Norway's second Biennial Report

Under the Framework Convention on Climate Change

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1 INTRODUCTION

Norway's second Biennial Report (BR2) uses the "UNFCCC biennial reporting guidelines for developed country Parties" as contained in annex 1 to decision 2/CP.17 for the preparation of this report. The common tabular format (CTF) tables have been prepared to be in accordance with the common tabular format for "UNFCCC biennial reporting guidelines for developed country Parties" as specified in decision 19/CP.18.

Norway' first Biennial Report (BR1) was submitted in conjunction with Norway's sixth National Communication (NC6). The BR2 is a stand-alone-report, but will in some cases refer to information previously reported such as in the NC6 or Norway's National Inventory Report.

The expert review team (ERT) of Norway's BR1 found that the reporting was mostly in adherence with the UNFCCC reporting guidelines on BRs as per decision 2/CP.17. In the review report[1], the ERT had eight recommendations for improving the timeliness, completeness and transparency of the reporting. We have strived to adhere with the reporting guidelines to the extent possible and our follow-up to the various recommendations are summarized below. See annex 3 for a list of the follow- up to the ERT's –recommendations.

The preparation of the BR2 also draws on the questions formulated and answers provided prior to the multilateral assessment and the multilateral assessment itself.[2]

2 INFORMATION ON GREENHOUSE GAS EMISSIONS AND TRENDS

2.1 Emission trends for aggregated greenhouse gas emissions

The Norwegian inventory has been prepared in accordance with the revised UNFCCC Reporting Guidelines on Annual Inventories (decision 24/CP.19). The latest inventory containing the National Inventory Report (NIR) and Common Reporting Format (CRF) covering the years 1990-2013 was submitted to the UNFCCC Secretariat on November 13th 2015. Due to delays in the availability of the CRF reporter software, the NIR and CRF tables were submitted after the regular deadline of April 15th, but this is in accordance with decision 13/CP.20.

Errors in the CRF tables for land use, land-use change and forestry (LULUCF) under the Kyoto Protocol (KP) due to a not fully functional CRF reporter software did however prevent Norway from reporting under the Kyoto Protocol. This inventory submission in 2015 was therefore reported only under the Convention and not under the Kyoto Protocol.

[1] http://unfccc.int/resource/docs/2015/trr/nor01.pdf

[2] http://unfccc.int/national_reports/biennial_reports_and_iar/items/8829.php for more information.

Chapter 2 of Norway's 2015 NIR provides detailed information on the greenhouse gas emissions and removals trends for gases and sectors. Therefore, only a short summary of the GHG emissions and removals trends for the years 1990-2013 is included here in BR2.

As required by the revised reporting guidelines, Norway's greenhouse gas inventory includes four different national totals. This includes total GHG emissions expressed in CO_2 equivalent with and without LULUCF. Both with and without indirect CO_2.In the following chapters, if not specified otherwise, emission figures include indirect CO_2 emissions but not LULUCF.

In 2013, total greenhouse gas (GHG) emissions in Norway were 53.7 million tonnes of carbon dioxide equivalents, which is a slight decrease of 0.15 million tonnes compared to 2012. Preliminary figures for 2014 indicate the same emissions level (53.2 Mt).

Over the last two decades total emissions have been relatively stable. Total greenhouse gas emissions were approximately 1.7 million tonnes CO_2- equivalent, or 3,3 per cent, higher in 2013 than in 1990. Emissions have decreased by almost 6 per cent since they peaked at 57.0 million tonnes in 2007. The net greenhouse gas emissions, including all sources and sinks, were 27.6 million tonnes of CO_2 equivalents in 2013 as compared to 41.5 Mt in 1990. The total emissions distribution among the main CRF categories from 1990 to 2013 is illustrated in figure 1.

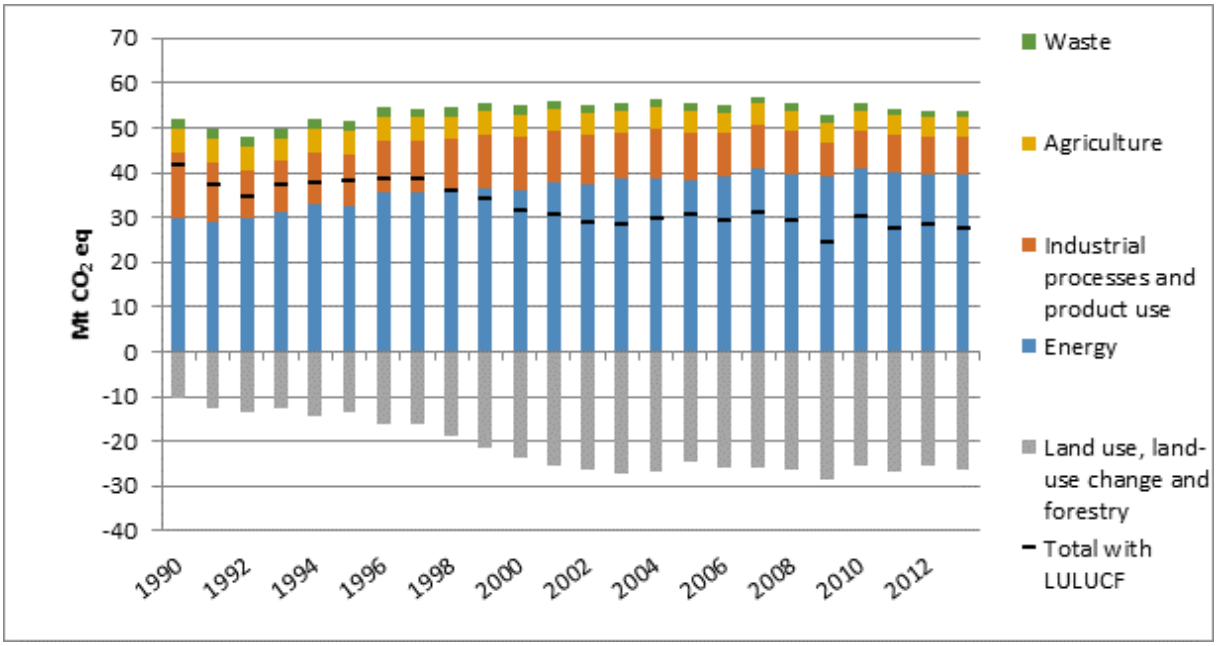

Figure 1. Total emissions of greenhouse gases by sources and removals from LULUCF in Norway 1990-2013 (Mtons CO_2 equivalents). Source: Statistics Norway/Norwegian Environment Agency/ Norwegian Institute of Bioeconomy Research.

Table 1 presents the total emissions including indirect CO_2 emissions and its distribution among the main CRF categories from 1990 to 2013. The total indirect CO_2 emissions are also presented in this table.

Table 1. Total emissions of greenhouse gases by sources and removals from LULUCF in Norway 1990-2013. Emissions are given in million tonnes of CO_2 equivalents.

	Energy	**Industrial processes and product use**	**Agriculture**	**LULUCF**	**Waste**	**Total without LULUCF**	**Total with LULUCF**	**Indirect CO_2 emissions**
1990	30.1	14.5	5.2	-10.6	2.3	52.0	41.5	0.5
1995	32.6	11.6	5.1	-13.7	2.2	51.5	37.8	0.7
2000	35.9	12.1	5.0	-23.6	1.9	54.9	31.3	0.8
2004	38.7	10.9	4.9	-26.7	1.7	56.3	29.5	0.6
2005	38.2	10.6	4.9	-24.7	1.6	55.4	30.7	0.5
2006	39.0	9.7	4.8	-25.9	1.7	55.1	29.3	0.4
2007	40.8	9.8	4.8	-25.8	1.6	57.0	31.2	0.4
2008	39.5	9.7	4.7	-26.4	1.6	55.5	29.1	0.3
2009	39.2	7.4	4.5	-28.5	1.6	52.7	24.3	0.3
2010	41.1	8.2	4.5	-25.4	1.6	55.3	29.9	0.3
2011	40.2	8.2	4.5	-26.8	1.6	54.4	27.5	0.3
2012	39.7	8.2	4.4	-25.4	1.5	53.9	28.4	0.3
2013	39.5	8.3	4.5	-26.1	1.5	53.7	27.6	0.3

Source: Statistics Norway/Norwegian Environment Agency/Norwegian Institute of Bioeconomy Research.

Norway has experienced about 80 percent growth in GDP since 1990, while overall emissions are only 3 – 4 percent higher in 2013 than in 1990. In particular the offshore petroleum sector has expanded significantly over the past 20 years. Energy industries offshore and transport explains most of the growth in CO_2 emissions from energy use. However, the growth in CO_2 has been almost fully offset by reductions in other gases and sectors.

In 2013, the net sequestration in the LULUCF sector was 26.1 million tonnes CO_2 equivalents, which corresponds to around half of the total greenhouse gas emissions in Norway that year. The average annual net sequestration from the LULUCF sector was equivalent to 21.94 million tons CO_2 per year for the period 1990–2013. The calculated changes in carbon removals depend upon several factors such as growing conditions, harvest levels, and land use changes. Variations in annual harvest and age class effects will directly influence the variations in changes in carbon stocks and dead organic matter.

CTF table 1 with the trends for the gases is reported through the CTF application.

2.2 National inventory arrangements and changes

2.2.1 Current national inventory arrangements

The Norwegian Environment Agency, Statistics Norway and the Norwegian Institute of Bioeconomy Research[3] (NIBIO) are the core institutions in the national greenhouse gas inventory system in Norway. Statistics Norway is responsible for the official statistics on emissions to air. Norwegian Institute of Bioeconomy Research is responsible for the calculations of emission and removals from Land Use, Land Use Change and Forestry (LULUCF).

The Norwegian Environment Agency has been appointed by the Ministry of Climate and Environment as the national entity through the budget proposition to the Norwegian parliament (Stortinget) for 2006.

The three core institutions work together to fulfil the requirements for the national system. An overview of institutional responsibilities and cooperation is shown in Figure 2.

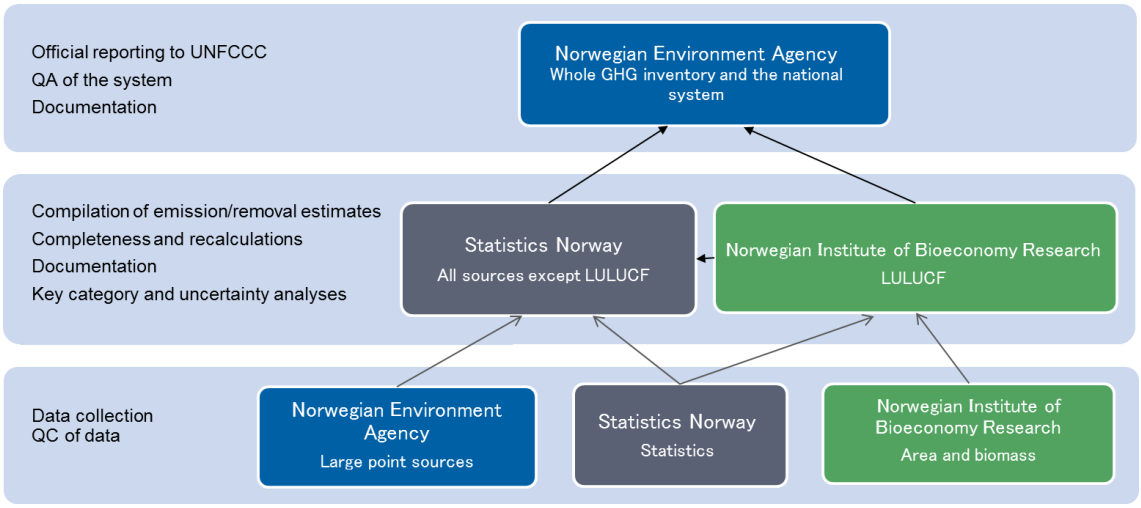

Figure 2. Overview of institutional responsibilities and cooperation

Statistics Norway and Norwegian Institute of Bioeconomy Research have signed agreements with Norwegian Environment Agency as the national entity, outlining their responsibilities. Through these agreements, the institutions are committed to implementing the QA/QC and archiving procedures, providing documentation, making information available for review, and

[3] The Norwegian Forest and Landscape Institute was merged with Norwegian Institute for Agricultural and Environmental Research and the Norwegian Agricultural Economics Research Institute to form NIBIO - Norwegian Institute of Bioeconomy Research on July 1st 2015. This new organization is owned by the Ministry of Agriculture and Food as an administrative agency with special authorization and its own board. NIBIO (previously the Norwegian Forest and Landscape Institute) is one of three core institutions in Norway's National System.

delivering data and information in a timely manner to meet the deadline for reporting to the UNFCCC.

The UNFCCC biennial reporting guidelines calls for Parties to provide summary information on the changes to the national inventory arrangements since their last national communication or biennial report. Each year, Norway reports the changes in the national system in chapter 13 of the NIR. For BR2, Norway therefore includes the changes reported in the NIRs for 2014 and 2015. Comprehensive information regarding the national system is reported annually in Annex V of the NIR.

2.2.2 Changes in the national inventory arrangements reported in the 2015 NIR

Comprehensive information regarding the national greenhouse gas inventory system in Norway can be found in Annex V of the 2015 NIR. The new CRF reporting tool has introduced a need for revision of the production plan of the Norwegian emission inventory, and of the timeline for cooperation between the institutions of the national system. The new routines will be further elaborated in the 2016 NIR, based on experiences gathered through the implementation of the new reporting tool in 2015.

Annex V of the 2015 NIR reflects that the Norwegian Forest and Landscape Institute was merged with Norwegian Institute for Agricultural and Environmental Research and the Norwegian Agricultural Economics Research Institute to form NIBIO - Norwegian Institute of Bioeconomy Research on July 1st 2015. This new organization is owned by the Ministry of Agriculture and Food as an administrative agency with special authorization and its own board. NIBIO (previously the Norwegian Forest and Landscape Institute) is one of three core institutions in Norway's National System.

Also, since the last submission, and in accordance with the decision on Article 5.1 of the Kyoto Protocol, new formalized agreements between the Norwegian Environment Agency and Statistics Norway, as well as between the Norwegian Environment Agency and the Norwegian Institute of Bioeconomy Research (NIBIO), were signed in December 2014. The agreements ensure the continuation of the national system or greenhouse gas inventories and reporting in Norway for the period from 2015 – 2022.

2.2.3 Changes in the national inventory arrangements reported in the 2014 NIR

The QA/QC report for Norwegian Forest and Landscape Institute (NFLI)[4] has been revised and there has been a revision of the description of the general annual QC procedures in Annex V to better reflect the QC checks performed by the three institutions.

[4] Now Norwegian Institute of Bioeconomy (NIBIO)

A new formalized agreement has been made in 2013 between the Norwegian Environment Agency and Statistics Norway, which regulates details about the cooperation with the national air emission inventory in Norway.

3 QUANTIFIED ECONOMY-WIDE EMISSION REDUCTION TARGET

Norway's climate policy is founded on the objective of the Convention on Climate Change and the Kyoto Protocol and the scientific understanding of the greenhouse effect set out in the reports from IPCC. Thus, the policies and measures reported are seen as modifying long-term trends in anthropogenic greenhouse gas emissions and removals. Section 4.1 of Norway's sixth National Communication describes inter alia the Norwegian policy-making process, the broad political agreement on climate policy and the policy instruments.

Norwegian climate policy is based on a broad agreement between the majorities of the political parties in the Storting[5] from June 2012 (*Meld.St. 21 (2011-2012) and Innst.390 S (2011-2012*)), and the white paper outlining the Norwegian Intended Nationally Determined Contribution from February 2015 (*Meld.St. 13 (2014-2015 and* Innst. 211 S (2014-2015)).

The political agreement on climate of 2012 states the following emission targets:

- Norway will overachieve the Kyoto commitment for the first Kyoto Protocol commitment period by 10 percentage points.
- During the period up to 2020, Norway will commit to cutting global emissions of greenhouse gases equivalent to 30 per cent of Norway's emissions in 1990. Following the political agreement on climate, Norway has made a commitment under the second commitment period of the Kyoto Protocol (KP 2). Under KP 2, Norway is committed to an emission reduction that corresponds to average annual emissions over the period 2013-2020 at 84 per cent of the 1990 emission level. The commitment under KP 2 is consistent with the Norwegian target of 30 per cent reduction of emissions by 2020, compared with 1990.
- Norway will be carbon neutral in 2050.
- As part of an ambitious global climate agreement where other developed nations also undertake ambitious commitments, Norway will adopt a binding goal of carbon neutrality no later than 2030. This means that Norway will commit to achieving emission reductions abroad equivalent to Norwegian emissions by 2030.

It is also a long-term objective for Norway to become a low-emission society by 2050.

In February 2015 the government put forward a White paper outlining the new emission commitment for Norway for 2030 – towards joint fulfilment with the EU (Meld. St. 13 (2014-

[5] The Norwegian Parliament

2015)). Norway's Intended Nationally Determined Contribution (INDC) to the UNFCCC[6] would include the following elements:

- Norway will conditionally undertake a commitment to reduce emissions by at least 40 % by 2030 compared with the 1990 level.
- Norway will enter into a dialogue on joint fulfilment of its climate commitment together with the EU, with an emission reduction target of at least 40 % in 2030 compared with the 1990 level. In the period up to the Paris conference, Norway will work towards a letter of intent with the EU on joint fulfilment of this commitment.

