



United Nations

FCCC/TRR.1/KAZ



Framework Convention on
Climate Change

Distr.: General
7 August 2015

English only

Report of the technical review of the first biennial report of Kazakhstan

Developed country Parties are requested, in accordance with decision 2/CP.17, to submit their first biennial report to the secretariat by 1 January 2014. This report presents the results of the technical review of the first biennial report of Kazakhstan conducted by an expert review team in accordance with the “Guidelines for the technical review of information reported under the Convention related to greenhouse gas inventories, biennial reports and national communications by Parties included in Annex I to the Convention”.

GE.15-13384(E)



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I. Introduction and summary

A. Introduction

1. For Kazakhstan the Convention entered into force on 15 August 1995. Under the Convention, Kazakhstan made a commitment to reduce its greenhouse gas (GHG) emissions by 15 per cent below the 1990 level by 2020.¹
2. This report covers the technical review of the first biennial report (BR1)² of Kazakhstan, coordinated by the secretariat, in accordance with the “Guidelines for the technical review of information reported under the Convention related to greenhouse gas inventories, biennial reports and national communications by Parties included in Annex I to the Convention” (annex to decision 23/CP.19).
3. The review took place from 20 to 25 April 2015 in Astana, Kazakhstan, and was conducted by the following team of nominated experts from the UNFCCC roster of experts: Mr. Roberto Acosta (Cuba), Ms. Patricia Grobбен (Belgium), Ms. Katherine Monahan (Canada) and Ms. Tatiana Tugui (Republic of Moldova). Mr. Acosta and Ms. Grobбен were the lead reviewers. The review was coordinated by Ms. Ruta Bubniene and Mr. Davor Vesligaj (secretariat).
4. During the review, the expert review team (ERT) reviewed each section of the BR1.
5. In accordance with decision 23/CP.19, a draft version of this report was communicated to the Government of Kazakhstan, which made no comment on it.

B. Summary

6. The ERT conducted a technical review of the information reported in the BR1 of Kazakhstan according to the “UNFCCC biennial reporting guidelines for developed country Parties” (hereinafter referred to as the UNFCCC reporting guidelines on BRs).
7. During the review, Kazakhstan provided further relevant information. It clarified its emission reduction target, the policies and measures (PaMs) implemented to achieve that target and the projections reported in its BR1.

1. Completeness and transparency of reporting

8. The information reported in the BR1 is mostly complete and mostly transparent. Gaps and issues related to the reported information identified by the ERT are presented in table 1.

2. Timeliness

9. The BR1 was submitted on 26 December 2014, after the deadline of 1 January 2014 mandated by decision 2/CP.17. The common tabular format (CTF) tables were submitted on 26 February 2014, also after the deadline. The ERT noted with concern the delay in the submission of the BR1. In response to the comments and recommendations of the ERT during the review, Kazakhstan provided a revised version of the CTF tables on 13 May 2015, including revised CTF tables 2 and 3 (see para. 18 below).

¹ See document FCCC/SBSTA/2014/INF.6.

² The BR1 comprises the text of the report and the common tabular format (CTF) tables. Both the text and the CTF tables have been subject to the technical review.

3. Adherence to the reporting guidelines

10. The information reported by Kazakhstan in its BR1 is mostly in adherence to the UNFCCC reporting guidelines on BRs as per decision 2/CP.17 (see table 1).

Table 1

Summary of completeness and transparency issues of reported information in the first biennial report of Kazakhstan^a

<i>Sections of the biennial report</i>	<i>Completeness</i>	<i>Transparency</i>	<i>Reference to paragraphs</i>
Greenhouse gas emissions and trends	Mostly complete	Transparent	12
Assumptions, conditions and methodologies related to the attainment of the quantified economy-wide emission reduction target	Complete	Mostly transparent	14
Progress in achievement of targets	Partially Complete	Partially transparent	19, 22
Projections	Complete	Partially transparent	18, 26, 29
Provision of support to developing country Parties	NA	NA	NA

Abbreviation: NA = not applicable.

