-national development program (see Figure 5), which is in place for all of Kazakhstan's provinces. The Ministry of Energy needs to initiate and coordinate efforts to adjust the sub-national development program and to clarify responsibilities. The Ministry of National Economy demands action plans for development planning from the provincial government. At the sub-national level, the Department of Economy and Budget Planning coordinates all line ministries that contribute to the action plan. Each line department needs also to coordinate its proposal with the corresponding line ministry at the national level.

In this proposal, each provincial line department, according to the guidelines of the Ministry of National Economy, selects and prioritizes adaptation options. This is done by using information on RVAs and elaborated adaptation options generated at the national level by scientific bodies attached to each line ministry responsible for a climate-sensitive sector. Currently, five sectors are defined as priority sectors by the Ministry of Energy: agriculture, forestry, water, disaster risk reduction and health. Scientific bodies responsible for conducting RVAs and elaborating adaptation options need to make this information and knowledge accessible to provincial line departments via reports, databases or catalogues. The scientific institute under the Ministry of Energy can play a coordinating role for all other scientific bodies. Relevant climate information is generated by Kazhydromet and collected and used by the scientific bodies responsible for RVAs.

Finally, the Ministry of National Economy revises and approves suggested adaptation options from the sub-national line departments. These provincial departments monitor and evaluate the climate impact-reducing effects of measures with the support of the national level.

On the one hand, capacities for conducting RVAs and elaborating adaptation options need to be built at the national level. On the other hand, provincial departments need to be supported in selecting and prioritizing adaptation options. To ensure sustainability, we propose identifying a suitable training institution where methodological knowledge is held and transferred on a regular basis. This institutions needs to be involved into a ToT.

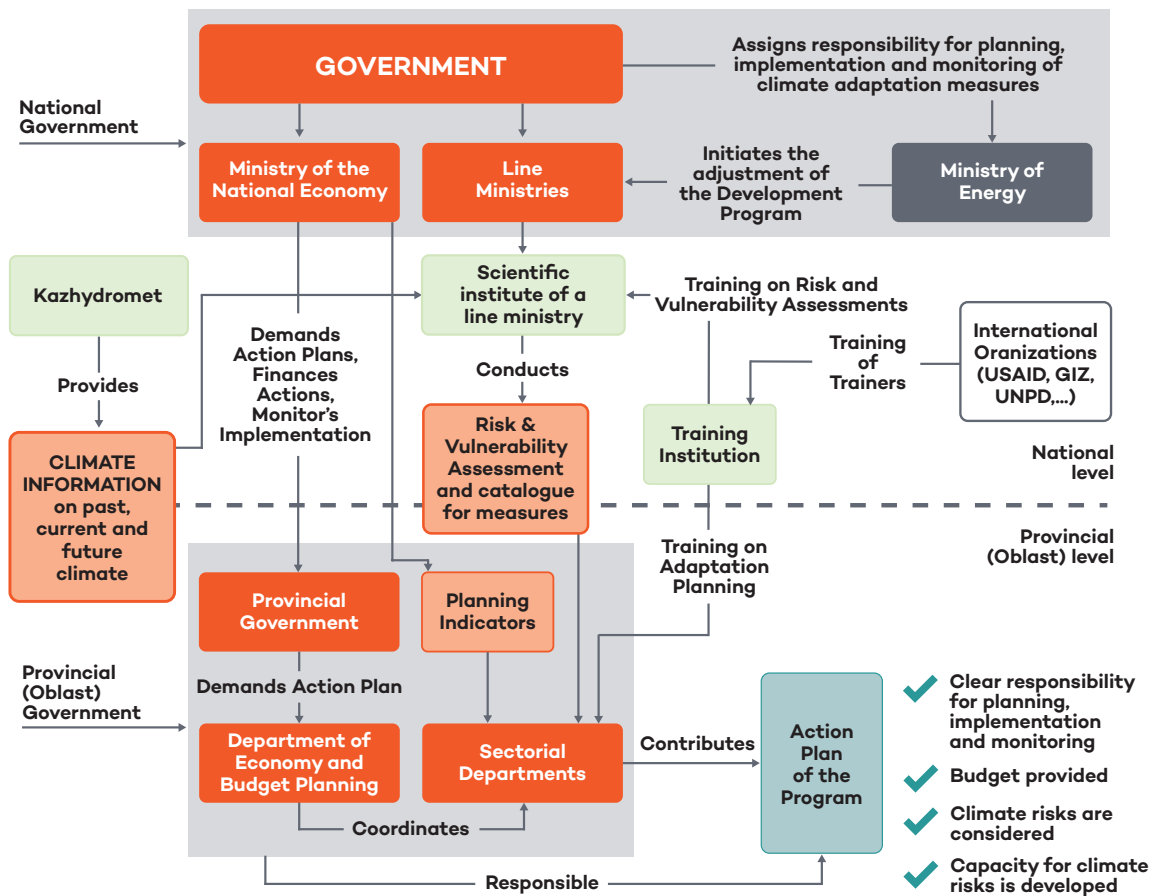


Figure 5. Adjusted Territorial Development Program of the Ministry of National Economy¹⁴

5.3 Enabling Factors for Sub-National Adaptation Planning

Beyond adjusting institutional planning mechanisms, the provision of climate information and capacity development is equally important to enabling adaptation planning at the sub-national level.