Accordingly, Norway's INDC says that Norway is committed to a target of an at least 40% reduction of greenhouse gas emissions by 2030 compared to 1990 levels. Norway intends to fulfil this commitment jointly with the EU and its Member States. In the event that there is no agreement on a joint fulfilment with the EU, Norway will comply individually. The ambition level of at least 40% emission reduction by 2030 compared to 1990 still stands. In this situation Norway assumes that we will have access to flexible mechanisms as in the case with collective delivery with EU. Table 2.1 in the INDC provides information to facilitate clarity, transparency and understanding.

In this BR2, Norway reports on the target for the period through 2020. By 2020, Norway is committed to reduce global emissions of greenhouse gases equivalent by 30 % relative to Norway's emission level in 1990. The target was set by the Government in 2007, agreed by the Parliament (Storting) and sets the overall ambition level. It was reported pursuant to the Copenhagen Accords. In 2012, this target was made operational through the legally binding commitment for 2013-2020 under the Kyoto Protocol where average emissions in 2013-2020 shall not exceed 84 % of the 1990 level. Norway ratified the Doha amendments 12 June 2014. Thus, compliance with the commitment under KP will also imply that the 30% target for 2020 is achieved. Norway explained the relation between the target and a quantified emissions reduction commitment for an 8 years period in its submission under the KP the 8th of May 2012[7] and in the subsequent presentation to the AWG KP on the 16th of May[8].

Norway has not yet submitted its report to facilitate the calculation of its assigned amount pursuant to Article 3, paragraphs 7bis, 8 and 8bis, of the Kyoto Protocol for the second commitment period and to demonstrate its capacity to account for its emissions and assigned amount (hereinafter referred to as the report) to facilitate the calculation of the assigned amount. Since the report to facilitate the calculation of the assigned amount is closely linked to the inventory under the Kyoto Protocol, it will be submitted at a later stage.

[6] http://www4.unfccc.int/submissions/indc/Submission%20Pages/submissions.aspx

[7] FCCC/KP/AWG/2012/MISC.1 at http://unfccc.int/resource/docs/2012/awg17/eng/misc01.pdf

[8] http://unfccc.int/files/meetings/ad_hoc_working_groups/kp/application/pdf/awgkp_norway_ppt.pdf

In the report to facilitate the calculation of the assigned amount, Norway will formally decide on certain choices with regards to our implementation of the Kyoto Protocol's second commitment period. CTF table 2 describes relevant information for Norway's implementation of its KP 2 commitment and the most important aspects are summarized here in textual form. Norway will report and account for all the seven mandatory gases or groups of gases. 1990 will be used as the base year, with the exception of NF_3, for which Norway has not yet decided on. All mandatory sectors will be included and the global warming potential values from the Fourth Assessment Report of the IPCC will be used. An activity-based approach will be used for the LULUCF sector. Norway works towards comprehensive inclusion and reporting of the land sector under the Kyoto Protocol, and will, in the report to facilitate the calculation of the assigned amount formally decide on certain choices with regards to our implementation of the Kyoto Protocol's second commitment period. Formal choices of which activities that will be included for reporting under the Kyoto Protocol depends on where our methodological approaches are sufficiently well developed. All currently available mechanisms under the Convention may be used to meet the target. Future mechanisms will be considered, but a decision on this must first be taken by the COP, and if applicable, by the CMP.

The information provided in CTF table 2 does not prejudge Norway's post-2020 approach.

CTF table 2a. Description of quantified economy-wide emission reduction target: base year [a]

NORWAY		
Base year/base period	1990	
Emission reduction target	% of base year: 30%[c]	% of 1990[b]: 30%
Period for reaching target	2020[c]	

[a] Reporting by a developed country Party on the information specified in the common tabular format does not prejudge the position of other Parties with regard to the treatment of units from market-based mechanisms under the Convention or other market-based mechanisms towards achievement of quantified economy-wide emission reduction targets.

[b] Optional.

[C] The commitment for 2013-2020 under the Kyoto Protocol is consistent with the 2020 target, and the 2020 target is operationalized through this commitment. The accounting rules under the Kyoto Protocol, including for LULUCF, applies both to the 2020 target and the commitment under the Protocol. See chapter 3 in the BR2 for further details.

CTF table 2b. Description of quantified economy-wide emission reduction target: gases and sectors covered [a]

Gases covered	Base year for each gas (year):	
CO_2	1990	
CH_4	1990	
N_2O	1990	
HFCs	1990	
PFCs	1990	
SF_6	1990	
NF_3	Not yet decided	
Other gases	NA	
Sectors covered [b]	Energy	Yes
	Transport [c]	Yes
	Industrial processes [d]	Yes
	Agriculture	Yes
	LULUCF	Yes
	Waste	Yes
	Other (specify)	NA

Abbreviations: LULUCF = land use, land-use change and forestry.

[a] Reporting by a developed country Party on the information specified in the common tabular format does not prejudge the position of other Parties with regard to the treatment of units from market-based mechanisms under the Convention or other market-based mechanisms towards achievement of quantified economy-wide emission reduction targets.

[b] More than one selection will be allowed. If Parties use sectors other than those indicated above, the explanation of how these sectors relate to the sectors defined by the IPCC should be provided.

[c] Transport is reported as a subsector of the energy sector.

[d] Industrial processes refer to the industrial processes and solvent and other product use sectors.

CTF table 2c. Description of quantified economy-wide emission reduction target: global warming potential values (GWP) [a]

Gases	GWP values [b]
CO_2	Fourth Assessment Report of the IPCC
CH_4	Fourth Assessment Report of the IPCC
N_2O	Fourth Assessment Report of the IPCC
HFCs	Fourth Assessment Report of the IPCC
PFCs	Fourth Assessment Report of the IPCC
SF_6	Fourth Assessment Report of the IPCC
NF_3	Fourth Assessment Report of the IPCC
Other gases	NA

Abbreviation: GWP = global warming potential

[a] Reporting by a developed country Party on the information specified in the common tabular format does not prejudge the position of other Parties with regard to the treatment of units from market-based mechanisms under the Convention or other market-based mechanisms towards achievement of quantified economy-wide emission reduction targets.

[b] Please specify the reference for the GWP: Second Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) or the Fourth Assessment Report of the IPCC.

CTF table 2d. Description of quantified economy-wide emission reduction target: approach to counting emissions and removals from the LULUCF sector [a]

Role of LULUCF	LULUCF in base year level and target	Included in target year [b]
	Contribution of LULUCF is calculated using	Activity-based approach with accounting rules as applied under the Kyoto Protocol

Abbreviation: LULUCF = land use, land-use change and forestry.

[a] Reporting by a developed country Party on the information specified in the common tabular format does not prejudge the position of other Parties with regard to the treatment of units from market-based mechanisms under the Convention or other market-based mechanisms towards achievement of quantified economy-wide emission reduction targets.

CTF table 2(e)I. Description of quantified economy-wide emission reduction target: market-based mechanisms under the Convention [a]

	Possible scale of contributions
CERs	All available mechanisms that can be used for compliance under the Kyoto Protocol may be used to meet the target. The net contribution of units through the mechanisms could be about 90 million tonnes for the whole 2013-2020 period.
ERUs	
AAUs [b]	
Carry-over units [c]	
Other mechanism units under the Convention (specify) [d]	

Abbreviations: AAU = assigned amount unit, CER = certified emission reduction, ERU = emission reduction unit.

[a] Reporting by a developed country Party on the information specified in the common tabular format does not prejudge the position of other Parties with regard to the treatment of units from market-based mechanisms under the Convention or other market-based mechanisms towards achievement of quantified economy-wide emission reduction targets.

[b] AAUs issued to or purchased by a Party.

[c] Units carried over from the first to the second commitment periods of the Kyoto Protocol, as described in decision 13/CMP.1 and consistent with decision XX /CMP.8.

[d] As indicated in paragraph 5(e) of the guidelines contained in annex I of decision 2/CP.17.

CTF table 2(e)II. Description of quantified economy-wide emission reduction target: other market-based mechanisms [a]

	Possible scale of contributions
NA	Norway will not use other market mechanisms than those eligible for meeting Norway's commitment under KP2.

Abbreviations: AAU = assigned amount unit, CER = certified emission reduction, ERU = emission reduction unit.

[a] Reporting by a developed country Party on the information specified in the common tabular format does not prejudge the position of other Parties with regard to the treatment of units from market-based mechanisms under the Convention or other market-based mechanisms towards achievement of quantified economy-wide emission reduction targets

4 PROGRESS IN ACHIEVEMENT OF QUANTIFIED ECONOMY-WIDE EMISSION REDUCTION TARGETS AND RELEVANT INFORMATION

4.1 Mitigation actions and their effects

4.1.1 General overview on mitigation actions and their effects

The polluter pays principle is a cornerstone of the Norwegian policy framework on climate change. The policy should be designed to yield the greatest possible emission reductions relative to effort, and should result in emission reductions both in Norway and abroad.

General policy instruments are key elements of domestic climate policy. Cross-sectoral economic policy instruments (e.g. CO_2 tax) form the basis for decentralised, cost-effective and informed actions, where the polluter pays. In areas subject to general policy instruments, additional regulation should as a main rule be avoided. At the same time, the possibility of employing other policy instruments in addition to emission trading and taxes is to be continued, also in these sectors. For example, development of new technology in Norway might help bring about a faster transition to use of more climate friendly technologies.

In accordance with the broad political agreement on climate of 2012, Norway will particularly focus on measures that are cost-effective in the light of expectations of rising carbon prices over the lifetime of the investments, and which are not necessarily triggered by current policy instruments. This applies particularly to measures that promote technological development and to measures that mobilize earlier adoption by the population of consumer patterns that yield lower emissions.

More than 80 per cent of domestic greenhouse gas emissions are from 2013 either covered by the emissions trading scheme, subject to a CO_2 tax, or other taxes directed to reduce greenhouse gas emissions, or both. Certain sources of emissions may be difficult to incorporate into the emissions trading scheme or to make subject to a CO_2 tax. In such cases, other instruments to reduce greenhouse gas emissions may be more appropriate.

In addition to demand-side instruments like emission trading and taxes, support to research on and innovation of climate-friendly technologies should provide complementary support where markets do not provide the solutions.

Norway has over the years introduced several policies and measures that have reduced the GHG emissions. Chapter 4 and section 5.3 of Norway's sixth National Communication describe these policies and measures and estimate the effect these have had on the historical and projected emissions. According to the estimates, the GHG emissions in 2010 would have been 12.6-15.2 million tonnes of CO_2 equivalents higher than observed, if these policies and measures had not been implemented. GHG emissions would be 17.1-20.1 million tonnes higher in 2020 and 17.8-20.5 million tonnes higher in 2030. The estimates prepared for the NC6 are illustrated in figure 3 below.

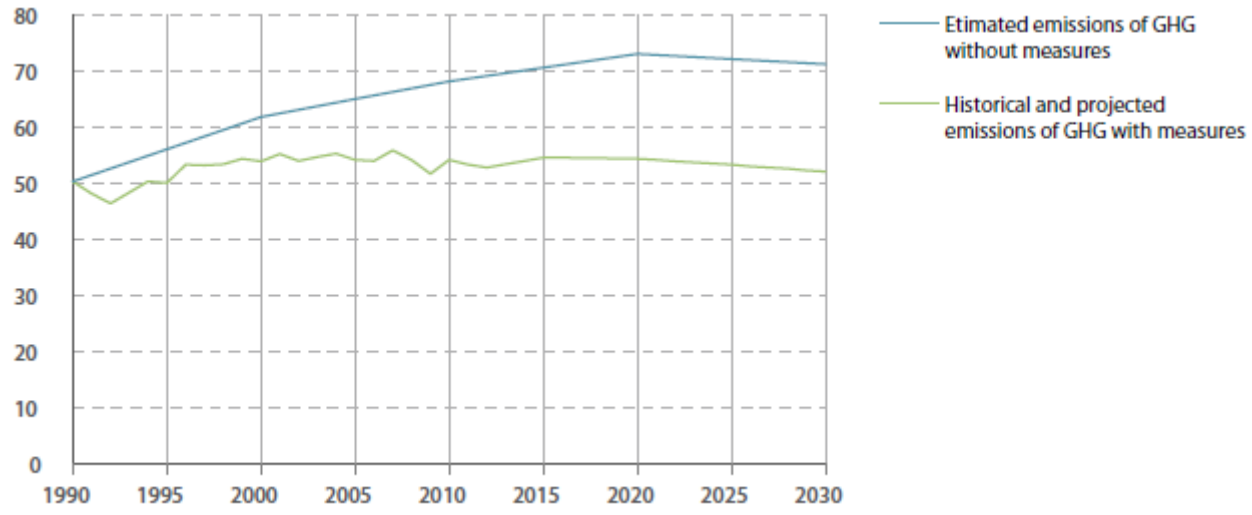

Figure 3. Emissions with and without measures (million tonnes CO_2 equivalents). Sources: Statistics Norway, Norwegian Environment Agency and Ministry of Finance.

The UNFCCC biennial reporting guidelines call for information on mitigation actions, including the policies and measures that have been implemented or are planned to be implemented since the last national communication or biennial report. In CTF table 3, Norway therefore identifies important policies and measures that are new or changed since Norway reported its sixth National Communication and first Biennial Report in 2014. For the policies and measures included in CTF table 3, and for which the mitigation effect have been quantified, the total effect in 2020 is estimated to be between 270 and 370 kilotons of CO_2 equivalents. The policies and measures are further described below.

For some of the policies and measures in CTF table 3 the impact in terms of GHG reductions have not been estimated (NE). There are good reasons for this. Firstly, the CTF table 3 should include effects of new or changed policies and measures since 2014, and for many there are methodological difficulties in isolating the mitigation effect of a change or adjustment. Secondly, as for the policies and measures reported in the NC6, there are methodological difficulties in isolating the mitigation effect from one policy and measure to another, or from other factors that may influence emissions.

Thus, although the notation key NE (not estimated) is used, the various policies and measures are likely to have an impact in terms of GHG reductions. We believe it useful to display the range that have been adopted or are to be implemented even if the impact of the action has not been quantified.

CTF table 3. Progress in achievement of the quantified economy-wide emission reduction target: information on mitigation actions and their effects

Name of mitigation action. [a] (* = included in with measures in the GHG projection scenario)	Sector(s) affected [b]	GHG(s) affected	Objective and/or activity affected	Type of instrument [c]	Status of implementation [d]	Brief description [e]	Start year of implementation	Implementing entity or entities	Estimate of mitigation impact (not cumulative, in ktons CO_2 eq.)	
									2020	2030 [f]
Base tax on mineral oils.*	Energy	CO_2	Reduce energy consumption	Economic	Implemented	Increase in base tax on mineral oils of NOK 200 per tonne of CO_2 in 2014.	2000. Increase in 2014.	Ministry of Finance	50−100	50−100
CO_2 tax on mineral products.*	Energy	CO_2	Reduce emissions	Economic	Implemented	Increased tax rates, see footnote.[j]	1991. Increases in 2014-2015	Ministry of Finance	100−150	100−150
Tax on HFCs and PFCs in products.*	Mainly refrigeration, heat-pump and air-conditioning (incl. passenger cars) sector.	HFCs PGCs	Reduce emissions	Economic	Implemented	Tax rate increased (in real terms) by NOK 100 per tonne of CO_2 equivalents in 2014 and by NOK 17 in 2015. The tax will be increased to 383 NOK in 2016.	2003. Increases in tax rate in 2014, 2015 and 2016.	Ministry of Finance	NE	NE
The Norwegian Energy fund, Enova.*	Multiple sectors, e.g. transport, energy and industry, services, and household.	All GHG gases.	Contribution to an environmentally friendly change in the consumption and production of energy and the development of energy and climate technologies.	Economic	Implemented.	Expanded in 2015 to include transport. Increased budget.	2002, extended in 2012. Transport included in 2015.	Enova SF	NE	NE
The Fund for Climate Mitigation measures, Renewable Energy and Energy Transition.*	Multiple sectors, including energy,	All GHG gases	Provides finance for other climate and energy initiatives, mainly the Energy fund.	Economic	Implemented	The capital has been increased yearly since 2012.	2002, extended scope from 2012. The fund increased its	Ministry of Petroleum and Energy	NE	NE

	transport, industry.						capital in 2014 and 2015.			
Energy requirements in the building code (TEK)	Buildings	CO_2	Reduce use of fossil fuels and energy demand in new buildings.	Regulatory	Implemented	Requirements strengthened to "passive house level" in 2015, including ban on fossil fuels in new buildings.	2007 (energy supply).	Ministry of Local Government and Modernisation	NE	NE
The Environmental technology scheme.*	Multiple sectors	All GHG-gases	Green competitiveness, reduced emissions, green growth.	Economic	Implemented	Support to pilot and demonstration projects environmental technology.	2010. Increased funding in 2016 to NOK 505 million from NOK 173 and 330 million in 2014 and 2015, respectively.	Ministry of trade, industry, and fisheries	NE	NE
Lower vehicle- taxes for low and zero emission vehicles.*	Transport	CO_2	Reduce emissions from new cars.	Economic	Implemented	In both years since BR1 more weight has been added on CO_2 emissions in the registration tax.	2007. Adjusted annually 2009-2015.	Ministry of Finance	NE	NE
Mandatory biofuels sales in road transport.	Transport	CO_2	Reduce emissions	Regulatory	Implemented	In order to increase the use of biofuels, a mandatory turnover is in place.	2009 (2.5%), increased in 2010 (3.5%) and 2015 (5.5%).	Ministry of Climate and Environment	120	90
Stimulate walking and the use of bicycles.*	Transport	CO_2	Increase cycling and walking.	Economic	Implemented	The scheme provides grants for local governments to invest in cycling infrastructure.	2014.	Ministry of Transport and Communications/Norwegian Public Roads Administration	NE	NE
Reward scheme for public transport.*	Transport	CO_2	Increasing shares of public transport at the same time as managing traffic with private cars by including a goal of	Economic	Implemented	Reward scheme for the largest cities. Makes grants available to local governments for increased level of service for public transport. Local governments are	2004, budget increase in 2015.	Ministry of Transport and Communications	NE	NE