^a A list of recommendations pertaining to the completeness and transparency issues identified in this table is included in chapter III below.

II. Technical review of the reported information

A. All greenhouse gas emissions and removals related to the quantified economy-wide emission reduction target

11. Kazakhstan has provided a summary of information on its GHG emission trends for the period 1990–2011 as well as for the period 1990–2012 in its BR1 and a summary of information for the period 1990–2011 in CTF table 1. This information is broadly consistent with the 2013 and 2014 national GHG inventory submissions. The use of both time series led to some inconsistencies between the tables in the BR1 and the CTF tables and added to the length of the report. However, Kazakhstan has clearly described key trends in both time series as well as explained key differences between the two time series presented. The ERT encourages Kazakhstan to provide in its biennial report only data from the most recent national inventory submission available at the time of the preparation of the biennial report and to use the same time series consistently across the biennial report and the CTF tables.

12. The BR1 does not include summary information on Kazakhstan’s national inventory arrangements, although they are reported on in the national inventory report. The ERT recommends that Kazakhstan include summary information on its national inventory arrangements in accordance with the relevant reporting requirements contained in the “Guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part I: UNFCCC reporting guidelines on annual greenhouse gas inventories”, as well as on any changes to the national inventory arrangements since its last national communication or biennial report.

13. In its BR1, Kazakhstan has provided a summary of the entire national inventory report. The ERT encourages Kazakhstan to summarize only historical emission trends in the text of the BR1 (observed changes, drivers, etc.) and to provide a reference to the

relevant part of the national inventory report, as appropriate. The Party's total GHG emissions³ excluding emissions and removals from land use, land-use change and forestry (LULUCF) decreased by 20.7 per cent between 1990 and 2012, whereas total GHG emissions including net emissions or removals from LULUCF decreased by 25.8 per cent over the same period. Further information on the review of emissions and emission trends is provided in chapter II.A of the report of the technical review of the sixth national communication of Kazakhstan (IDR/NC6).

B. Assumptions, conditions and methodologies related to the attainment of the quantified economy-wide emission reduction target

14. In its BR1, Kazakhstan has reported a description of its target to reduce emissions by 15 per cent compared with the 1990 level by 2020, including associated conditions and assumptions. In CTF table 2(a), however, Kazakhstan has reported its target under the second commitment period of the Kyoto Protocol to reduce emissions by 5 per cent compared with the 1990 level in the period 2013–2020. During the review, Kazakhstan agreed that the information reported in the CTF tables should be consistent with that in the BR1 and provided details on its 15 per cent emission reduction target under the Convention. The ERT also learned that CTF table 2(b) contains an error, since Kazakhstan does not currently intend to account for emissions and removals from the LULUCF sector towards achieving its target under the Convention. During the review, Kazakhstan provided a revised version of the CTF tables, indicating its target of a 15 per cent GHG emission reduction by 2020 compared with in 1990. The ERT recommends that Kazakhstan improve transparency by clearly defining its target consistently across its biennial report and the CTF tables.

15. Kazakhstan's 15 per cent emission reduction target uses a base year of 1990 for all GHGs except for hydrofluorocarbons, perfluorocarbons, sulphur hexafluoride and nitrogen trifluoride (fluorinated gases (F-gases)), for which the base year is 1995. Global warming potential values from the Second Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) (AR2) are used, but Kazakhstan has stated that it will update them to values from the IPCC Fourth Assessment Report (AR4) after 2015. The target does not include an assumed use of international market-based mechanisms or credits from the LULUCF sector.

C. Progress made towards the achievement of the quantified economy-wide emission reduction target

16. In its BR1, Kazakhstan has reported information on its mitigation actions implemented and planned since its second national communication to achieve its emission reduction target. However, Kazakhstan did not fill in the relevant CTF tables 3 and 4. In response to the comments and recommendations of the ERT during the review, Kazakhstan provided a revised version of the CTF tables, which includes some information on mitigation actions in table 3. The ERT recommends that Kazakhstan improve transparency by providing completely filled CTF tables 3 and 4 in its next biennial report.