Information Sharing

Key stakeholders leading the Territorial Development Program, such as the Ministry of National Economy, can only be convinced to make necessary amendments to it if all necessary capacities and information required for RVAs as well as adaptation planning are sufficiently supported for all provinces in Kazakhstan.

Within an adjusted Territorial Development Program (Figure 5), line departments at the provincial level will play the main role for developing and planning adaptation measures. On the other hand, the development and planning of climate adaptive measures is based on an RVA. It is most likely that there is limited expert knowledge related to undertaking RVAs in every line department of each province. Relevant information must be made available and shared between national and sub-national levels to facilitate adaptation planning.

¹⁴ Please note that Figure 5 does not illustrate the national adaptation planning (NAP) process at the national level, because it is not in place yet and only proposed to GCF by UNDP.

In Kazakhstan each national ministry is connected to a specific scientific body that supports the ministry analytically. Our proposal suggests that these scientific bodies at the national level conduct the necessary RVAs (at least for the identified priority sectors). At the provincial level, line departments that are already coordinating with their national counterparts can then perform adaptation planning based on the RVAs conducted by national ministries.

Capacity Development

It is important to ensure that i) scientific bodies at the national level are able to conduct RVAs and ii) that line departments at the provincial level are able to undertake adaptation planning and develop suitable adaptation measures. At the same time, it is crucial that the knowledge of the method for conducting RVAs is embedded in an institution/ministry and not lost due to rotation of staff.

We propose one or more institutions that can provide training sessions for i) scientific bodies at the national level on RVAs and ii) for line departments at the provincial level on how to develop adaptation measures as well as adaptation planning.

Institutions that will conduct trainings for central and local executive bodies need to fulfill the following requirements:

- Able to provide trainers to conduct a “training of trainers” (ToT), offered by international development organizations
- Access to budget for conducting regular short-term trainings
- Experience with executive bodies of different sectors
- Facilities to conduct training at the sub-national level
- Ideally, possess experience with environmental risks.

Entities that could provide trainings to local and central executive bodies are NGOs, private consultancy firms, academic bodies, scientific institutes below the line ministries or the academy of administration, who is responsible for training civil servants. The matter of who to involve would be decided by the Ministry of Energy. From our point of view, promising candidates are the Public Academy and the scientific body below the Ministry of Energy. The Public Academy is especially suitable for trainings at the provincial level, because it operates branches in each province.

Various international development organizations, such as USAID, UNDP, GIZ are currently involved or willing to conduct ToTs for RVAs. There is a window of opportunity to coordinate resources in order to address potential challenges faced by our proposal, as illustrated in Figure 5.

6. Conclusions and Recommendations

In order to meet the challenges arising from climate change impacts in Kazakhstan, its NAP process needs to account for the sub-national perspective. The fact that Kazakhstan is currently initiating the development of its NAP process presents an opportunity to shape this process and ensure the vertical integration of climate action.

We have identified two major entry points for action. Firstly, the integration of climate adaptation needs into high-level strategic documents. If successful, this represents a facilitating leverage for all climate-resilient planning across all sectors and levels. This can be achieved by using the ongoing SDG process, where intersectoral working groups represent a platform for dialogue and the coming update of the Green Economy (GE) concept.

Secondly, the integration of climate-resilient planning into sub-national development planning presents an entry point for action. This would ensure access to funding for climate actions and make investments across all provinces climate-proof.

The Ministry of Energy is the coordinating authority for the update of the green economy concept and the SDGs' "Planet Working Group," where it can influence the policy framework on different document levels. The adjustment of sub-national development programs requires the support of other key ministries, such as the Ministry of National Economy.