			zero growth during the period.			encouraged to apply restrictions in automobile use.				
Investments in railway infrastructure.	Transport	CO_2	Developing a competitive railway transport system for passengers and freight.	Economic	Implemented.	The broad political agreement on climate gives high priority to developing a competitive railway transport system.	Budget increases in 2014, 2015 and 2016	Ministry of Transport and Communications	NE	NE
Biogas.	Agriculture	CH_4, N_2O,	Reduce emissions	Economic	Implemented	Subsidies to stimulate deliveries of livestock manure to biogas plants.	2014	Ministry of Agriculture and Food	NE	NE
Grants for biogas – projects.	Agriculture and transport	CH_4, N_2O, CO_2	Reduce emissions	Economic	Implemented	Grants given to pilot projects to increase production and use of biogas.	2015	Ministry of Climate and Environment	NE	NE
Green renewal of the fleet of cargo vessels in domestic coastal operation.*	Transport	CO_2	Phase out of old vessels with low energy efficiency and introduction of new low emission vessels.	Economic	Planned	A grant scheme for demolition of old non-efficient vessels, combined with a green loan scheme for new low emission vessels.	Planned implemented in 2016.	Ministry of trade, industry, and fisheries	NE	NE
Denser spacing between forest seedlings in regular forest plantations.	LULUCF	CO_2	Enhanced carbon sink compared to baseline.	Economic	Planned	Increase the number of plants to an optimum level from a climate perspective in order to enhance net carbon sequestration.	Planned implemented in 2016.	Ministry of Agriculture and Food	NE	NE
Fertilization of forests.	LULUCF	CO_2	Enhanced carbon sink compared to baseline.	Economic	Planned	Fertilization can sustain or improve sequestration of carbon where scarcity of nitrogen on existing forest areas limits plant growth.	Planned implemented in 2016.	Ministry of Agriculture and Food	NE	140-270[g]
Genetically improvement, plant breeding.	LULUCF	CO_2	Enhanced carbon sink compared to baseline	Economic	Partly implemented. Enhanced action planned.	Genetically improvement means to single out robust plants which can	Planned implemented in 2016.	Ministry of Agriculture and Food	NE	NE

						improve the forest stand increment and quality.				
Increased afforestation to enhance carbon stock and sequestration.	LULUCF	CO_2	Increase forest carbon stock and net CO_2 sequestration.	Economic	Implemented	Planting trees on areas in early successional stages and/or areas without existing forests will expand forested areas and increase carbon sequestration.	2015. (pilot project)	Ministry of Climate and Environment and Ministry of Agriculture and Food	NE	NE
Restoration of organic soils.	LULUCF Agriculture	CO_2, CH_4, N_20	Reduce soil carbon emissions from peatlands, increase net sequestration.	Economic	Implemented	Emissions from drained organic soils can be reduced by restoring trenches made for drainage on peatlands.	2015 (Pilot study). Planned extension in 2016.	Ministry of Climate and Environment	NE	NE

Note: The two final columns specify the year identified by the Party for estimating impacts (based on the status of the measure and whether an ex post or ex ante estimation is available).

Abbreviations: GHG = greenhouse gas; LULUCF = land use, land-use change and forestry.

[a] Parties should use an asterisk (*) to indicate that a mitigation action is included in the 'with measures' projection.

[b] To the extent possible, the following sectors should be used: energy, transport, industry/industrial processes, agriculture, forestry/LULUCF, waste management/waste, other sectors, cross-cutting, as appropriate.

[c] To the extent possible, the following types of instrument should be used: economic, fiscal, voluntary agreement, regulatory, information, education, research, other.

[d] To the extent possible, the following descriptive terms should be used to report on the status of implementation: implemented, adopted, planned.

[e] Additional information may be provided on the cost of the mitigation actions and the relevant timescale.

[f] Optional year or years deemed relevant by the Party.

[g] Provided that the economic incentives will increase the level of forest fertilization (150 kg nitrogen per ha) to 5000 - 10 000 ha annually in 10 years

[h] In a review of the taxation scheme for cars, presented in the revised budget for 2015, the Government presented policy for putting more weight on emissions in the registration tax in the future.

[j] The estimate includes the following:

Increase in the general CO_2 tax on mineral oil of NOK 100 per tonne of CO_2 in 2014
Increase in the CO_2 tax on mineral oil used for fishing and catching in inshore waters of NOK 50 in 2014

Increase in the general CO_2 tax on natural gas and LPG of NOK 50 in 2014 and NOK 75 in 2015.

Increase in the CO_2 tax on domestic aviation covered by the EU ETS of NOK 50 in 2014 and NOK 190 in 2015

Increase in the CO_2 tax on other domestic aviation by NOK 50 in 2014 and NOK 75 in 2015.

4.1.2 Information on specific areas of mitigation actions

4.1.2.1 Base tax on mineral oils

Base tax on mineral oils was increased 50 percent in 2014. The tax was introduced in 2000 to avoid substitution of electricity and district heating when electricity tax was raised. Subsequently the base tax was raised to the same level as the electricity tax measured by the heat content of the fuel. Since 2014 energy taxation of mineral oils exceeds that of electricity. The base tax applies to use onshore also when CO_2-emissions require quotas, while use of mineral oils offshore is exempted the base tax. The mitigation effect of the increase in the base tax on mineral products in 2014 is estimated to 50-100 kt. CO_2-eq in 2020 and 2030.

4.1.2.2 CO_2 tax on mineral products

The mitigation effect of increased CO_2 tax rates on mineral products in 2014 and 2015 is estimated to 100-150 kt. CO_2-eq in 2020 and 2030. The estimate includes an increase in the general CO_2 tax on mineral oil as well as in the CO_2 tax rates for mineral oil used for fishing and catching in inshore waters and domestic aviation, respectively, and an increase in the general CO_2 tax on natural gas and LPG. The estimate is *inter alia* based on assumptions of the price elasticity of demand.

4.1.2.3 Tax on HFCs and PFCs in products

The growth trend in HFC and PFC emissions from product use was slowed following introduction of a tax on import and production of HFCs and PFCs in 2003. From the 1st of January 2014, the tax increased by about 100 NOK to NOK 330 (approximately EUR 40) per tonne of CO_2 equivalents and was increased further to 354 NOK in 2015, and will be increased further to 383 NOK in 2016. It is assumed that the tax has reduced the growth in emissions, but we have not estimated the reduced emissions from the tax increases in 2014 and 2015.

4.1.2.4 Fund for Climate Mitigation Measures, Renewable Energy and Energy Transition

The Fund for Climate Mitigation Measures, Renewable Energy, and Energy Transition is a capital fund of which the return is used to finance climate mitigation and energy conversion measures through Enova and other climate initiatives. By 2015 the fund has a capital of NOK 53 500 millions. The capital has been increased by NOK, 9 250 million in 2014 and NOK 9 250 million in 2015. In 2016 the government will increase the capital by another 14 250 million. In 2015 the return from the fund was NOK 1 418 million which was transferred to the Energy Fund (see chapter 4.1.2.5).

4.1.2.5 The Norwegian Energy fund, Enova

The Energy Fund is a policy instrument to ensure a long-term, predictable and stable source of finance to promote an environmentally friendly change in the consumption and production of energy, and the development of energy and climate technologies. The activity should contribute to enhanced security of supply and reduced emissions of greenhouse gases. The Energy Fund is a government fund owned by the Ministry of Petroleum and Energy. The state enterprise Enova manages the Energy Fund. Enova's obligations are specified in an agreement between the Ministry and Enova. The current agreement runs from 2012 until 31 December 2016. The Energy Fund is financed by means of a levy on the electricity grid tariff, as well as through the annual returns from the Fund for Climate Mitigation Measures, Renewable Energy, and Energy Transition. The Energy Fund also generates interest which contributes to the Energy Fund's budget. The government body Transnova was established in 2009 to reduce GHG-emissions from the transport sector. 1st of January 2015 Transnova's tasks were transferred to Enova and Enova's mandate was expanded to include reduced GHG-emissions from the transport sector. The transfers to the Energy Fund increased from NOK 1.9 billion in 2014 to NOK 2.2 billion in 2015. This includes transport which was formerly financed through Transnova which had a budget of NOK 100 million in 2014. The government will further increase the transfers to the Energy Fund to NOK 2.3 billion in 2016. The increases are financed from increased returns from the fund for Climate Mitigation Measures, Renewable Energy and Energy Transition and from direct transfers in the state budget.

The effect on national emissions from Enova's activities is the calculated reduction of annual CO_2 emissions as a result of the reduced oil consumption estimated from Enova's energy results. Other measures, such as taxes and regulations, also have an impact on projects supported by Enova. For this BR2, it has not been possible to estimate an effect for 2020 or 2030 from the changes since 2014.

4.1.2.6 Energy requirements in the building code

The Norwegian technical building regulation code under the Planning and Building Act contains specific energy demand requirements for all new buildings. It is also required that energy supply solutions ensure an environmentally friendly energy supply. Through the broad political agreement on climate of 2012, the Storting has requested the change of the energy requirements in the building code to "passive house level" by 2015 and "nearly zero energy level" by 2020. In November 2015, new energy requirements were adopted by the Ministry of Local Government and Modernization. This entails more stringent energy efficiency requirements applicable to new buildings, predicted to between 20 and 25 percent compared to current levels. The new requirements also prohibit installation of new fossil energy solutions in all new buildings. The requirements to energy supply solutions are simplified and opens for more use of electricity for heating. These new requirements will enter into force on the first of January 2016. There will be a transition period until the first of January 2017.

4.1.2.7 The Environmental Technology Scheme – Innovation Norway

The environmental technology scheme was established in 2010. The overall target of the scheme is to encourage the Norwegian industry to bring the results from more projects on environmental technology to the marked, see Norway's sixth National communication chapter 4.3.2.8 for more information. During the period 2013 to 2015 NOK 781 million was provided to 222 projects. The funding to the scheme will increase from NOK 173 and NOK 330 million in 2014 and 2015, respectively, to NOK 505 million in 2016.

4.1.2.8 Green renewal of the fleet of cargo vessels in domestic coastal operation

Norway gives priority to development of more environmentally friendly shipping. To increase the efficiency of the vessels engaged in domestic transportation of cargo, the government has established a mechanism for renewal of the fleet. The mechanism which will be available in 2016 contains a grant scheme for demolition of old ships combined with a loan scheme which will be available for newbuilds of low emissions cargo vessels to be engaged in domestic traffic.

4.1.2.9 Lower vehicle- taxes for low and zero emission vehicles

The average CO_2 emissions from new cars have been reduced from an average of 177 g/km in 2006 to 110 g/km in 2014. The first eleven months of 2015 the average CO_2 emissions from new cars have been 99 g/km. There are several reasons for this reduction. Firstly, the motor vehicle registration tax rewards vehicles with low CO_2 emissions and penalises vehicles with high emissions. Secondly, electric vehicles have a high market share of new cars sold in Norway, due to strong tax and user subsidies. In addition, hybrid vehicles have a significantly lower registration tax and it can be assumed this has led to a higher market share than we see in other countries. In addition to the vehicle taxes and the subsidies for electric vehicles, EU emission standards for motor vehicles have contributed to the reduction in emissions. The registration tax on cars depends on the weight, engine power, and CO_2 and NO_X emissions of the car. The CO_2 element was introduced in 2007 and gives strong economic incentives to choose cars with low CO_2 emissions. The CO_2 element has been adjusted several times after the introduction in 2007.

The broad agreement on climate policy from 2012 (*Innst.390 S (2011-2012*)) adopted a target where the average emissions from new passenger cars in 2020 shall not exceed an average of 85 grams CO_2/km. In a review of the taxation scheme for cars, presented in the revised budget for 2015, the Government decided to prolong the subsidies for electric vehicles and to put more weight on emissions in the registration tax in the future. For 2016 the registration tax will again be changed by putting more weight on emissions of CO_2- and NO_X.

4.1.2.10 Mandatory biofuels sales in road transport

In order to increase the use of biofuels, there is a mandatory biofuels sales in Norway. A sales obligation was introduced in 2009, committing the economic operators to sell at least 2.5 per

cent biofuels as a share of fuels sold for road transport, measured in volume (litres). Since April 2010, 3.5 per cent of the total yearly amount of fuel sold for road transport must be biofuels and the requirement was increased to 5.5 per cent from the 1st of October 2015.

As of 1 January 2014, sustainability criteria must be met by all biofuels and bio liquids included in renewable energy targets of government support schemes and used for fulfilment of the sales obligation. The sustainability criteria are the EU criteria implemented in the Fuel Quality Directive and the Renewable Energy Directive. Since 1 January 2014, to promote biofuels with better climate effects, biofuels produced from wastes, residues, non-food cellulosic material, and ligno-cellulosic material count as twice the actual amount when calculating fulfilment of the sales obligation. Norway also aims to promote development of the value chain for second generation biofuels.

Norway imposes CO_2 tax on mineral products. This entails that petrol and diesel are subject to CO_2 tax, whereas bio ethanol, biodiesel and hydrogen are not. Since October 1st 2015 only biofuels reported under the sales obligation is subject to the road usage tax. Biofuels reported under the sales obligation is subject to a road usage tax corresponding to its fossil alternative. Biofuels not used in the fulfilment of the sales obligation are not subject to the road usage tax.

The use of biofuels, blended or pure, has led to reduced CO_2 emissions from road vehicles as the content of bio fuels in petrol and auto diesel has increased since 2006. The isolated effect of increasing the requirement from 3.5 per cent to 5.5 percent will be to reduce CO_2 emissions by 160 kilotons. However, since the content of bio fuels in the projections is higher than the 3.5 per cent requirement, the added effect in 2020 and 2030 is lower. The additional effect of the new requirement is therefore estimated to about 120 kilotons CO_2 in 2020 and 90 kilotons in 2030. The possible additional effect on the use of biofuels from the tax changes in 2015 is uncertain.

4.1.2.11 Stimulate walking and the use of bicycles

Through the broad political agreement on climate of 2012 the Storting has adopted a goal of absorbing the growth in passenger transport in major urban areas through public transport, cycling and walking. For 2016 there is a funding of 625 million NOK to walking and cycling through the Norwegian Public Roads Administration. In addition to this funding, in 2014, a grant scheme for bicycle paths was established to make grants available for local governments to invest in cycling infrastructure. The scheme was granted NOK 10 million in 2014 and NOK 95 million in 2015. The government will grant 162.5 million NOK to the scheme in 2016. It is not possible to estimate the effect on CO_2 from this policy and measure since it will depend on how the grants are spent, and that is not yet evident. For the cycling/walking paths it is up to the municipalities to apply for funding, and therefore it is not clear where the paths will be established, and hence not clear what effect it can be expected to have on traffic.

4.1.2.12 Reward scheme for public transport

The reward scheme for the largest cities was originally established in 2004 to make grants available to local governments that achieve positive results increasing shares of public transport

at the same time as managing traffic with private cars. The grant should be spent on increased level of service for public transport (higher frequency, improved travel speeds, etc.), and the local governments are encouraged to apply restrictions in automobile use (congestion charges, local fuel taxes, reduced parking, building regulations, etc.). In 2014 the scheme was granted NOK 1 010.3 million, a gross increase of more than NOK 300 million compared to the 2013 budget. In 2015, the scheme granted NOK 1.3 billion. For 2016, the government will grant NOK 1.4 billion. It is not possible to estimate the effect on CO_2 from this policy and measure as such since it will depend on how the grants are spent, which is not yet evident. For the reward scheme for public transport the effect on emissions will depend on the outcome of negotiations between the state and the municipalities applying for funds.

4.1.2.13 Investments in railway infrastructure

The broad political agreement on climate gives high priority to developing a competitive railway transport system for passengers and freight. Emphasis is placed on improving the passenger rail network around the big cities and improving capacity for freight transport. There have been substantial increases in funding for investment in new railways maintenance of existing railways. The railway sector was granted NOK 19.4 billion in 2014, a gross increase of 4.5 billion NOK compared to 2013, when the sector was granted NOK 14.9 billion. In 2015, the sector has been granted NOK 21.5 billion. The government will grant 21. billion in 2016. Chapter 4.3.5.9 in Norway's NC6 gives an overview of the plans for the railway sector in Norway and the expected reductions in CO_2 emissions of these plans. It has not been possible to estimate an effect in terms of reduced GHG emissions from the increased investments since 2014.

4.1.2.14 Biogas

The Ministry of Climate and Environment launched a national cross-sectoral biogas strategy in 2014. Biogas, when replacing the use of diesel, is a mitigation measure that also can reduce local air pollution and noise. In 2015, the government introduced a 10 million NOK grant to support biogas pilot projects. The grant will be increased to 20 million NOK in 2016. The pilot plants will aim to test technology for biogas produced from e.g. livestock manure, and contribute to future cost reductions and increase future emission reductions in the agricultural sector. The government has also introduced a monetary support scheme to stimulate deliveries of livestock manure to biogas plants. Other existing general measures to support investment in renewable energy and bioenergy are relevant, and have been strengthened. No effect of the measures has been estimated.