17. The ERT reviewed the reported information and provided its assessment of progress made towards achieving the target. The ERT noted that Kazakhstan's total GHG emissions without LULUCF in 2012 (283,549.97 kt carbon dioxide equivalent (CO₂ eq)) were below

³ In this report, the term "total GHG emissions" refers to the aggregated national GHG emissions expressed in terms of carbon dioxide equivalent excluding land use, land-use change and forestry, unless otherwise specified.

the 1990 level (357,601.99 kt CO₂ eq) by 20.7 per cent. The total GHG emissions without LULUCF have increased by 95.0 percent in the period 1999–2012 driven mainly by strong economic growth and continued reliance on fossil fuels for primary energy supply.

18. During the review Kazakhstan submitted revised CTF tables which indicate that according to the updated ‘with measures’ scenario total national GHG emissions in 2020 are projected to be 15.6 per cent below the 1990 level. As such, the projections show that Kazakhstan could reach its 15 per cent emission reduction target by 2020 under the Convention. The ERT noted that these projections are not consistent with the GHG emission projections as reported in Kazakhstan’s sixth national communication (NC6), which indicate that Kazakhstan’s 2020 target under the Convention could not be achieved under the ‘with measures’ scenario (see paras. 84 and 94 of the IDR/NC6). The ERT recommends that Kazakhstan enhance the transparency of its reporting by providing the information on mitigation actions and their effects included in the updated ‘with measures’ scenario in the next biennial report.

1. Mitigation actions and their effects

19. Kazakhstan has provided in its BR1 information on its package of mitigation actions introduced to achieve its emission reduction target. The information is, however, not organized by sector or by gas as required by the UNFCCC reporting guidelines on BRs. In its initial BR1 submission, Kazakhstan did not fill in CTF table 3. In the resubmitted version, it provided information on its energy efficiency and renewable energy targets in CTF table 3. A detailed review of the reported information is provided in chapter II.B of the IDR/NC6. The text of the BR1 repeats the general policy context provided in the NC6, but the description of the specific programmes put in place to realize the policy targets is not always coherent and consistent across the two reports. The BR1 does not refer to the NC6 and does not specify which PaMs the Party has implemented or plans to implement since its last national communication, although there is a one-year time difference between the submission of the NC6 and the BR1. The quantified mitigation impact reported in table 3 of the resubmitted CTF tables is not coherent with the information provided in the NC6. The ERT recommends that Kazakhstan organize the reporting of mitigation actions by sector and by gas in its next biennial report and provide coherent and consistent information between the national communication and the biennial report.

20. The key PaMs include the promotion of renewable energy sources (the target is to achieve a share in electricity generation of 30 per cent by 2030 and of 50 per cent by 2050) and the programme to improve energy efficiency (the target is to decrease the energy intensity of the gross domestic product by 30 per cent by 2030 and by 50 per cent by 2050 compared with the 2008 level). The Kazakhstan emissions trading system (KazETS), the major cross-sectoral PaM, is also likely to contribute to the reduction of emissions, although the link with the overall national GHG emission reduction target is at present not clear. The Energy Efficiency Programme 2020 and KazETS are partially targeting the same enterprises. The ERT reviewed the reported information on PaMs included in the BR1 and concluded that it is difficult to assess the progress made towards the achievement of the Party’s 2030 and 2050 targets. The continuation of existing PaMs and the further operationalization of planned PaMs will be needed to achieve the targets. On the basis of a comparison with past sectoral trends and the PaMs in place and/or planned, the greatest challenge for Kazakhstan in meeting its emission reduction target may lie in reducing or limiting its emissions from the transport sector. The ERT noted that Kazakhstan’s ‘green economy concept’ has no specific targets related to the transport sector. Table 2 provides a concise summary of the key mitigation actions implemented by Kazakhstan to achieve its target.