Since the Ministry of Energy (as the authorized body of the Kazakh government) designs its NAP process, key points that it may consider for the vertical integration of action include the following, which international organizations would likely strongly support:

- **Shape the implementation discussion within the SDG Planet working group on climate policy change and pursue the adjustment of high-level governmental strategic documents:** The explicit mention of adaptation needs in high-level strategic documents represents a strong leverage mechanism for the integration of climate action into national and sub-national development programs.
- **Provide proposals and expertise on vertical integration of the NAP process in the SDG implementation process:** Make use of known best practices and existing support on enabling factors from international organization. Access support from peer learning, for instance from NAP Global Network.
- **Initiate dialogue processes with the Ministry of National Economy and propose adjustments on current sub-national development programs:** Development plans as entry points for climate action at the sub-national level can only be integrated if other ministries—and especially the Ministry of National Economy, as key actor—are engaged. Specific adjustments of development plans, as discussed in this study, need to be proposed, discussed and in response to feedback, be modified.
- **Design an institutional arrangement that covers the entire NAP process at multiple levels:** Propose that scientific bodies of national ministries conduct the RVA and elaborate adaptation options. Propose that provincial departments be responsible for selecting and prioritizing adaptation options with the support of scientific bodies at the national level. Consider piloting sectoral and/or regional adaptation planning.

-
- **Address capacity gaps at the national level:** Provide scientific bodies of national ministries with methods and trainings on RVAs and how to elaborate adaptation options. Ensure that methods are suitable for the context of Kazakhstan.
 - **Address capacity gaps at the sub-national level:** Provide line departments at the provincial level with methods and training on how to select and prioritize adaptation options.
 - **Ensure the sustainability of knowledge and capacity transfer:** Identify an institution for sustainable transfer of methodological knowledge into all provinces and sectors. Organize a “Training of Trainers” with support of international organizations that provides relevant methodological knowledge to this institution, which can be transferred to the provinces on a regularly basis.
 - **Support for climate information and stakeholder involvement:** Coordinate a dialogue platform between users and generators of climate information. Support of Kazhydromet and other scientific bodies to produce user-centred information on climate change scenarios and their impacts.

Vertical integration represents a challenge for Kazakhstan, where the sub-national level has limited possibilities and platforms for shaping processes and expressing demands outside of centralized processes. However, the sub-national sector has already been assigned roles with parameters for planning and implementation of sub-national development programs. A decision at the national level that directs the sub-national level to consider climate risks for investment planning would represent a major step toward effective climate adaptation.

References

Dazé, A., Price-Kelly, H., & Rass, N. (2016). *Vertical integration in national adaptation Plan (NAP) processes: A guidance note for linking national and sub-national adaptation processes*. Winnipeg, Canada. Retrieved from www.napglobalnetwork.org

Department for Economy and Budget Planning (DEBP) & GIZ. (2018). *Provincial Adaptation Plan for Eastern Kazakhstan*.

Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), adelphi, & EURAC. (2017). *The vulnerability sourcebook: Concept and guidelines for standardized vulnerability assessments*. Retrieved from https://www.adaptationcommunity.net/?wpfb_dl=203

Deutsche Gesellschaft für Internationale Zusammenarbeit, & EURAC. (2017). *Risk supplement to the Vulnerability Sourcebook. Guidance on how to apply the Vulnerability Sourcebook's approach with the new IPCC AR5 concept of climate risk*. Bonn. Retrieved from https://www.adaptationcommunity.net/wp-content/uploads/2017/10/GIZ-2017_Risk-Supplement-to-the-Vulnerability-Sourcebook.pdf

Kazhydromet. (2018). *Annual bulletin of monitoring over climate state and climate change in Kazakhstan*. Astana, Kazakhstan. Retrieved from www.kazhydromet.kz/en/p/monitoring-klimata-kazahstana

Ministry of Energy of the Republic of Kazakhstan, UNDP, & GEF. (2017). *Kazakhstan's, 7th National Communication, 3rd Biennial Report*. Astana. Retrieved from https://unfccc.int/sites/default/files/resource/20963851_Kazakhstan-NC7-BR3-1-ENG_Saulet_Report_12-2017_ENG.pdf

United Nations Framework Convention on Climate Change (UNFCCC). (2015). *Report of the Conference of the Parties on its twenty-first session, held in Paris from 30 November to 13 December 2015 CP.21 (Decision 1) – Paris* [“The Paris Agreement”], 1–36. Retrieved from <https://unfccc.int/resource/docs/2015/cop21/eng/10a01.pdf>

USAID & Abt associates. (in press). *Vulnerability Assessment Guide*.