4.1.2.15 Carbon capture and storage

The government has made CCS one of its five prioritised areas of enhanced national climate policy. The Government aims to realise at least one large-scale project by 2020, and grants approximately 70 mill. NOK through the 2016 state budget for further studies on relevant projects in Norway. Norway has also increased funds for research programs through CLIMIT, granted funding for future investments at Technology Centre Mongstad, and has committed to

provide significant funds internationally, including towards the realization of a European CCS-project through an ERA-NET Cofund.

4.1.2.16 Mitigation actions in Norwegian forestry

Norway has an active forest policy, aiming to increase carbon- sequestration and the forest carbon stock. Forests represent an important source of renewable energy, and contributes to production of wooden materials that can replace materials with a stronger carbon footprint. The broad political climate agreement in the Storting from June 2012 states that an active, sustainable forestry policy will support the overall climate policy. Through the political climate agreement from 2012, the Storting calls for several actions to contribute to increasing the CO_2 uptake and carbon stocks in the forestry sector. Several of these mitigation actions are included in the National Budget for 2016. The government will spend NOK 33 million to increasing plant density, forest fertilization and to reinforcing efforts in forest plant breeding.

It is difficult to quantify the mitigation effects of slow growing boreal forests in a short timescale (2020-2030). Fertilization of forests is the only mitigation action where the contribution to increased removals is quantified by 2030. The Ministry of Agriculture and Food has estimated that the suggested increased support in 2016 will increase the level of forest fertilization (150 kg nitrogen per ha) to between 5000 and 10 000 hectares (ha) annually in 10 years as expected. The mitigation impact is estimated to be in the range of 140-270 kilotons CO_2 equivalents in 2030.

On a longer timescale (100 years), mitigation actions in the LULUCF sector can contribute significantly to increasing the removals of greenhouse gases and thereby stabilizing the concentration of greenhouse gases in the atmosphere at a lower level.

4.1.2.17 Increased afforestation to enhance carbon stock and sequestration

The Norwegian Ministry of Climate and Environment and the Ministry of Agriculture and Food implemented in 2015 a pilot project with the objective to increase the CO_2 sequestration and forest carbon stock by planting forest on areas in early successional stages and/or areas without existing forests. The pilot has a budget on NOK 15 million in 2016. Planting on such areas will increase CO_2 sequestration in Norwegian forests on a long-term scale due to the long rotational cycles of boreal forests. The effect of the pilot project is likely to be low in 2020 and 2030 due to the long rotational cycles of boreal forests.

4.1.2.18 Restoration of organic soils

In addition to mitigation efforts within forestry, efforts to reduce emissions from other sources in the LULUCF sector are also in place. A pilot study to reduce emissions from soil carbon stored in peatlands by restoration of drained organic soils was executed in 2015. In 2016, the government will use 13 mill. NOK on restoration of peatlands. The government will also draw

up a plan to restore peatlands in the period 2016-2020. Restoration of peatlands is a long term mitigation effort, and the emission effect until 2020 and 2030 is uncertain.

4.2 Changes in domestic institutional arrangements

The UNFCCC biennial reporting guidelines encourage Parties to provide 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 towards its economy-wide emission reduction target.

Chapters 4.2 and 4.3 of Norway's sixth National Communication describes the current domestic institutional arrangements. Norway has several legislative arrangements in place in order to help reduce emissions of greenhouse gases, such as the Pollution Control Act, the Greenhouse Gas Emissions Trading Act, the CO_2 Tax Act, and the Petroleum Act, as well as requirements under the Planning and Building Act. There have not been any changes to these arrangements since Norway reported its sixth National Communication.

4.3 Assessment of economic and social consequences of response measures

The UNFCCC biennial reporting guidelines encourage Parties to provide, to the extent possible, detailed information on the assessment of the economic and social consequences of response measures. Norway's approach to minimization of adverse impacts of mitigation actions in accordance with Articles 2.3 and 3.14 of the Kyoto Protocol is described in chapter 4.1.6 in the NC6. The information is summarized below and further information is found in the NC6.

Norway has strived to follow a comprehensive approach to climate change mitigation from policy development started around 1990, addressing all sources as well as sinks. One of the concerns behind this policy is to minimize adverse effects of climate policies and measures.

In the environmental, as well as the economic and energy policy development, Norway strives to base the policy on the polluter pays principle and to have a market-based approach where prices reflect costs including externalities. As regards emissions of greenhouse gases, costs of externalities are reflected by levies and by participation in the European Emissions Trading Scheme (EU ETS). These instruments place a charge on emissions of greenhouse gases. Norway believes that the best way to reduce emissions on a global scale, in line with the two degree target, is to put a global price on carbon. Putting a global price on carbon is the most efficient way to ensure cost-effectiveness of mitigation actions between different countries and regions, and secure equal treatment of all emitters and all countries. This will help minimize adverse impacts of mitigation.

Norway has given priority to development of carbon capture and storage (CCS) as a mitigation option. The national CCS projects in operation are in the petroleum sector, and Norway strives to disseminate information and lessons learned, both through international fora, and through bilateral cooperation with developing and developed countries.

Norway has also initiated cooperation with developing countries related to fossil fuels: Oil for Development (OfD).[9] This initiative aims at responding to requests for assistance from developing countries, in their efforts to manage petroleum resources in a way that generates economic growth and promotes the welfare of the whole population in an environmentally sound way.

Furthermore, Norway is involved in several initiatives fostering technology transfer and capacity building in developing countries in shifting the energy mix away from fossil fuels to more renewable energy systems, including the Clean Energy for Development Initiative and the International Energy and Climate Initiative ("Energy+").

Norway has issued Instructions for Official Studies and Reports (Utredningsinstruksen), laid down by Royal Decree. These Instructions deal with consequence assessments, submissions and review procedures in connection with official studies, regulations, propositions and reports to the Storting. The Instructions are intended for use by ministries and their subordinate agencies. The Instructions form part of the Government's internal provisions and deviation may only be allowed pursuant to a special resolution. The provisions make it mandatory to study and clarify financial, administrative and other significant consequences in advance.

In addition, Norway has a legal framework that deals specifically with environmental impact assessments. The purpose is to promote sustainable development for the benefit of the individual, society and future generations. Transparency, predictability and participation for all interest groups and authorities involved are key aims, and it is intended that long-term solutions and awareness of effects on society and the environment will be promoted.

[9] http://www.norad.no/en/thematic-areas/energy/oil-for-development

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

4.4.1 General Information

Chapters 4 and 5.3 of Norway's sixth National Communication and chapter 4.1 of this BR2 describe policies and measures that have reduced or will reduce Norway's national emissions. Chapter 5.4 of Norway's sixth National Communication explains Norway's accounting under the Kyoto Protocol for both commitment periods. The information in the NC6 is updated for this BR2 to explain the roles of market-based mechanisms and the LULUCF sector.

4.4.2 The Kyoto Protocol's first commitment period (2008-2012)

Norway's Assigned Amount under the Kyoto Protocol's first commitment period (2008-2012) of 1 per cent above the 1990-level, totalled about 250.6 million assigned amount units (AAU). Through the review of the inventory submitted in 2014, Norway's total emissions from Annex A sources in the years 2008-2012 were finalised to about 266.8 million tonnes CO2 equivalents.[j] The annual emissions for the years 2008-2012 are shown in CTF table 4.

Norway voluntarily chose to over achieve the Kyoto commitment for 2008-2012 by 10 per cent, which is equivalent to about 5 million tonnes per year. In addition Norway has purchased Kyoto units to compensate for emissions caused by governmental employees' international air travel in the years 2008-2011, and their travels in and out of the EEA during 2012, as well as emissions related to the CCS test centre at Mongstad.

A governmental procurement programme for Kyoto units was established under the Ministry of Finance in 2007. About 30 Mt Kyoto units, mostly CERs, have been contracted in respect of the first commitment period. By end December 2013 22 million units were delivered, which is above the expected delivery volume and more than sufficient to realise the overachievement, for which 21.5 Mt is seen as needed. The total expenditure for the 2008-2012 portfolio is estimated at NOK 1,447 million (EUR 175 mill). The procurement strategy for the period 2008-2012 emphasised the acquisition of units from UN-approved projects at market prices. Furthermore, a diversification of the portfolio to mitigate different risk-components was implemented. This implied inter alia the acquisition of some units from LDCs. Following the change of government in autumn 2013, the administration of the procurement programme was moved to the Ministry of Climate and Environment.

[j] See review report document FCCC/ARR/2014/NOR, http://unfccc.int/resource/docs/2015/arr/nor.pdf

The review report of the 2014 inventory also contains the final accounting quantities for activities under Article 3.3 and Article 3.4. Based on the information in the review report, Norway issued 2 614 190 removal units (RMUs) in our national registry for the activity afforestation and reforestation, issued 16 491 128 RMUs in our national registry for the activity forest management and cancelled a total of 11 771 985 units in our national registry for the activity deforestation. Norway had intended to use only RMUs for the net source cancellation for deforestation, but since the net source cancellation technically in the registry had to occur early in the process, 1 824 462 AAUs were cancelled together with 9 947 523 RMUs.

The deadline for the true up for the Kyoto Protocol's first commitment period was the 18th of November 2015. By 16 November 2015, Norway had transferred a sufficient number of units to the retirement account to meet the commitment under Article 3.1, cancelled units corresponding to the 10 per cent over achievement and cancelled units for emissions caused by governmental employees' international air travel in the years 2008-2011, and their travels in and out of the EEA during 2012, as well as emissions related to the CCS test centre at Mongstad. In addition to this, a total of 7 333 333 RMUs from forest management were cancelled in our national registry. The total overachievement is thus 13 per cent. The details for this was reported in Norway's true up period report which can be found on the UNFCCCs webpages[k]. Annex 1 shows information from Standard Electronic Format (SEF) table 4 produced after Norway's true up.

Norway stated in its "Initial report" in 2006 that RMUs issued by Norway from Article 3.4 will not be used to meet the commitment under Article 3.1. But since the registry's technically sequencing was different from what was foreseen, 1 824 462 RMUs (equal to the number of AAUs used for net source cancellation) were used in Norway's true up for the Kyoto Protocol's first commitment period. In CTF table 4, the actual contribution from LULUCF to meet the commitment under Article 3.1 for the first commitment period is 0.

Although the actual contribution from LULUCF for the Kyoto Protocol's first commitment period in CTF table 4 is 0, Norway has reported under the accounting approach under the Kyoto Protocol for afforestation/reforestation and deforestation under article 3.3 of the Kyoto Protocol and on forest management under article 3.4 of the Kyoto Protocol.

As stated in chapter 2.1, errors in the KP-LULUCF tables due to a not fully functional CRF reporter software prevented Norway from reporting under the Kyoto Protocol in 2015. For this reason, it was not possible to report CTF table 4(a)II for the Kyoto Protocol's second commitment period. The CTF tables have been updated and it is no longer possible to report CTF table 4(a)II for the Kyoto Protocol's first commitment period. For these reasons, it has not been possible to report CTF table 4(a)II through the BR CTF application. However, Norway's LULUCF accounting quantities for the years 2008-2012 is included as reported in the CRF in a table in Annex 2.

CTF table 4(a)I is not relevant for Norway since an activity-based approach is used.

[k] http://unfccc.int/kyoto_protocol/reporting/true-up_period_reports_under_the_kyoto_protocol/items/9049.php

Installations in Norway are covered by the European Union Emissions Trading System (EU ETS). International transfers within the EU ETS is also part of the emissions trading scheme under the Kyoto Protocol since each unit issued in the scheme is backed by an AAU in 2008-2012. The Norwegian installations have on average delivered 4.1 million more units (AAU, ERU, and CERs)[l] annually to the Norwegian government than Norway has allocated free of charge or through sale under the EU ETS. This implies that the participation in the EU ETS in itself has led to a net acquisition of Kyoto units that has more than closed the gap between Norway's emissions and its commitment under the Kyoto Protocol's first commitment period. Thus, Norway has met its Kyoto commitment for the period 2008-2012 without any need for government purchases of Kyoto units.

In CTF table 4(b), Parties are asked to report on the amounts of units surrendered by that Party for 2013 and 2014 that have not been previously surrendered by that or any other Party. Norway's interpretation of this is that Parties should report on the number of units transferred to its retirement account each year. This is also our understanding for reporting on market-based mechanisms under the Convention in CTF table 4. We therefore report the units surrendered by the installations in Norway that were covered by the EU ETS. Note that the units surrendered for instance in 2009 are for the installations' emissions in 2008. This information is provided in Norway's SEF tables that were submitted to the UNFCCC along with the submission of Norway's NIR.[m]

CTF table 4. Reporting on progress [a,b]

	Unit	Base Year	2008	2009	2010	2011	2012
Total (without LULUCF)	kt. CO_2 eq.	NA	54,494.91	51,878.56	54,373.12	53,320.66	52,757.24
Contribution from LULUCF [d, e]	kt. CO_2 eq.	NA	0.00	0.00	0.00	0.00	0.00
Market-based mechanisms under the Convention [f]	number of units	NA	NO	19,342.24	19,217.10	19,333.29	19,132.76
	kt. CO_2 eq.	NA	NA	19,342.24	19,217.10	19,333.29	19,132.76
Other market-based mechanisms	number of units	NA	NA	NA	NA	NA	NA
	kt. CO_2 eq.	NA	NA	NA	NA	NA	NA

Abbreviation: GHG = greenhouse gas, LULUCF = land use, land-use change and forestry.

[a] Reporting by a developed country Party on the information specified in the common tabular format does not prejudge the position of other Parties with regard to the treatment of units from market-based mechanisms under the Convention or other market-based mechanisms towards achievement of quantified economy-wide emission reduction targets.

[l] Installations are allowed to use about 3 Mt CERs and/or ERUs annually for compliance in 2008-2012, but have used less than 2Mt/year.

[m] http://unfccc.int/national_reports/annex_i_ghg_inventories/national_inventories_submissions/items/7383.php

[b] For the base year, information reported on the emission reduction target shall include the following: (a) total GHG emissions, excluding emissions and removals from the LULUCF sector; (b) emissions and/or removals from the LULUCF sector based on the accounting approach applied taking into consideration any relevant decisions of the Conference of the Parties and the activities and/or land that will be accounted for; (c) total GHG emissions, including emissions and removals from the LULUCF sector. For each reported year, information reported on progress made towards the emission reduction targets shall include, in addition to the information noted in paragraphs 9(a–c) of the UNFCCC biennial reporting guidelines for developed country Parties, information on the use of units from market-based mechanisms.

[c] Parties may add additional rows for years other than those specified below.

[d] Information in this column should be consistent with the information reported in table 4(a)I or 4(a)II, as appropriate. The Parties for which all relevant information on the LULUCF contribution is reported in table 1 of this common tabular format can refer to table 1.

[e] RMUs issued by Norway have not been used to meet the commitment under Article 3.1.

[f] Units from marked-based mechanisms correspond to the units surrendered by the installations in Norway that are covered by the EU ETS.

Table 4(b)

Reporting on progress[a, b, c]

Units of market based mechanisms			*Year*	
			2013	*2014*
Kyoto Protocol units[d]	*Kyoto Protocol units*	*(number of units)*	NO	NO
		(kt CO_2 eq)	0.00	0.00
	AAUs	*(number of units)*	NO	NO
		(kt CO2 eq)	0.00	0.00
	ERUs	*(number of units)*	NO	NO
		(kt CO2 eq)	0.00	0.00
	CERs	*(number of units)*	NO	NO
		(kt CO2 eq)	0.00	0.00
	tCERs	*(number of units)*	NO	NO
		(kt CO2 eq)	0.00	0.00
	lCERs	*(number of units)*	NO	NO
		(kt CO2 eq)	0.00	0.00
Other units [d,e]	*Units from market-based mechanisms under the Convention*	*(number of units)*		
		(kt CO_2 eq)		
	Units from other market-based mechanisms	*(number of units)*		
		(kt CO_2 eq)		
Total		*(number of units)*	NO	NO
		(kt CO_2 eq)	0.00	0.00

Abbreviations: AAUs = assigned amount units, CERs = certified emission reductions, ERUs = emission reduction units, lCERs = long-term certified emission reductions, tCERs = temporary certified emission reductions.

Note: 2011 is the latest reporting year.

[a] Reporting by a developed country Party on the information specified in the common tabular format does not prejudge the position of other Parties with regard to the treatment of units from market-based mechanisms under the Convention or other market-based mechanisms towards achievement of quantified economy-wide emission reduction targets.

[b] For each reported year, information reported on progress made towards the emission reduction target shall include, in addition to the information noted in paragraphs 9(a-c) of the reporting guidelines, on the use of units from market-based mechanisms.

[c] Parties may include this information, as appropriate and if relevant to their target.

[d] Units surrendered by that Party for that year that have not been previously surrendered by that or any other Party.

[e] Additional rows for each market-based mechanism should be added, if applicable.

4.4.3 The Kyoto Protocol's second commitment period (2013-2020)

Norway's commitment implies that average annual emissions of greenhouse gases in the period 2013-2020 are to be limited to 84 per cent of emissions in 1990. As explained in chapter 3, this is in line with the target of reducing emissions by 30 per cent by 2020.