Table 2
Summary of information on policies and measures reported by Kazakhstan

<i>Sectors affected</i>	<i>List of key policies and measures</i>	<i>Estimate of mitigation impact by 2020 (kt CO₂ eq)</i>	<i>Estimate of mitigation impact by 2030 (kt CO₂ eq)</i>
<i>Policy framework and cross-sectoral measures</i>			
	Emissions trading system (cap and trade)	20 000	30 000
<i>Energy</i>			
<i>Energy supply</i>			
	Fuel switching in power plants	2 000	3 000
Renewable energy	Promotion of hydro and wind power	2 000	2 000
Energy efficiency	Replacement of old coal power plants with new ones with higher efficiency	3 000	10 000
Residential and commercial sectors	Improved standards for heat insulation	2 000	5 000
<i>Industrial sectors</i>	Emission reporting, energy audit and upgrading assets	4 000	9 000
<i>Agriculture</i>	Not reported	NE	NE
<i>Forestry</i>	Not reported	NE	NE
<i>Waste management</i>	Not reported	NE	NE

Note: The greenhouse gas reduction estimates given for some measures are reductions in carbon dioxide or carbon dioxide equivalent for 2020 and 2030.

Abbreviation: NE = not estimated.

21. Although the government structure changed after the submission of the Party's NC6 and before the submission of its BR1, Kazakhstan has not provided information on changes in its domestic institutional arrangements, including institutional, legal, administrative and procedural arrangements used for domestic compliance, monitoring, reporting, archiving of information and evaluation of the progress made towards achieving its target. The BR1 mentions the Department of Strategic Planning and Monitoring and the Department of Environmental Law and Legal Support, but it is not clear about their specific roles in monitoring and evaluating GHG mitigation policy. During the review, Kazakhstan informed the ERT that the monitoring and evaluation of PaMs is done by means of periodical reporting to the Government on the advancement of strategies and action plans. Kazakhstan also informed the ERT that the monitoring and evaluation of climate policy is carried out by the Administration of the President of the Republic of Kazakhstan and the Office of the Prime Minister of the Republic of Kazakhstan.

22. The ERT noted that climate policy in Kazakhstan is under continuous development and modification on the basis of lessons learned and new insights. The ERT recommends that Kazakhstan include in its next biennial report a description, or a cross-reference to the description in the national communication, of its processes and institutional arrangements for monitoring and evaluating its PaMs over time, and describe, if applicable, the changes in its domestic institutional arrangements since its last national communication, or report that there have been no changes.

23. Kazakhstan has not provided detailed information on the assessment of the economic and social consequences of its response measures. The ERT encourages Kazakhstan to provide, to the extent possible, detailed information on the assessment of the economic and social consequences of its response measures in its next biennial report.

2. Estimates of emission reductions and removals and the use of units from the market-based mechanisms and land use, land-use change and forestry

24. In its BR1, Kazakhstan has explained that it does not currently intend to use market-based mechanisms or a contribution from the LULUCF sector towards achieving its emission reduction target. Regarding market-based mechanisms, the explanation provided in the BR1 is that Kazakhstan is not currently considered to be a Party to the Convention that is also a Party to the Kyoto Protocol with commitments inscribed in Annex B to the Kyoto Protocol and, as such, does not have an allocation of assigned amount units. During the review, Kazakhstan noted that it may consider international market mechanisms outside of the Kyoto Protocol as rules or guidance thereon is developed under the UNFCCC. During the review, Kazakhstan expressed an interest in linking KazETS with other systems in the future as the system evolves and matures.

25. During the review, Kazakhstan clarified that it does not currently plan to count the contribution from LULUCF towards its emission reduction target. The reason given is that the LULUCF sector currently presents large uncertainties in terms of its estimates and projections. However, Kazakhstan does not rule out accounting for this sector in the future as the estimates and projections continue to develop.