Annexes

Annex A. List of organizations and people interviewed

No. #	Organization	Contact person	Position of contact person
1	UNDP	Saulet Sakenov	NAP Project Coordinator
2	Association of Water Supply and Sanitation Enterprises of the Republic of Kazakhstan ("Kazakhstan Su Arnasy")	Suyundyukov Valeriy	President
3	Association of Water Supply and Sanitation Enterprises of the Republic of Kazakhstan ("Kazakhstan Su Arnasy")	Zaitseva Inna	Expert-analyst
4	National Chamber of Entrepreneurs of the Republic of Kazakhstan ("Atameken")	Eseneev Yerbol	Director of the Department of Agriculture and Food Industry
5	National Chamber of Entrepreneurs of the Republic of Kazakhstan ("Atameken")	Samat Seyilov	Expert of the Department of Agriculture and Food Industry
6	CIMMYT international representation in Kazakhstan	Karabayev Murat	Regional representative
7	Union of Farmers of Kazakhstan	Ibrayev Serik	Deputy President
8	Academy of Public Administration under the President of Kazakhstan	Medeuov Zhomart	Head of the Centre for Applied Research and International Partnership
9	Academy of public administration under the President of Kazakhstan	Abil Yerlan	The Director of the Institute of Management
10	Ministry of Agriculture of Republic of Kazakhstan	Nassyrkhanova Bakhyt	Chief manager of the Department of Strategic Planning and Analysis

No. #	Organization	Contact person	Position of contact person
11	Ministry of Culture and sports of the Republic of Kazakhstan	Kurmasheva Dana	Deputy Chairman of the Committee of Tourism Industry
12	Ministry of Culture and Sports of the Republic of Kazakhstan	Balgozhin Zhalgas	Head of Department of the Committee of Tourism Industry
13	Ministry of Culture and Sports of the Republic of Kazakhstan	Smailov Askhat	Head of Department of Advertising and Marketing Promotion
14	Food and Agriculture Organization of the United Nations	Didarbekov Ualikhan	Project manager: “Integrated Management of Natural Resources in Drought-Prone and Salinized Agricultural Production Landscapes in Central Asia and Turkey”
15	UNDP	Yerlan Zhumabayev, Firuz Ibragimov	Project managers
16	Ministry of National Economy of the Republic of Kazakhstan		Department of Strategic Planning and Analysis

Annex B. Guiding questions

Scope of interest	Guiding questions
Climate risk awareness	<ol style="list-style-type: none"> 1. How do you perceive climate risks within your sector? 2. How do you communicate future climate risks to your members, partners, clients or to governmental bodies? 3. How and to whom did you express demand for adaptation measures in order to address climate change risks? 4. What barriers exist for climate risk awareness?
Assessing existing demands for climate information and services	<ol style="list-style-type: none"> 1. What demand for climate information, services and RVA do you have? 2. What kind of demand has been expressed to you by your members, partners or clients? 3. What kind of information and services on climate change would you disseminate to your members, partners, clients or into your sector?
Climate information and risks and vulnerability assessment (RVA)	<ol style="list-style-type: none"> 1. What kind of climate information are you using? 2. How do you access climate information? 3. What kind of climate information would be more useful? 4. How should climate information and knowledge about risks be provided? 5. How do you include climate information and services in your decision making process? 6. How do you assess climate risks? What are your capacities to do this? 7. What kind of capacity development is needed for risk assessment? 8. What barriers exist for using climate information and RVAs?
Dialogue processes	<ol style="list-style-type: none"> 1. What dialogue processes are you involved in regarding climate risks? 2. What are the entry points and key processes to raise awareness and discuss options for adaptation planning?
Adaptation planning process	<ol style="list-style-type: none"> 1. In what kind of adaptation planning processes are you involved? 2. How do you identify adaptation measures in your sector? What are your capacities to do this? 3. How do you plan to implement your measures and access funding? 4. How do you plan to M&E measures?
Climate adaptation policy	<ol style="list-style-type: none"> 1. Which existing policies do account for climate risks and the need for adaptation efforts? 2. Which policies are best suited to integrate sub-national adaptation processes? 3. What policy changes would you like to advocate from your side in order to enhance climate resilience? 4. How can sub-national development planning made climate informed? 5. Which strategic documents/plans/initiatives are suitable for including the need for climate adaptation? 6. How would you like to contribute to a policy development that ensures adaptation planning at the national and sub-national level?

Scope of interest	Guiding questions
Economic development planning	<ol style="list-style-type: none"> 1. How are current risks on economic activities considered that arise from changing climate conditions and cause economic losses? 2. What are the best entry points in existing development planning processes to consider risks and opportunities from climate change? 3. How should an economic development process be organized that takes into account risks and opportunities from changing climate? 4. What information or knowledge is needed to assess climate risks from an economic perspective?
Institutional arrangements	<ol style="list-style-type: none"> 1. Which institutions are suitable for conducting RVAs at the national and at the sub-national level?
Capacity development needs	<ol style="list-style-type: none"> 1. What capacities exist to conduct adaptation planning, implementation and M&E? 2. What capacities need to be developed? 3. Which institutions are suitable to conduct ToTs on how to conduct RVA for government officials at the sub-national level?