The exact number of assigned amount units (AAUs) Norway can issue for the period 2013-2020 pursuant to the commitment under Article 3.1 will in due time be set through a review process. But according to our estimates, the number of AAUs could be about 349.6 million AAUs in total for the period 2013-2020, or in average 43.7 million AAUs annually. Chapter 5 shows that Norway's emissions in the with measures scenario are likely to be higher than the expected issuance of AAUs to Norway. It is therefore important to understand the role of the LULUCF sector, how policies and measures can continue to reduce emissions and the role of carbon markets.

For the second commitment period of the Kyoto Protocol, Norway will use an activity-based approach for the LULUCF sector. The net changes in greenhouse gas emissions by sources and removals by sinks resulting from land-use change under Article 3.3 (afforestation, reforestation and deforestation), measured as verifiable changes in carbon stocks in the commitment period, are accounted for in their entirety. It is uncertain whether this contribution will amount to a net reduction or a net emission. Norway expects to be eligible to issue RMUs corresponding to 3.5 per cent of total greenhouse gas emissions in 1990 from forest management (Article 3.4), or about 14 Mt for the entire period. Norway has not yet decided whether or which emissions and removals from other voluntary activities under Article 3.4 will be included in our accounting for the second commitment period of the Kyoto Protocol.

It is uncertain how and to what extent the participation in the EU ETS will contribute to the fulfilment of the commitments for 2013-2020.

Policies and measures that will ensure compliance with the commitment for the second commitment period under the Kyoto Protocol will, to a large extent, represent a continuation of an established system, which is well integrated into Norwegian climate policy. The current guidelines for the procurement programme for Kyoto units will continue during the period 2013-2020. The programme will only acquire UN-approved credits and contribute to the development of a global carbon market.

The carbon market is currently characterized by low demand which has led to excess supply and low prices, both in the primary and secondary market. An implication of this is that a number of registered projects are not issuing credits, and the number of new projects submitted for registration is low. Owing to the changes in the carbon market, Norway will only acquire units from projects facing a risk of discontinuing their operations, or from new, as yet unregistered projects. Norway will, as in the restrictions in the EU ETS, refrain from purchasing units from so-called industrial HFC projects. Furthermore, Norway will not purchase units from coal-based energy production without carbon capture and storage. A small part of the portfolio will be procured from the UN Adaptation Fund.

Norway has allocated funds for acquisitions and has also contracted the Nordic Environment Facility Cooperation (NEFCO) to acquire 30 million tons on its behalf, and is currently in process of acquiring a further 30 million CERs through a purchase program run directly by the Ministry of Climate and Environment. Currently, Norway is targeting delivery of 60 million CERs for the period 2013-2020.

5 PROJECTIONS

5.1 Methodology

Since the BR1 was reported, the Norwegian inventory has been prepared in accordance with the revised UNFCCC Reporting Guidelines on Annual Inventories (decision 24/CP.19). This includes using the Global Warming Potential (GWP) for greenhouse gas emissions from the IPCC's fourth assessment report, new emissions sources and new methods/emission factors for calculating some emission sources. The most important change is due to the new GWP values. The projections are updated to be consistent with historical data. The update makes it more difficult to compare the projections with what was reported in BR1/NC6.

There have been no other changes in the methods or models used to project emissions.

5.2 The baseline scenario[n]

Total greenhouse gas emissions excluding LULUCF are projected to remain relatively stable during the period up to 2020, before declining somewhat by 2030, (see CTF 6(a)). This projection profile reflects that emissions from the petroleum industry are expected to rise for some years to come before declining towards 2030. According to Statistics Norway's population projections (mean projection) the high immigration over the past years is assumed to continue, leaving the population in 2030 to be 17 per cent higher than in 2013. Despite continued strong economic growth and population growth, emissions from the mainland economy (excluding oil and gas extraction) are projected to stay at approximately the same level as in the past couple of years. Emissions per capita are thus projected to fall by 17 per cent by 2030 compared with 2013, both in the total and mainland economy. In the years since 1990, emissions per capita have been reduced by 14 per cent (in the mainland economy the reduction has been close to 25 per cent).

In 2013, the LULUCF sector contributed with net removals of 26.1 million tonnes of CO_2 equivalents. As shown by the historical data in CTF table 6a, the carbon stock in living biomass in the LULUCF-sector has increased steadily during the last decades. The increase in living biomass reflects that there has been an active forest management policy in Norway over the last 60–70 years. In the period after the Second World War (1955-1992), more than 60 million trees, in average, were planted each year. Trees planted in this period now contribute greatly to the

[n] The national projections were presented in the National budget 2015 (Meld.St. 1 (2014-2015) Nasjonalbudsjettet 2015). In this report these projections are adjusted in accordance with the revised UNFCCC Reporting Guidelines on Annual Inventories. The projections are based on policies as of the 3rd quarter of 2014.

high net CO_2 sequestration in Norwegian forests. In addition, annual drain levels are much lower than the annual increments. This causes an accumulation of tree biomass, which hence increases the sequestration from forests.

Net CO_2 sequestration is however expected to decline in the coming century. This is due to a combination of an assumed increase in logging, aging of the Norwegian forests and a reduction in the number of seedlings that were planted annually in the last decades. Projections show that the contribution to net CO_2 sequestration from the LULUCF sector in 2030 will decrease to about 21.3 million tons CO_2 (CTF table 6a). Despite this development, sequestration in forest and other land areas are projected to equal about two-fifths of the aggregate greenhouse gas emissions from Norwegian territory in 2030.

Emissions of greenhouse gases other than CO_2 have been reduced by 43 per cent from 1990 to 2013. Only a slight further decrease is projected for the next two decades, see CTF 6(a). However, during the period up to 2020, the projections show that lower emissions of methane and nitrous oxide will to some extent be offset by higher emissions of HFC gases owing to the increased use of cooling appliances containing HFCs.

The development in emission from oil and gas extraction is based on the expected production profile of oil and gas. In 2030, emissions from the petroleum sector are projected to be 11 per cent lower than in 2020. Compared with the 6th national communication/1st Biennial Report, emissions in 2020 are projected at the same level while emission in 2030 is revised upwards by 0.5 million tonnes. The production of oil and gas is projected to decrease by more than emissions from 2020 to 2030. The energy needed, and thus emissions, to produce oil and gas on a field are more or less constant as long as the field produces and not necessarily correlated with the amount produced.

The emissions projections for the mainland economy are revised down by almost 1 million tonnes in 2020 and 1.4 million tonnes in 2030 compared to in the previous Biennial Report (BR1). Emissions from road transport are projected to stay at today's level in the years to come. Thus, compared to BR1, emissions from transport are projected lower in both 2020 and 2030. The emissions are adjusted downwards i.a. because the growth in transportation per person has come to a halt the past couple of years. In line with this the use of transportation is projected to follow the population growth. In comparison, the previous projections (presented in BR1), was based on the assumption of continuously growth in driven kilometres per person. Stronger environmental regulation through higher taxes on fuels and higher emission standards for cars in several countries has contributed to the development of more emission efficient cars. Norway does not produce cars, but have benefited from this development by giving incentives to motorists through the use of strong economic policy instruments. This has contributed to reduced emissions per kilometre from passenger cars. Continued strong incentives to choose emission efficient cars are partly the reason why the emission intensity in cars is estimated to fall by 1.5 per cent annually going forward.

It is assumed that energy-intensive manufacturing industries will consume approximately the same amount of electricity as in 2013. However, as a result of increased productivity, production levels in energy-intensive industries will rise somewhat over time while emissions

remain stable. Thus, the emissions per produced unit will continue to fall. The emissions from industry are projected at approximately the same level as in BR1.

Electricity generation in Norway is almost entirely based on hydro. Emissions from this sector are projected to remain at a low level in the decades to come. As opposed to other countries, Norway does not have the opportunity to reduce emissions from electricity generation by developing more renewable energy.

As in the previous projections (presented in BR1) consumption of heating oil in households is assumed to be decrease significantly by 2020 and 2030, due to continues strong incentives through high taxes and generous subsidies for phasing out boilers in household. Thus, use of heating oil in households is projected to be phased out by 2030.

CTF table 5. Summary of key variables and assumptions used in the projections analysis [a]

	Historical [b]			*Projected*	
Key underlying assumptions	1990	2000	2012	2020[c]	2030[d]
	Billion NOK. Fixed 2012-prices				
Gross domestic product	1 705	2 448	2 965	3 447	4 227
- Petroleum activities and ocean transport	480	884	670	670	611
- Mainland Norway	1 215	1 670	2 295	2 777	3 512
Consumption	597	829	1 176	1 514	2 266
Gross fixed capital formation	301	436	660	799	825
- Petroleum activities and ocean transport	84	117	182	2111	167
- Mainland Norway	214	319	478	591	673
Population in 1000	4 250	4 503	5 051	5 503	5 991
Number of persons employed in 1000	2 059	2 320	2 684	2 908	2 999
Oil price (2011-NOK)	265	350	685	545	545

[a] Parties should include key underlying assumptions as appropriate.

[b] Parties should include historical data used to develop the greenhouse gas projections reported.

[c, d] For the assumptions on GDP, consumption and gross fixed capital formation, the estimates for 2020 and 2030 are based on annual growth rates.

CTF table 6(a). Information on updated greenhouse gas projections under a 'with measures' scenario [a]

GHG emissions and removals (kt CO_2 eq)[b]

	Base year each gas (year)	1990	1995	2000	2005	2010	2011	2012	2013	2020	2030
Sector [d,e]											
Energy	19 797	19 797	21 469	24 076	25 592	27 606	26 732	26 320	26 225	27 555	25 446
Transport	10 277	10 277	11 110	11 851	12 652	13 473	13 426	13 398	13 286	13 262	13 404
Industry/industrial processes	14 493	14 493	11 620	12 075	10 609	8 197	8 192	8 196	8 274	8 581	8 446
Agriculture	5 159	5 159	5 118	5 009	4 874	4 480	4 460	4 443	4 463	4 443	4 453
Forestry/LULUCF	-10 552	-10 552	-13 674	-23 562	-24 692	-25 429	-26 842	-25 448	-26 134	-23 466	-21 271
Waste management/waste	2 301	2 301	2 186	1 880	1 630	1 578	1 561	1 515	1 476	1 012	740
Other (specify)											
Gas											
CO2 emissions including net CO2 from LULUCF	24 594	24 594	24 171	17 939	18 265	19 853	17 588	18 591	17 778	22 080	22 624
CO2 emissions excluding net CO2 from LULUCF	35 600	35 600	38 322	41 996	43 469	45 811	44 958	44 567	44 441	45 546	43 895
CH4 emissions including CH4 from LULUCF	6 417	6 417	6 566	6 363	6 056	5 785	5 633	5 555	5 574	NE	NE
CH4 emissions excluding CH4 from LULUCF	6 273	6 273	6 421	6 215	5 906	5 636	5 486	5 408	5 428	5 325	5 003
N2O emissions including N2O from LULUCF	4 470	4 470	4 106	4 233	4 477	2 892	2 883	2 880	2 840	NE	NE
N2O emissions excluding N2O from LULUCF	4 160	4 160	3 773	3 886	4 114	2 512	2 502	2 498	2 457	2 475	2 451
HFCs	0	0	92	383	614	1 065	1 106	1 141	1 155	1 218	830
PFCs	3 895	3 895	2 314,	1 519	955,	238	263	201	182	217	231
SF6	2 099	2 099	580	891	298	72	58	58	61	71	78
Other (specify, e.g. NF3)											
Total with LULUCF[f]	41 474	41 474	37 828	31 329	30 665	29 904	27 530	28 424	27 590	31 387	31 218
Total without LULUCF	52 026	52 027	51 503	54 891	55 356	55 334	54 372	53 872	53 724	54 853	52 489

Abbreviations: GHG = greenhouse gas, LULUCF = land use, land-use change and forestry.
a In accordance with the "Guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part II: UNFCCC reporting guidelines on national communications", at a minimum Parties shall report a 'with measures' scenario, and may report 'without measures' and 'with additional measures' scenarios. If a Party chooses to report 'without measures' and/or 'with additional measures' scenarios they are to use tables 6(b) and/or 6(c), respectively. If a Party does not choose to report 'without measures' or 'with additional measures' scenarios then it should not include tables 6(b) or 6(c) in the biennial report.

b Emissions and removals reported in these columns should be as reported in the latest GHG inventory and consistent with the emissions and removals reported in the table on GHG emissions and trends provided in this biennial report. Where the sectoral breakdown differs from that reported in the GHG inventory Parties should explain in their biennial report how the inventory sectors relate to the sectors reported in this table.

d In accordance with paragraph 34 of the "Guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part II: UNFCCC reporting guidelines on national communications", projections shall be presented on a sectoral basis, to the extent possible, using the same sectoral categories used in the policies and measures section. This table should follow, to the extent possible, the same sectoral categories as those listed in paragraph 17 of those guidelines, namely, to the extent appropriate, the following sectors should be considered: energy, transport, industry, agriculture, forestry and waste management.

e To the extent possible, the following sectors should be used: energy, transport, industry/industrial processes, agriculture, forestry/LULUCF, waste management/waste, other sectors (i.e. cross-cutting), as appropriate.

f Parties may choose to report total emissions with or without LULUCF, as appropriate.

Norway does not report projections under a "without measures" scenario or under a "with additional measures" scenario.

6 PROVISION OF FINANCIAL, TECHNOLOGICAL AND CAPACITY-BUILDING SUPPORT TO DEVELOPING COUNTRY PARTIES

6.1 Introduction

Norway provides a wide range of financial, technological and capacity-building support to developing country Parties in order to build their capacity to reduce carbon emissions and to take action against the negative effects of climate change. Norwegian mitigation and adaptation support to developing countries has increased strongly over the past 10 years.

The Norwegian government uses a broad range of instruments and institutions for its international cooperation activities in the field of climate and development:

- Bilateral cooperation,
- Multilateral cooperation such as the Climate Investment Funds, the Kyoto Protocol's Adaptation Fund, the Global Environment Facility, the Forest Carbon Partnership Facility, and UN organizations and multilateral development banks.

Our public finance is directed as investments and projects on the ground, capacity building, technical assistance and project demonstration.

Norwegian climate finance is concentrated in three main areas; reducing emissions from deforestation and forest degradation, clean energy and climate adaptation. Norway has also introduced a program for "climate proofing" of all bilateral development assistance. Through examination of development activities by Norwegian embassies, the aim is to make sure that all assistance takes account of climate change. These examinations are carried out on the basis of OECD`s guidelines for integration of climate change adaptation into development assistance.

Norway's financial contribution will be elaborated in tables 7 (a-b) below, with a concise summary in table 7. Table 7(a) provides information on public financial support through multilateral channels. Table 7(b) provides information on public financial support through bilateral, regional and other channels. Contributions in the area of capacity building and technology transfer are elaborated in tables 8 and 9 in a qualitative tabular format.

Tables 7 below shows that the total Norwegian finance directed at climate change in 2014 to be USD 967,2 million, compared to USD 1 269,6 million in 2013. The comparative decline in 2014 can be explained by the fact that remaining funds set aside for the Amazon Fund in the Fast Start reporting period, amounting to USD 130 million in 2010 and USD 178 million in 2011, together with funding from 2012 amounting to USD 172 million, was transferred to BNDES in 2013 and hence counted according to the OECD/DAC reporting system. The Norwegian climate finance in 2014 is closer to the normal, but still contains a substantial relative increase compared to 2012 and 2013.

In chapter 6.2 follows a description of Norwegian contributions and support in our three main areas, as well as a listing of other actions.

Table 7: Provision of public financial support: summary information in 2013[a]

Allocation channels	Year - 2013									
	Domestic currency (NOK mill)					USD (mill.)[b]				
	Core/general[c]	Climate-specific[d]				Core/general[c]	Climate-specific[d]			
		Mitigation	Adaptation	Cross-cutting[e]	Other[f]		Mitigation	Adaptation	Cross-cutting[e]	Other[f]
Total contributions through multilateral channels:	**2 755,2**	**365,0**	**25,0**	**1 041,3**		**468,7**	**62,1**	**4,3**	**177,2**	
Multilateral climate change funds[g]	195,9		15,0			33,3		2,6		
Of which: Other multilateral climate change funds[h]	*33,5*					*5,7*				
Multilateral financial institutions, including regional development banks	1 729,4	98,5	10,0	421,3		294,2	16,8	1,7	71,7	
Specialized United Nations bodies	830,0	266,5		350,4		141,2	45,3		59,6	
Other multilateral channels*				269,6					45,9	
Total contributions through bilateral, regional and other channels		**109,7**	**15,4**	**5 906,4**			**18,7**	**2,6**	**1 004,8**	
Total	**2 755,2**	**474,7**	**40,4**	**6 947,7**		**468,7**	**80,8**	**6,9**	**1 182,0**	

** Other multilateral channels is added to this table by the Statistics Section of Norad. For online reporting to the UNFCCC, figures are included under Specialized United Nations bodies due to the rigidity of the reporting system.*

Abbreviation USD = United States Dollars

[a] Parties should fill in a separate table for each year, namely 20XX-3 and 20XX-2, where 20XX is the reporting year.

[b] Parties should provide an explanation on methodology used for currency exchange for the information provided in table 7, 7(a), 7 (b) in the box below.

[c] This refers to support to multilateral institutions that Parties cannot specify as being climate specific.

[d] Parties should explain in their biennial reports how they define funds as being climate specific.