Table 3

Summary information on the use of units from market-based mechanisms and land use, land-use change and forestry as part of the reporting on the progress made towards achievement of the target by Kazakhstan

Year	Emissions excluding	LULUCF ^a	Emissions including	Use of units from the
	LULUCF	emissions/removals	LULUCF	market-based
	(kt CO ₂ eq)	(kt CO ₂ eq)	(kt CO ₂ eq)	mechanisms ^b
				(kt CO ₂ eq)
Base year (1990)	357 601.99	NA	350 586.19	NA
2010	286 103.42	NA	266 724.37	NA
2011	277 953.15	NA	256 948.95	NA
2012 ^c	283 549.97	NA	260 032.07	NA

Abbreviations: LULUCF = land use, land-use change and forestry, NA = not applicable.

^a Kazakhstan's target under the Convention to reduce its greenhouse gas (GHG) emissions by 15 per cent compared with the 1990 level does not include emissions and removals from LULUCF. Kazakhstan, in common tabular format (CTF) table 4, did not report on units from LULUCF that it intends to use to achieve its target.

^b Kazakhstan's target to reduce its GHG emissions by 15 per cent compared with the 1990 level does not include the use of the market-based mechanisms. Kazakhstan, in CTF table 4, did not report on units from the market-based mechanisms that it intends to use to achieve its target.

^c GHG emissions including and excluding LULUCF for 2012 as reported in the 2014 GHG inventory submission.

3. Projections

26. Kazakhstan has provided in its BR1 information on 'with measures' emission projections for 2020 and 2030. These projections are not consistent with the updated projections for 2020 and 2030 provided in CTF table 6(a) as well as with projections reported in the NC6. A detailed review of the information on projections reported in the

NC6 is provided in chapter II.C of the IDR/NC6. The ERT noted that Kazakhstan has not provided complete information on key variables and assumptions used in the updated projections analysis in CTF table 5 and therefore recommends that Kazakhstan provide this information in its next biennial report.

27. Projections have been provided in the BR1 on the basis of the 2014 GHG inventory submission and general assumption that sectoral structure of the economy will not change significantly till 2030 in comparison to the planning period 2014–2018. The ERT noted that the ‘with measures’ projections in the BR1 are not fully robust and encourages Kazakhstan to use a more detailed modelling approach (such as that used for the NC6) for its next biennial report. During the review, the ERT learned that Kazakhstan plans to use a more detailed modelling approach consistent with that used for the national communication for its next biennial report, which is commendable.

28. The projections in the BR1 also assume that the power sector is constrained under the ‘green economy concept’ (i.e. by 2020 the level of emissions from the power sector will be maintained at the same level as in 2012 and the share of renewable energy sources and nuclear energy in electricity generation will be 3 per cent by 2020 and 30 per cent by 2030).

29. In table 11 of the BR1, Kazakhstan has provided a comparative analysis of its emission projections relative to various targets to reduce emissions below the 1990 level (i.e. by 5 per cent, 15 per cent and 30 per cent). According to the analysis, Kazakhstan will reach the 15 per cent target by 2020, but emissions will then increase. By 2030 emissions are projected to be 9 per cent below the 1990 level. The BR1 does not provide data related to figures 4 and 5 of the BR1, which show in graphical format the emission projections for Kazakhstan (however, as noted, table 11 provides calculations regarding the expected percentage differences between the projections and the varying targeted levels of emissions). The ERT recommends that Kazakhstan improve the transparency of its reporting by including more detailed data on the results of projections (absolute data) in its next biennial report.

III. Conclusions

30. The ERT conducted a technical review of the information reported in the BR1 and CTF tables of Kazakhstan in accordance with the UNFCCC reporting guidelines on BRs. The ERT concludes that the BR1 and CTF tables provide a good overview of information on emissions and removals related to the Party’s quantified economy-wide emission reduction target, a description of the target and a general overview of the progress made by Kazakhstan to achieve its target. During the review, Kazakhstan provided additional information on the progress made in achieving its target.