[e] This refers to funding for activities which are cross-cutting across mitigation and adaptation.

[f] Please specify.

[g] Multilateral climate change funds listed in paragraph 17(a) of the «UNFCCC biennial reporting guidelines for developing country Parties" in decision 2/CP.17.

[h] Other multilateral climate change funds as referred to in paragraph 17(b) of the « UNFCCC biennial reporting guidelines for developing country Parties" in decision 2/CP.17.

Each Party shall provide an indication of what new and additional financial resources they have provided, and clarify how they have determined that such resources are new and additional. Please provide this information in relation to table 7(a) and 7 (b)
Documentation box: New and additional funding is drawn from the growing aid program and does not divert funds from existing development priorities or programs

Table 7: Provision of public financial support: summary information in 2014[a]

Year - 2014

Allocation channels	Domestic currency (NOK mill)					USD (mill.)[b]				
	Core/general[c]	Climate-specific[d]				Core/general[c]	Climate-specific[d]			
		Mitigation	Adaptation	Cross-cutting[e]	Other[f]		Mitigation	Adaptation	Cross-cutting[e]	Other[f]
Total contributions through multilateral channels:	**2 695,6**	**425,9**	**0,0**	**2 352,4**		**427,7**	**67,6**	**-**	**373,3**	
Multilateral climate change funds[g]	193,8	2,0	0,0	0,0		30,7	0,3	-	-	
Of which: Other multilateral climate change funds[h]	*35,7*	*0,0*	*0,0*	*0,0*		*5,7*	-	-	-	
Multilateral financial institutions, including regional development banks	1 721,8	182,9	0,0	1 490,0		273,2	29,0	-	236,4	
Specialized United Nations bodies	780,0	241,0	0,0	262,6		123,8	38,2	-	41,7	
Other multilateral channels*				599,7					95,2	
Total contributions through bilateral, regional and other channels		**-172,2**	**20,9**	**3 468,3**			**-27,3**	**3,3**	**550,4**	
Total	**2 695,6**	**253,7**	**20,9**	**5 820,7**		**427,7**	**40,3**	**3,3**	**923,6**	

** Other multilateral channels is added to this table by the Statistics Section of Norad. For online reporting to the UNFCCC, figures are included under Specialized United Nations bodies due to the rigidity of the reporting system.*

Abbreviation USD = United States Dollars

[a] Parties should fill in a separate table for each year, namely 20XX-3 and 20XX-2, where 20XX is the reporting year.
[b] Parties should provide an explanation on methodology used for currency exchange for the information provided in table 7, 7(a), 7 (b) in the box below.
[c] This refers to support to multilateral institutions that Parties cannot specify as being climate specific.
[d] Parties should explain in their biennial reports how they define funds as being climate specific.
[e] This refers to funding for activities which are cross-cutting across mitigation and adaptation.
[f] Please specify.
[g] Multilateral climate change funds listed in paragraph 17(a) of the «UNFCCC biennial reporting guidelines for developing country Parties" in decision 2/CP.17.
[h] Other multilateral climate change funds as referred to in paragraph 17(b) of the « UNFCCC biennial reporting guidelines for developing country Parties" in decision 2/CP.17.

Each Party shall provide an indication of what new and additional financial resources they have provided, and clarify how they have determined that such resources are new and additional. Please provide this information in relation to table 7(a) and 7 (b)
Documentation box: New and additional funding is drawn from the growing aid program and does not divert funds from existing development priorities or programs

6.2 Norwegian contributions and support in main areas and other actions

6.2.1 Norway's International Climate and Forest Initiative

The Climate and Forest Initiative is Norway's largest contribution to international climate action. From the start in 2008 and up to the end of 2014, Norway has made payments totaling about NOK 14 billion to projects under the initiative for the reductions in emissions from deforestation and peat degradation. The Climate and Forest Initiative became part of Norway's climate policy after negotiations on the first cross-party agreement on climate policy, and was launched at the Bali climate conference in 2007.

The budget for the Climate and Forest Initiative is NOK 3 billion annually. The funds are being distributed through bilateral partnerships and multilateral collaborations and support to civil society.

It has previously been decided that the funding as a minimum will be maintained at the current level until 2020. At COP21 in Paris we announced that we will continue to provide finance for REDD+ until 2030. The exact level of our contribution will depend on a number of things, including the level of results achieved and the contributions of others – both forest countries and their partner countries

The initiative, its goals and strategy, and activities that are in progress are further described in the Ministry of Climate and Environment's budget proposal for 2015 (Prop. 1 S (2014–2015)).

A comprehensive evaluation of the initiative was published in 2014, and concluded that Norway's work in this field has given satisfactory results in a number of areas. Good progress has been made in reducing deforestation in several important forest countries, and the initiative has also resulted in important (sustainable) development benefits.

REDD+ was included as a standalone article, Article 5, in the final Paris- agreement, mandating all countries to conserve and enhance sinks and reservoirs of greenhouse gases, including forests.

6.2.2 Norwegian assistance to Clean Energy

Norway has been supporting clean energy projects in developing countries for many years. In 2013 and 2014, Norway allocated approximately NOK 1.1 and 1.3 billion respectively to renewable energy projects in developing countries through bilateral and multilateral channels.

In addition, Norfund[o] invest in the order of NOK 314 and 419 million in renewable energy projects in 2013 and 2014 respectively, thus encouraging the mobilization of private capital.

[o] Norwegian Investment Fund for Developing Countries (Norfund) is the development finance institution that serves as the commercial investment instrument of Norway's development policy. Through investment in

Most of the funding was managed by Norwegian Embassies, the Ministry of Foreign Affairs, Norfund and Norad. Norfund aims to promote renewable energy production as a basis for economic growth and enhanced quality of life in developing countries. This is best done by investing in equity, mobilizing other capital and combining this investment with expertise and insight into the sector. Norfund's collaboration with Norwegian energy producers such as Statkraft, TrønderEnergi and BKK are examples of this.

6.2.3 Norwegian assistance to Climate Adaptation

Norwegian assistance to climate change adaptation has been scaled up in recent years, both looking at activities for adaptation only, and when looking at activities targeting both adaptation and mitigation. The bulk of Norway's support for adaptation activities in developing countries is mainly channelled through the general contributions to multilateral development institutions, including through the UNDP and international financing institutions. Support is given to the following main thematic areas: disaster risk reduction, food security, climate services and agriculture.

Africa received the largest share of this support, more than 40 % of the total adaptation expenditures in 2013 and 2014. Among countries, Ethiopia, Zambia and Malawi received the highest amount of funding for climate change adaptation.

6.2.4 Other Actions

6.2.4.1 Green Climate Fund

Norway played a part in establishing the Green Climate Fund (GCF), which was formally launched in 2011. By the beginning of 2015, the Fund had received total pledges of USD 10.2 billion, and has thus become established as the key institution for multilateral climate finance. Norway pledged in 2014 NOK 1.6 billion in funding for the period 2015–18 and finalized the contribution agreement with GCF in 2015. Norway co-chaired the board of GCF in 2015.

6.2.4.2 Short- lived pollutants

Norway is a partner in the Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants (CCAC), an international organization focusing particularly on black carbon (soot), methane and hydrofluorocarbons (HFCs). Reducing emissions of these substances can yield a rapid climate response and slow down global warming, thus improving the prospects of achieving the two-degree target.

The CCAC's aim is to promote rapid reductions in emissions through a range of initiatives, for example targeting waste management, HFCs in products, methane emissions from oil and gas production and black carbon emissions from heavy freight transport.

profitable companies and the transfer of knowledge and technology, it contributes to reducing poverty and to economic progress in poor countries.

Since autumn 2014, Norway and Chile have been the co-chairs of the coalition. Norway allocated NOK 27.3 million to the CCAC in 2014. Norway is also working at national level to reduce emissions of these substances, and the Norwegian Environment Agency has published a proposed action plan for reducing emissions of short-lived climate pollutants in Norway. On Norway's initiative, the Arctic Council is seeking to increase knowledge of the effects of emissions of short-lived climate pollutants such as methane and black carbon on temperatures in the Arctic. Norway will continue to play a leading role in promoting closer cooperation between the Arctic countries to reduce emissions of these climate pollutants in the Arctic.

6.2.4.3 Global Environment Facility

The Norwegian government`s contribution to the Global Environment Facility (GEF) for the GEF- 5 period was approximately USD 62.7 million and our contribution to GEF-6 is USD 87,5 million. Both in GEF-5 and GEF-6, the climate change focal area receives roughly 30 % of GEF resources. In addition, a fast growing number of multi focal area projects and programs are being introduced, mainly involving the focal areas of climate change, biodiversity and land degradation. Norwegian contributions to the GEF was USD 17.72 and 21.87 million for the years 2013 and 2014 respectively.

In the same period, contributions to the Least Developed Countries Fund (LDCF) and the Special Climate Change Funds (SCCF), were USD 7.23 and 4.93 respectively.

Tables 7 (a) provides a summary of Norwegian financial support through multilateral channels in the years 2013 and 2014.

6.3 Core support to multilateral institutions

Core Support to selected multilateral institutions partly or fully targeting climate change in 2013 - 2014 is presented in table 7 (a) below, but without estimates on the share of these grants targeted for climate change in general, and to adaptation and mitigation in particular. For some, estimates are more accurate than for others. For example, the climate change focal area of the GEF receives around 30 % of total resources in a given GEF period. The activities of the GEF climate funds` (LDCF and SCCF) and the UNFCCC Secretariat are specifically directed towards climate change. It is much more difficult to estimate the exact climate share of core support to, for example, the UNDP or the WFP.

It is also very difficult to report accurately on the percentages of core funding to multilateral organizations devoted to mitigation and adaptation respectively. For the purpose of this report, we have therefore decided to simply present the overall core support to those multilateral organizations that we classify as climate relevant, in the sense that core support can be assigned to climate change activities.

Table 7(a): Provision of public financial support: contribution through multilateral channels in 2013[a]

	Total Amount								
	Core/general[d]		Climate-specific[e]						
Donor funding	NOK Million	USD Million	NOK Million	USD Million	Status[b]	Funding[f] source	Financial instrument[f]	Type of support[f]	Sector[c]
2013									
Multilateral climate change funds	**195,9**	**33,3**	**15,0**	**2,6**					
1. Global Environment Facility	106,3	18,1			Provided	ODA	Grant	Other	Other
2. Least Developed Countries Fund	22,0	3,7			Provided	ODA	Grant	Other	Other
3. Special Climate Change Fund	15,0	2,6			Provided	ODA	Grant	Other	Other
4. Adaptation Fund			15,0	2,6	Provided	ODA	Grant	Adaptation	Other
5. Green Climate Fund									
6. UNFCCC Trust Fund for Supplementary Activities	19,0	3,2			Provided	ODA	Grant	Other	Not applicable
7. Other multilateral climate change funds	33,5	5,7							
other					Provided	ODA	Grant	Cross-cutting	Cross-cutting
Nordic Development Fund	33,5	5,7			Provided	ODA	Grant	Other	Not applicable
Multilateral financial institutions, including regional development banks	**1 729,4**	**294,2**	**529,8**	**90,1**					
1. World Bank	1 101,7	187,4	420,0	71,5	Provided	ODA	Grant	Cross-cutting	Cross-cutting
2. International Finance Corporation			10,0	1,7	Provided	ODA	Grant	Adaptation	Industry
3. African Development Bank	532,2	90,5			Provided	ODA	Grant	Other	Other
4. Asian Development Bank	76,7	13,0	83,0	14,1	Provided	ODA	Grant	Mitigation	Energy
5. European Bank for Reconstruction and Development	15,2	2,6	15,5	2,6	Provided	ODA	Grant	Mitigation	Energy
6. Inter-American Development Bank	3,6	0,6	1,3	0,2	Provided	ODA	Grant	Cross-cutting	Other
7. Other									

Specialized United Nations bodies	**830,0**	**141,2**	**886,5**	**150,8**					
1. United Nations Development Programme	730,0	124,2	158,6	27,0					
UNDP	730,0	124,2	158,6	27,0	Provided	ODA	Grant	Cross-cutting	Cross-cutting
2. United Nations Environment Programme	100,0	17,0	458,3	78,0					
UNEP	100,0	17,0	191,8	32,6	Provided	ODA	Grant	Cross-cutting	Cross-cutting
UN-REDD			266,5	45,3	Provided	ODA	Grant	Mitigation	Other
3. Other			269,6	45,9					
other			269,6	45,9	Provided	ODA	Grant	Cross-cutting	Cross-cutting
Total	**2 755,2**	**468,7**	**1 431,3**	**243,5**					

Abbreviations: ODA = official development assistance, OOF = other official flows

[a] Parties should fill in a separate table for each year, namely 20XX-3 and 20XX-2, where 20XX is the reporting year.

[b] Parties should explain, in their biennial reports, the methodologies used to specify the funds as provided, committed and/or pledged. Parties will provide the information for as many status categories as possible as appropriate in the following order of priority; provided, committed, pledged.

[c] Parties may select several applicable sectors. Parties may report sectoral distribution, as applicable under "Other". Sector can be either energy, transport, industry, agriculture, forestry, water and sanitation, cross-cutting, other or the category not applicable.

[d] This refers to support to multilateral institutions that Parties cannot specify as climate-specific.

[e] Parties should explain in their biennial reports how they define funds as being climate-specific.

[f] *Funding source* can either be ODA, OOF or Other. *Financial instrument* can be either Grant, Concessional loan, Non-concessional loan, Equity or Other. *Type of support* can be either mitigation, adaptation, cross-cutting or other. Cross cutting refers to funding for activities which are cross-cutting across mitigation and adaptation.

Table 7(a): Provision of public financial support: contribution through multilateral channels in 2014[a]

	Total Amount								
	Core/general[d]		Climate-specific[e]						
Donor funding	NOK Million	USD Million	NOK Million	USD Million	Status[b]	Funding source[f]	Financial instrument[f]	Type of support[f]	Sector[c]
2014									
Multilateral climate change funds [g]	**193,8**	**30,7**	**2,0**	**0,3**					
1. Global Environment Facility	108,0	17,1			Provided	ODA	Grant	Other	Other (other)
2. Least Developed Countries Fund	22,0	3,5			Provided	ODA	Grant	Other	Other (other)
3. Special Climate Change Fund	15,0	2,4			Provided	ODA	Grant	Other	Other (other)
4. Adaptation Fund									
5. Green Climate Fund									
6. UNFCCC Trust Fund for Supplementary Activities	13,1	2,1	2,0	0,3	Provided	ODA	Grant	Mitigation	Other (General environmental protection)
7. Other multilateral climate change funds	35,7	5,7							
Nordic Development Fund	35,7	5,7			Provided	ODA	Grant	Other	Not applicable
Multilateral financial institutions, including regional development banks	**1 721,8**	**273,2**	**1 672,9**	**265,5**					
1. World Bank	1 009,6	160,2	926,8	147,1	Provided	ODA	Grant	Cross-cutting	Cross-cutting
2. International Finance Corporation			102,4	16,2	Provided	ODA	Grant	Mitigation	Energy
3. African Development Bank	624,6	99,1			Provided	ODA	Grant	Other	Not applicable
4. Asian Development Bank	83,7	13,3	80,5	12,8	Provided	ODA	Grant	Mitigation	Energy
5. European Bank for Reconstruction and Development					Provided	ODA	Grant	Other	Not applicable
6. Inter-American Development Bank	3,9	0,6	563,3	89,4	Provided	ODA	Grant	Cross-cutting	Other (General environmental protection)
7. Other									
Specialized United Nations bodies	**780,0**	**123,8**	**1 103,4**	**175,1**					

1. United Nations Development Programme	680,0	107,9	187,9	29,8					
UNDP	680,0	107,9	187,9	29,8	Provided	ODA	Grant	Cross-cutting	Cross-cutting
2. United Nations Environment Programme	100,0	15,9	315,7	50,1					
UNEP	100,0	15,9	74,8	11,9	Provided	ODA	Grant	Cross-cutting	Cross-cutting
UN-REDD			241,0	38,2	Provided	ODA	Grant	Mitigation	Other (General environmental protection)
3. Other			599,7	95,2					
other			599,7	95,2	Provided	ODA	Grant	Cross-cutting	Cross-cutting
Total	**2 695,6**	**427,7**	**2 778,3**	**440,9**					

Abbreviations: ODA = official development assistance, OOF = other official flows

[a] Parties should fill in a separate table for each year, namely 20XX-3 and 20XX-2, where 20XX is the reporting year.

[b] Parties should explain, in their biennial reports, the methodologies used to specify the funds as provided, committed and/or pledged. Parties will provide the information for as many status categories as possible as appropriate in the following order of priority; provided, committed, pledged.

[c] Parties may select several applicable sectors. Parties may report sectoral distribution, as applicable under "Other". Sector can be either energy, transport, industry, agriculture, forestry, water and sanitation, cross-cutting, other or the category not applicable.

[d] This refers to support to multilateral institutions that Parties cannot specify as climate-specific.

[e] Parties should explain in their biennial reports how they define funds as being climate-specific.

[f] *Funding source* can either be ODA, OOF or Other. *Financial instrument* can be either Grant, Concessional loan, Non-concessional loan, Equity or Other. *Type of support* can be either mitigation, adaptation, cross-cutting or other. Cross cutting refers to funding for activities which are cross-cutting across mitigation and adaptation.

Below follows an overview of Norwegian public financial support, disbursed through bilateral, regional and other channels in the reporting period. Norwegian support directed at climate change covers a wide variety of areas and sectors and Norway offers development cooperation in areas where she has particular expertise: renewable energy (especially hydropower), long-term management of natural resources and competence- and capacity-building in the field of environmental policy.

Table 7(b): Provision of public financial support: contribution through bilateral, regional and other channels in 2013[a]

	Total Amount							
	Climate-specific[f]							
Donor funding	Domestic Currency (NOK)	USD	Status[c]	Funding source[g]	Financial instrument[g]	Type of support[g]	Sector[d]	Additional Information[e]
Recipient country[b]								
Afghanistan /	22 728 767	3 866 752	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Africa /	48 229 137	8 205 025	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
America /	5 917 348	1 006 694	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Armenia /	4 499 999	765 566	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Asia /	53 548 491	9 109 985	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Azerbaijan /	1 997 376	339 805	Provided	ODA	Grant	Mitigation	Energy	
Bangladesh /	2 156 625	366 898	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Bhutan /	7 594 119	1 291 956	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Brazil /	3 936 544 018	669 708 067	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Cambodia /	2 502 507	425 741	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Cameroon /	3 761 740	639 969	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Chile /	54 003 788	9 187 443	Provided	ODA	Grant	Mitigation	Energy	
China /	35 849 837	6 098 986	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Democratic Republic of the Congo /	28 936 632	4 922 870	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Cuba /	600 000	102 076	Provided	ODA	Grant	Adaptation	Other (Disaster prevention and preparedness)	
Ethiopia /	90 000 540	15 311 422	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Europe /	23 283 791	3 961 176	Provided	ODA	Grant	Mitigation	Cross-cutting	
Georgia /	2 390 984	406 768	Provided	ODA	Grant	Mitigation	Energy	
Ghana /	3 128 686	532 271	Provided	ODA	Grant	Cross-cutting	Other (General Environmental protection)	

Global /	500 284 297	85 111 313	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Guatemala /	13 228 446	2 250 501	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Guyana /	956 325	162 69	Provided	ODA	Grant	Mitigation	Other (General Environmental protection)	
Haiti /	755 826	128 586	Provided	ODA	Grant	Adaptation	Water and sanitation	
India /	94 241 118	16 032 854	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Indonesia /	58 766 196	9 997 652	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Kazakhstan /	5 452 000	927 526	Provided	ODA	Grant	Mitigation	Cross-cutting	
Kenya /	26 530 480	4 513 522	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Lao People's Democratic Republic /	2 179 312	370 757	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Liberia /	134 678 611	22 912 319	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Macedonia (Fyrom) /	4 258 998	724 566	Provided	ODA	Grant	Mitigation	Cross-cutting	
Madagascar /	18 670 662	3 176 363	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Malawi /	75 248 070	12 801 645	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Malaysia /	1 982 711	337 310	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Mali /	17 639 576	3 000 949	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Mozambique /	73 358 397	12 480 163	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Myanmar /	7 874 185	1 339 603	Provided	ODA	Grant	Cross-cutting	Not applicable	
Nepal /	30 418 445	5 174 965	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Nicaragua /	16 689 754	2 839 359	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Niger /	8 371 236	1 424 164	Provided	ODA	Grant	Adaptation	Other (Government and civil society)	
Nigeria /	2 151 243	365 982	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Pakistan /	9 203 901	1 565 822	Provided	ODA	Grant	Cross-cutting	Other (Disaster prevention and preparedness)	
Palestine /	785 903	133 702	Provided	ODA	Grant	Adaptation	Other (Disaster prevention and preparedness)	
Panama /	11 678 008	1 986 732	Provided	ODA	Grant	Mitigation	Energy	
Papua New Guinea /	677 420	115 247	Provided	ODA	Grant	Mitigation	Energy	
Peru /	9 598 688	1 632 985	Provided	ODA	Grant	Cross-cutting	Other (General Environmental protection)	
Philippines /	-5 297 405	-901 226	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Serbia /	1 002 540	170 558	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
South Africa /	68 378 822	11 633 008	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
South of Sahara /	78 791 140	13 404 413	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
South Sudan /	30 933 333	5 262 561	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Sri Lanka /	5 305 800	902 654	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Tajikistan /	238 515	40 578	Provided	ODA	Grant	Mitigation	Energy	
United Republic of Tanzania /	91 149 211	15 506 841	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Thailand /	657 532	111 863	Provided	ODA	Grant	Adaptation	Cross-cutting	
Togo /	1 558 516	265 144	Provided	ODA	Grant	Mitigation	Energy	
Uganda /	146 319 532	24 892 741	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Ukraine /	770 000	130 997	Provided	ODA	Grant	Cross-cutting	Other (General Environmental protection)	
Viet Nam /	7 751 461	1 318 724	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Zambia /	96 307 465	16 384 394	Provided	ODA	Grant	Cross-cutting	Cross-cutting	

Angola /	3 376 015	574 348	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Burkina Faso /	751 308	127 817	Provided	ODA	Grant	Mitigation	Energy	
Burundi /	1 722 088	292 972	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Colombia /	2 978 084	506 649	Provided	ODA	Grant	Cross-cutting	Other (General Environmental protection)	
Costa Rica /	4 250 436	723 109	Provided	ODA	Grant	Cross-cutting	Other (General Environmental protection)	
Ecuador /	1 449 878	246 662	Provided	ODA	Grant	Cross-cutting	Other (General Environmental protection)	
El Salvador /	1 728 660	294 090	Provided	ODA	Grant	Mitigation	Cross-cutting	
Lebanon /	2 011 415	342 194	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Albania /	1 800 000	306 227	Provided	ODA	Grant	Cross-cutting	Energy	
Mexico /	8 246 025	1 402 862	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Middle East and North Africa /	3 183 785	541 644	Provided	ODA	Grant	Cross-cutting	Other (General Environmental protection)	
Montenegro /	195 153	33 201	Provided	ODA	Grant	Mitigation	Energy	
Namibia /	1 690 348	287 572	Provided	ODA	Grant	Adaptation	Other (Government and civil society)	
South America /	827 711	140 815	Provided	ODA	Grant	Adaptation	Other (Government and civil society)	
Rwanda /	191 166	32 522	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Sudan /	975 330	165 929	Provided	ODA	Grant	Adaptation	Agriculture	
Turkmenistan /	550 000	93 569	Provided	ODA	Grant	Mitigation	Energy	
Zimbabwe /	777 803	132 324	Provided	ODA	Grant	Adaptation	Other (Disaster prevention and preparedness)	
North & Central America /	17 600 000	2 994 216	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Total	**6 031 525 860**	**1 026 118 725**						

Abbreviations: ODA = official development assistance, OOF = other official flows; USD = United States dollars.

[a] Parties should fill in a separate table for each year, namely 20XX-3 and 20XX-2, where 20XX is the reporting year.

[b] Parties should report, to the extent possible, on details contained in this table.

[c] Parties should explain, in their biennial reports, the methodologies used to specify the funds as provided, committed and/or pledged. Parties will provide the information for as many status categories as appropriate in the following order of priority: provided, committed, pledged.

[d] Parties may select several applicable sectors. Parties may report sectoral distribution, as applicable, under "Other". Sector can be either energy, transport, industry, agriculture, forestry, water and sanitation, cross-cutting, other or the category not applicable.

[e] Parties should report, as appropriate, on project details and the implementing agency.

[f] Parties should explain in their biennial reports how they define funds as being climate-specific.

[g] *Funding source* can either be ODA, OOF or Other. *Financial instrument* can be either Grant, Concessional loan, Non-concessional loan, Equity or Other. *Type of support* can be either mitigation, adaptation, cross-cutting or other. Cross cutting refers to funding for activities which are cross-cutting across mitigation and adaptation.

Table 7(b): Provision of public financial support: contribution through bilateral, regional and other channels in 2014[a]

	Total Amount							
	Climate-specific[f]							
Donor funding	Domestic Currency	USD	Status[c]	Funding source[g]	Financial instrument[g]	Type of support[g]	Sector[d]	Additional Information[e]
Recipient country[b]								
Afghanistan /	27 918 077	4 430 105	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Africa /	47 472 670	7 533 073	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
America /	4 906 177	778 523	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Angola /	6 893 678	1 093 905	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Armenia /	1 200 000	190 419	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Asia /	66 520 537	10 555 632	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Azerbaijan /	604 338	95 898	Provided	ODA	Grant	Mitigation	Energy	
Bangladesh /	1 564 995	248 337	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Bhutan /	15 397 216	2 443 266	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Brazil /	652 725 289	103 575 952	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Burundi /	1 191 332	189 043	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Cambodia /	2 789 488	442 642	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Cameroon /	4 647 820	737 527	Provided	ODA	Grant	Cross-cutting	Other (General Environmental protection)	
Chile /	-241 880 420	-38 382 142	Provided	ODA	Grant	Mitigation	Energy	
China /	37 575 412	5 962 553	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Democratic Republic of the Congo /	26 732 384	4 241 956	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Cuba /	-50 540	-8 020	Provided	ODA	Grant	Adaptation	Other (Disaster prevention and preparedness)	
Ethiopia /	110 842 168	17 588 690	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Europe /	33 715 125	5 349 994	Provided	ODA	Grant	Mitigation	Cross-cutting	

Georgia /	1 200 000	190 419	Provided	ODA	Grant	Mitigation	Energy	
Ghana /	1 261 993	200 256	Provided	ODA	Grant	Cross-cutting	Other (General Environmental protection)	
Global /	464 462 464	73 701 973	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Guatemala /	40 821 796	6 477 697	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Guyana /	19 962 431	3 167 685	Provided	ODA	Grant	Cross-cutting	Other (General Environmental protection)	
Haiti /	4 138 889	656 768	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
India /	30 700 278	4 871 591	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Indonesia /	62 769 622	9 960 428	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Kazakhstan /	3 500 000	555 388	Provided	ODA	Grant	Mitigation	Energy	
Kenya /	91 957 616	14 592 046	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Lao People's Democratic Republic /	526 984 905	83 623 178	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Liberia /	193 466 544	30 699 717	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Macedonia (Fyrom) /	1 974 094	313 254	Provided	ODA	Grant	Mitigation	Other (General Environmental protection)	
Madagascar /	18 606 752	2 952 562	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Malawi /	110 750 188	17 574 095	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Malaysia /	430 431	68 302	Provided	ODA	Grant	Cross-cutting	Other (General Environmental protection)	
Mali /	19 506 372	3 095 316	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Mozambique /	108 883 087	17 277 819	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Myanmar /	23 045 388	3 656 895	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Namibia /	1 964 835	311 785	Provided	ODA	Grant	Adaptation	Other (Government and civil society)	
Nepal /	14 756 320	2 341 567	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Nicaragua /	13 815 770	2 192 318	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Niger /	451 680	71 674	Provided	ODA	Grant	Cross-cutting	Agriculture	
Nigeria /	1 989 705	315 731	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
North & Central America /	16 750 000	2 657 929	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Pakistan /	10 372 534	1 645 938	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Palestine /	1 032 745	163 878	Provided	ODA	Grant	Adaptation	Other (Government and civil society)	
Panama /	22 533 720	3 575 703	Provided	ODA	Grant	Mitigation	Energy	
Papua New Guinea /	854 472	135 590	Provided	ODA	Grant	Mitigation	Energy	

Peru /	-213 787 204	-33 924 246	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Philippines /	341 516 453	54 192 617	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Serbia /	1 157 001	183 596	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Somalia /	14 240 425	2 259 703	Provided	ODA	Grant	Adaptation	Cross-cutting	
South Africa /	35 812 918	5 682 876	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
South of Sahara /	62 840 286	9 971 641	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
South Sudan /	14 670 602	2 327 965	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Sri Lanka /	2 619 663	415 694	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Sudan /	901 707	143 085	Provided	ODA	Grant	Adaptation	Agriculture	
Tajikistan /	91 525	14 523	Provided	ODA	Grant	Cross-cutting	Other (General Environmental protection)	
United Republic of Tanzania /	130 249 225	20 668 247	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Thailand /	1 261 364	200 156	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Togo /	1 070 000	169 790	Provided	ODA	Grant	Mitigation	Energy	
Uganda /	174 037 364	27 616 650	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Ukraine /	3 144 198	498 929	Provided	ODA	Grant	Mitigation	Energy	
Viet Nam /	12 245 838	1 943 198	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Zambia /	67 188 573	10 661 637	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Colombia /	5 285 452	838 708	Provided	ODA	Grant	Cross-cutting	Other (General Environmental protection)	
Costa Rica /	4 227 395	670 813	Provided	ODA	Grant	Cross-cutting	Other (General Environmental protection)	
Ecuador /	2 610 045	414 168	Provided	ODA	Grant	Cross-cutting	Other (General Environmental protection)	
El Salvador /	1 400 648	222 258	Provided	ODA	Grant	Cross-cutting	Agriculture	
Honduras /	705 166	111 897	Provided	ODA	Grant	Cross-cutting	Agriculture	
Lebanon /	2 309 677	366 505	Provided	ODA	Grant	Cross-cutting	Other (Disaster prevention and preparedness)	
Mexico /	9 506 484	1 508 511	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
Middle East and North Africa /	3 388 079	537 628	Provided	ODA	Grant	Cross-cutting	Other (General Environmental protection)	
Montenegro /	1 000 000	158 682	Provided	ODA	Grant	Cross-cutting	Cross-cutting	
South America /	756 500	120 043	Provided	ODA	Grant	Adaptation	Other (Government and civil society)	
Rwanda /	23 718 078	3 763 639	Provided	ODA	Grant	Cross-cutting	Cross-cutting	

Zimbabwe /	1 810 475	287 290	Provided	ODA	Grant	Adaptation	Other (Disaster prevention and preparedness)	
Lesotho /	241 707	38 355	Provided	ODA	Grant	Mitigation	Water and sanitation	
Maldives /	38 300	6 078	Provided	ODA	Grant	Adaptation	Other (General Environmental protection)	
Senegal /	853 000	135 356	Provided	ODA	Grant	Mitigation	Energy	
Uruguay /	170 000	26 976	Provided	ODA	Grant	Adaptation	Agriculture	
Total	**3 316 991 321**	**526 347 823**						

Abbreviations: ODA = official development assistance, OOF = other official flows; USD = United States dollars.
[a] Parties should fill in a separate table for each year, namely 20XX-3 and 20XX-2, where 20XX is the reporting year.
[b] Parties should report, to the extent possible, on details contained in this table.
[c] Parties should explain, in their biennial reports, the methodologies used to specify the funds as provided, committed and/or pledged. Parties will provide the information for as many status categories as appropriate in the following order of priority: provided, committed, pledged.
[d] Parties may select several applicable sectors. Parties may report sectoral distribution, as applicable, under "Other". Sector can be either energy, transport, industry, agriculture, forestry, water and sanitation, cross-cutting, other or the category not applicable.
[e] Parties should report, as appropriate, on project details and the implementing agency.
[f] Parties should explain in their biennial reports how they define funds as being climate-specific.
[g] *Funding source* can either be ODA, OOF or Other. *Financial instrument* can be either Grant, Concessional loan, Non-concessional loan, Equity or Other. *Type of support* can be either mitigation, adaptation, cross-cutting or other. Cross cutting refers to funding for activities which are cross-cutting across mitigation and adaptation.

6.4 National approach to tracking and reporting provision of support

The main goal of Norway's ODA is poverty reduction, equitable distribution of social and economic goods and sustainable development. The strong inter-linkages between climate change and development has been emphasized, and the budget for climate change adaptation and mitigation has increased strongly over recent years. In 2006 the share of climate finance in the overall Official Development Assistance (ODA) budget was around 2.2 per cent, which by 2014 had increased to 19 per cent. During the same period, the total ODA budget also increased from an already high level.

Norwegian total ODA has not only exceeded 0.7 % of Gross National Income (GNI) for many years, but oscillated around 1 % in the last few years. All our climate finance can be counted beyond the 0.7 % threshold. Moreover, we have steadily increased the volume of our ODA budget, as the economy has been growing, meaning that the increase in climate finance has not reduced other ODA.

Pursuant to the UNFCCC 'Developed country Parties shall provide new and additional financial resources to meet the agreed full costs incurred by developing country Parties in complying with their obligations'. 'New and additional resources' is a term used in many multilateral contexts. However, there is no internationally agreed definition of what constitutes "new and additional" resources under Article 4.3 of the Convention. One frequently used definition, supported by many countries, is that climate financing should be additional to the international development aid goal of 0.7% of gross national income (GNI). According to this definition, Norway's climate finance could be viewed as new and additional, since Norway's ODA for many years has exceeded the 0.7% target. Furthermore, as was underlined in the Addis Abeba accord and the Sustainable development goals, we acknowledge the importance of taking into account the three dimensions of sustainable development. Well-designed actions can produce multiple local and global benefits, including those related to climate change.

Norway's climate change finance is tracked by The Norwegian Agency for Development Cooperation (Norad), using Norwegian Aid Statistics. The report covers our bilateral and multilateral support for climate change action in developing countries. It should be noted that the information is based on the OECD/DAC reporting system, which uses markers for climate change mitigation and adaptation. The markers indicate degree of relevance only. Consequently, the figures should be interpreted with some caution.

As there is no room for distinction between the two values main objective and significant objective, this reporting treats them as equal. This can lead to an overestimate of climate change funding. Hence, the figures should be interpreted as "total value of projects that fully, or to a certain degree, target climate change mitigation and adaptation". Despite this inherent weakness, the methodology is applied because the policy markers are well established parts of the international reporting system which ensures comparable information among countries, and because it is well incorporated into the Norwegian reporting system.