31. Kazakhstan’s emissions and removals were estimated for 2012 to be 20.7 per cent below the 1990 level excluding LULUCF and 25.8 per cent below including LULUCF. Emissions decreased substantially between 1990 and 1999 owing to the economic recession. The increase in emissions since 1999 is driven by strong economic growth, the continued reliance on fossil fuels for primary energy supply, the abundance of natural resources in the oil and gas and mining sectors, and population growth.

32. Kazakhstan’s 15 per cent emission reduction target uses a base year of 1990 for all GHGs except for F-gases, for which the base year is 1995. Global warming potential values from the AR2 are used, but Kazakhstan has stated that it will update them to values from the AR4 after 2015. The target does not include an assumed use of international market-based mechanisms or units from the LULUCF sector.

33. During the review Kazakhstan submitted revised CTF tables which indicate that according to the ‘with measures’ scenario total GHG emission projections in 2020 are expected to be 15.6 per cent below the 1990 level. As such, the projections show that Kazakhstan could attain its 15 per cent emission reduction target by 2020.

34. In the course of the review, the ERT formulated several recommendations relating to the completeness and transparency of Kazakhstan’s reporting under the Convention. The key recommendations⁴ are that Kazakhstan:

(a) Improve the completeness of its reporting by including in its next biennial report the following:

- (i) Summary information on national GHG inventory arrangements;
- (ii) Completely filled in CTF tables 3 and 4;
- (iii) Information on key variables and underlying assumptions used in the updated ‘with measures’ projection analysis;

(b) Improve the transparency of its reporting by including in its next biennial report the following:

- (i) More detailed and accurate information on its emission reduction target in CTF table 2(a), consistent with the information provided in the biennial report;
- (ii) More detailed information on mitigation actions, organized by sector and by gas;
- (iii) A description, or a cross-reference to the description in the national communication, of the domestic institutional arrangements for monitoring and evaluating its PaMs over time and a description, if applicable, of the changes in those arrangements since the last biennial report;
- (iv) More detailed information, in absolute values, on the results of the projections;
- (v) Information on mitigation actions and their effects as included in the update “with measures” projection scenario.

⁴ The recommendations are given in full in the relevant sections of this report.

Annex

Documents and information used during the review

A. Reference documents

“UNFCCC biennial reporting guidelines for developed country Parties”. Annex to decision 2/CP.17.

Available at <<http://unfccc.int/resource/docs/2011/cop17/eng/09a01.pdf#page=4>>.

“Guidelines for the technical review of information reported under the Convention related to greenhouse gas inventories, biennial reports and national communications by Parties included in Annex I to the Convention”. Annex to decision 23/CP.19. Available at

<<http://unfccc.int/resource/docs/2013/cop19/eng/10a02.pdf#page=20>>.

FCCC/ARR/2012/KAZ. Report of the individual review of the inventory submission of Kazakhstan submitted in 2012. Available at

<<http://unfccc.int/resource/docs/2013/arr/kaz.pdf>>.

Sixth national communication of Kazakhstan. Available at

<http://unfccc.int/files/national_reports/annex_i_natcom/_application/pdf/kaz_nc3,4,5,6_eng.pdf>.

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<http://unfccc.int/files/national_reports/biennial_reports_and_iar/submitted_biennial_reports/application/pdf/biennial_report_kaz_ru.pdf>.

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<http://unfccc.int/national_reports/annex_i_ghg_inventories/national_inventories_submissions/items/7383.php>.

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<http://unfccc.int/national_reports/annex_i_ghg_inventories/national_inventories_submissions/items/8108.php>.

B. Additional information provided by the Party

Responses to questions during the review were received from Ms. Gulmira Sergazina and Ms. Aigerim Yergabulova (Ministry of Energy), including additional material on updated policies and measures, greenhouse gas projections, the national registry and recent climate policy developments in Kazakhstan.