It should also be noted that the term "bilateral" includes assistance through public and private sector, as well as non-governmental organizations. The figures applied under core-support to

multilateral channels, refer to all un-earmarked support to the organization, regardless of its climate change relevance.

All items in the tables are specified as provided. This means that the amounts are disbursed during the year reported for. All numbers in this report are ODA net disbursements; non-ODA contributions to various climate change activities are not included. The reporting period in this Biennial Report covers the years 2013 and 2014. Funds are, as required, reported in NOK and USD. Figures are based on an average exchange rate of (NOK- 1 USD): 2013: 5.8780 and 2014: 6.3019.

Furthermore, the predefined tables below do not give the complete picture when it comes to distinguishing between support to climate change adaptation and mitigation. As the predefined tables allows for one category only for each row, any contribution that could be divided between mitigation and adaptation are reported as cross-cutting, independent of the ratio between the two. E.g. if 90 per cent of the contributions through a multilateral organization aims at mitigation, and the remaining 10 per cent at adaptation, the total amount is reported as cross-cutting. Another issue should be noted regarding the bilateral support, viz. the tables below do not reflect the total climate change support to the recipient country, as they do not include the support through multilateral channels. This is to avoid double-counting as these contributions are already included in the table for multilateral reporting.

While a large part of our total climate finance is allocated to REDD+ and renewable energy programs, both of which are classified as mitigation, several REDD projects may have strong adaptation components, since forest conservation in many cases will increase climate change resilience. Also, renewable energy projects may promote climate change adaptation. In these cases, both markers have been used. This has been part of a conscious effort to ensure more consistent use of especially the adaptation marker.

It should be noted that efforts are being made, where relevant, to integrate climate change concerns into all development efforts. This is not altogether captured in the report or in the numbers. It is sometimes difficult to single out assistance for adaptation from more general development assistance, which often also contributes to improving resilience to climate change.

6.5 Private Finance

Norway acknowledges that major financial investments – from both public and private sources and guided by smart and equitable policies – are required to transition the world's economy to a low-carbon path, reduce greenhouse gas concentrations to safe levels, and build the resilience of vulnerable countries to climate change. The dominant global capital flows are private, and to be able to manage climate change it is of the utmost importance to link these flows to efforts both to tackle climate change and to adapt to its negative effects.

Many of the efforts undertaken by Norway in the field of climate change are directed at strengthening technical and institutional capacity to support private sector investment. The objective being to support institutional capacity-building, the implementation of policy and

legal reforms and the establishment of monitoring and reporting systems, which will promote regulatory regimes that provide incentives for commercial investment.

In addition, The Norwegian MFA, Norad and other government actors play an important catalytic role by creating meeting places for an exchange of experience and information, for the development of skills and expertise and also with the aim of preparing for further investment by providing catalytic contributions.

Nevertheless, tracking private climate finance is not a straight forward undertaking. Through the OECD Research Collaborative on Tracking Private Climate Finance, Norway, other developed countries and several organizations have partnered to try to fill the knowledge gaps both on the overall architecture and measurement of private climate finance flows to, between and in developing countries, as well as on determining how developed country public interventions mobilize private finance. The results of this endeavor might in the future help track and attribute finance flows mobilized by public investments.

6.6 Technology Transfer

Transfer of technology and know-how in order to promote development, availability and efficiency of energy constitutes an important element of Norwegian Official Development Assistance (ODA) and has significant environmental co-benefits that are consistent with the promotion of the Framework Convention on Climate Change. In addition Norway supports a wide range of technology transfer and capacity building efforts.

Norway has been the major donor and supporter of the Climate and Technology Centre and Network (CTCN) under the Technology mechanism of UNFCCC since the start in 2013. The Norwegian agreement with UNEP, the host of CTCN, has now been prolonged until the end of 2017.

Norway is a member of institutions and initiatives that have the exchange of research results and transfer of technology as a main target, e. g. the International Energy Agency and the Climate Technology Initiative. Bilateral assistance projects are another important means for technology transfer, often even if technology transfer is not the main target.

From a development point of view, the issue of technology is more than the act of transferring hardware and software; it is just as much a matter of building capacity in developing countries to receive, use and develop technology. It is therefore very much related to capacity building as described in chapter 6.7 below.

Development cooperation has an important role to play in this context, and Norway undertakes technology and research cooperation with significant elements of capacity development with a number of partner countries. This integrated approach is crucial if developing countries are to benefit from, and themselves contribute to, the development of sustainable technological solutions adapted to their specific circumstances.

It is challenging to track and distinguish specific technology transfer and/or capacity- building contributions. However, elaborate information on a selection of measures to support technology transfer and access, supported by Norway, can be found in table 8 below.

Table 8: Provision of technology development and transfer support [a, b]

Recipient country and region	Targeted area	Measures and activities related to technology transfer	Sector [c]	Source of the funding for technology transfer	Activities undertaken by	Status	Additional Information[d]
	Mitigation *Adaptation* *Mitigation and adaptation*		*Energy* *Transport* *Industry* *Agriculture* *Water and sanitation* *Other*	*Private* *Public* *Private and public*	*Private* *Public* *Private and public*	*Implemented* *Planned*	
Kenya, Bhutan, Liberia, Ethiopia, Nepal, Mali, Grenada, Mozambique	Mitigation and adaptation	**Energy+** supports development of low-carbon and energy sector strategies, establish reference levels, and strengthen technical and institutional capacity to support private sector investment in developing countries. In this regard it will support the implementation of policy and legal reforms and the establishment of monitoring and reporting systems, and will promote regulatory regimes that provide incentives for commercial investments.	Renewable energy Energy efficiency Energy access	Public	Private and public	Implemented	Integrated into the Norwegian Clean Energy for Development Initiative

Angola, Bhutan, Ethiopia, India, Liberia, Mozambique, Myanmar, Nepal, South Sudan, Tanzania and Uganda	Mitigation and adaptation	**The Norwegian Clean Energy for Development Initiative** contributes to the international transfer of energy-related technology by supporting investment in infrastructure and clean energy production capacity in the energy sector of developing countries. Such investment support is frequently supplemented by institutional and human resource development measures that improve the technological expertise of the recipient country (e.g. support to HydroLab in Nepal).	Renewable energy Energy efficiency Energy access	Public	Private and public	Implemented	
Focus on non-Annex 1 countries	Mitigation and adaptation	**Norfund – Renewable Energy.**Norfund is the development finance institution that serves as the commercial investment instrument of Norway's development policy. Through investment in profitable companies and the transfer of knowledge and technology, it contributes to reducing poverty and to economic progress in poor countries.	Renewable energy Energy efficiency Energy access Industry Transport	Private and public	Private and public	Implemented	
Focus on non-Annex 1 countries	Mitigation	Norway is one of the contributors to the partnership **Energising Development** (EnDev). EnDev - is an impact-oriented initiative between the Netherlands, Germany, Norway, Australia, the United Kingdom and Switzerland. EnDev promotes the supply of modern energy	Renewable energy Energy efficiency	Public	Private and public	Implemented	Norway's contribution to EnDev is NOK 228 million in the period 2011-2015.

		technologies to households and small-scale businesses. The Partnership cooperates with 24 countries in Africa, Latin America and Asia. Since its start in 2005, EnDev has taken a leading role in promoting access to sustainable energy for all.	Energy access Industry				
Non-Annex I	Mitigation	Norway has been an active supporter of the **International Renewable Energy Institute** (IRENA) since the early planning stage, and signed the statutes in January 2009. We strive to involve our private sector companies and our technological institutions as much as possible in the endeavour to promote the widespread use of renewable energy. We contribute to the Global Renewable Energy Atlas and Renewable Energy Roadmap, as well as a range of other products and resources IRENA is developing to support developing countries develop their own renewable energy resources and industries.	Renewable Energy	Public	Private and public	Implemented	
Both Annex-I and non-Annex-I	Mitigation	**The International Centre for Hydropower (ICH)** is based in Norway and has members from the hydropower industry as well as Norwegian public institutions. Its aim is promoting hydropower and power market competence in emerging markets	Renewable energy Energy efficiency Energy access	Public	Public and Private	Implemented	

		and developing countries. Institutional frameworks and capacity building as well as technological transfer are central in ICH's programmes.					
Both Annex-I and non-Annex-I	Mitigation	Norway is a member of the **Clean Energy Ministerial (CEM)**. CEM is a high-level global forum to promote policies and programs that advance clean energy technology, to share lessons learned and best practices, and to encourage the transition to a global clean energy economy. Initiatives are based on areas of common interest among participating governments and other stakeholders.	Renewable energy Energy efficiency Energy access	Public	Public and Private	Implemented	The CEM is focused on three global climate and energy policy goals: • Improve energy efficiency worldwide • Enhance clean energy supply • Expand clean energy access Improving policies and enhanced deployment of clean energy technologies is the main objective.
non Annex-I	Mitigation and adaptation	**The Climate Technology Initiative:** (CTI) is a multilateral cooperative activity that supports implementation of the UNFCCC by fostering international cooperation for accelerated development and diffusion of climate-friendly technologies and practices. CTI was originally established at the first Conference of the Parties to the UNFCCC in 1995. Since July 2003, CTI	Renewable energy Energy efficiency Energy access	Private and Public	Private and public	Implemented	Through a variety of capacity-building activities, CTI has promoted technology transfer to and among developing and transition countries. In addition to their current and future environmental

		has been operating under an implementing agreement of the International Energy Agency.					benefits, these efforts are promoting near- and long-term global economic and social stability.
Botswana, South Africa, China, Kosovo, Indonesia, Egypt, Jordan, Maghreb, and Mexico	Mitigation	**The World Bank CCS Capacity Building Trust Fund for developing countries**: In 2009, Norway was the largest donor to the establishment of the World Bank CCS Capacity Building Trust Fund. The Fund's purpose is to strengthen the opportunities of developing countries to promote economic growth with low CO_2 emissions through technology cooperation that promotes the use of CO_2 capture and storage technologies in industry and the energy sector.	Energy Industry	Public	Public and private	Implemented	The support of NOK 113.5 million during 2009-15 (primarily development assistance funds), will help to strengthen technology cooperation between industrialised countries and developing countries.
All	Mitigation	**The technology centre for CO_2 capture at Mongstad**: Established with the aim of creating an arena for targeted development, testing and qualification of CO_2 capture technologies. This in addition to international dissemination of the centre's experiences and results is important to reduce the costs and risks associated with large-scale CO_2 capture.	Energy Industry	Private and Public	Private and public	Implemented	
Non Annex I	Mitigation	**The Renewable Energy and Energy Efficiency Partnership (REEEP)** is a market catalyst for clean energy in developing countries and emerging	Renewable energy	Public	Private and public	Implemented	Norway has been the2nd largest donor to the Renewable Energy and Energy

		markets. In this role, it acts as a funder, information provider and connector for up-scaling clean energy business models.	Energy efficiency				Efficiency Partnership (REEEP) since 2006, and has supported with a total of NOK 61,5 million. REEEP has supported 185 projects in 65 different countries.
Non Annex I	Mitigation	**GEEREF** is an innovative fund that aims to mobilise private sector finance. By providing new risk-sharing and contributing to co-financing options, GEEREF plays a role in increasing the uptake of renewables and energy efficiency in developing countries. The approach is demand-driven in markets that need more risk capital to evolve. GEEREF's support to regional sub-funds tailored to regional needs and conditions stimulates these markets.	Renewable energy Energy efficiency	Public	Private and public	Implemented	Norway participated in the establishment of the Global Energy Efficiency and Renewable Energy Fund (GEEREF) in 2008 together with the European Commission and Germany. We have supported GEEREF over a period of four years with totally NOK 110 million.
Tanzania, Malawi	Adaptation	**Global framework for climate services adaptation in Africa.** Weather services and seasonal forecasts downscaled to district level	Agriculture, Health	Public	Public	Implemented	The project is administered by the GFCS secretariat located at WMO in Geneva. NOK 60 million for the period 2013-2016

Regional Africa	Adaptation	**Global framework for climate services – Adaptation and disaster risk reduction in Africa**. Building capacity for the prediction of severe weather in Africa. Support to meteorological services.	Agriculture, fisheries	Public	Public	Implemented	Support through WMO to regional meteorological offices and to the GFCS secretariat in Geneve. NOK 56,8 million for the period 2011-2015
Regional Africa	Adaptation	**Strengthening the capacity of climate services through expert deployment**	Agriculture, fisheries, health	Public	Public	Implemented	Support through Norwegian Refugee Council. Supported by WMO and GFCS. NOK 24, 2 mill 2015-2017

[1] To be reported to the extent possible

[1] The tables should include measures and activities since the last national communication or biennial report

[1] Parties may report sectoral disaggregation, as appropriate.

[1] Additional information may include, for example funding for technology development and transfer provided, a short description of the measure or activity and co-financing arrangements.

6.7 Capacity building

Countries face a range of challenges in responding to climate change. Capacity development is a critical factor in enabling developing countries to face up to climate change. Capacity is required to receive financial and technology-related support for adaptation and mitigation and to ensure that such support is sustainable.

National expertise and know-how on climate change and its effects is significant, as well as strengthening institutions so that the countries in the longer term will themselves be able to integrate climate change into their planning process and pursue a national climate change policy.

The best results are achieved when capacity development is based on countries' own needs and priorities and is a joint learning process owned and operated nationally but taking place in partnership. Capacity building is primarily an integral part of the programmes and projects supported by the Norwegian MFA and Norad. The integrated approach is of key significance as capacity cannot develop in a vacuum and is always linked to the relevant activity.

Elaborate information on a selection of capacity-building measures, supported by Norway, can be found in table 9 below.

Table 9: Provision of capacity-building support [a]

Recipient country/ region	Targeted area	Programme or project title	Description of programme or project [b, c]
	Mitigation Adaptation Technology development and transfer		
Various REDD+ partner countries	Mitigation	**The UN-REDD Programme**	The UN-REDD Programme is a collaborative partnership bringing together the expertise of the UN Food and Agricultural Organization (FAO), the UN Development Program (UNDP) and the UN Environment Program (UNEP). The Programme has over 60 partner countries. Through its global activities UN-REDD contributes to the development of methodology and building of capacity within areas such as REDD+ governance, MRV, biodiversity and green economic development. In 2014, Norway contributed NOK 240 million to the UN-REDD Programme
Various REDD+ partner countries	Mitigation	**The Forest Investment Program (FIP)**	The Forest Investment Program (FIP) under the CIF provides financing at scale to a limited number of pilot countries to support the implementation of their national REDD+ strategies. Over time, the intention is to help countries access larger and more sustainable results-based REDD+ payments.
Various REDD+ partner countries	Mitigation	**Forest Carbon Partnership Facility (FCPF)**	The Forest Carbon Partnership Facility is a global partnership of governments, businesses, civil society and indigenous peoples established to provide financial and technical assistance to countries seeking to build their capacity to effectively implement REDD+. In 2012, Norway disbursed approximately NOK 232 million for this purpose.

Developing country partners	Mitigation	**Partnership for Market Readiness**	Norway is one of the contributing participants in the World Bank Partnership for Market Readiness (PMR). The PMR brings together most of the world's major market players, and consists of 28 developing and developed countries and the European Commission. The PMR is made up of Contributing Participants who provide financial support to the PMR trust fund and Implementing Country Participants who receive PMR funding. Together, the participants have created a global platform for discussions on new market instruments and how best to create and build market solutions for GHG mitigation.
Kenya, Bhutan, Liberia, Ethiopia and Nepal,	Mitigation Adaptation Technology development and transfer	**Energy+**	Energy+ will support development of low-carbon and energy sector strategies, establish reference levels, and strengthen technical and institutional capacity to support private sector investment in developing countries. In this regard it will support the implementation of policy and legal reforms and the establishment of monitoring and reporting systems, and will promote regulatory regimes that provide incentives for commercial investments.
Angola, Bhutan, Ethiopia, Liberia, Mozambique, Myanmar, Nepal, South Sudan, Tanzania and Uganda	Mitigation Adaptation	**The Norwegian Clean Energy for Development Initiative**	The Norwegian Clean Energy for Development Initiative contributes to the international transfer of energy-related technology by supporting investment in infrastructure and clean energy production capacity in the energy sector of developing countries. Such investment support is frequently supplemented by institutional and human resource development measures that improve the technological expertise of the recipient country.
Turkey, Georgia, Ghana, Angola and Mozambique	Mitigation	**INTPOW (Norwegian Renewable Energy Partners)**	INTPOW is a public-private partnership between three Government Ministries and Norwegian renewable energy companies. The aim is to promote Norwegian renewable energy competence in international markets. INTPOW has held capacity building activities in several countries.
Both Annex-I and non-Annex-I	Mitigation Adaptation	**The International Centre for Hydropower**	**The International Centre for Hydropower (ICH)** is based in Norway and has members from the hydropower industry as well as Norwegian public institutions. Its aim is promoting hydropower and power market competence in emerging markets

	Technology development and transfer	**(ICH)**	and developing countries. Institutional frameworks and capacity building as well as technological transfer are central in ICH's programmes.
Both Annex-I and non-Annex-I	Mitigation Technology development and transfer	**The Clean Energy Ministerial (CEM)**	CEM is a high-level global forum to promote policies and programs that advance clean energy technology, to share lessons learned and best practices, and to encourage the transition to a global clean energy economy. Initiatives are based on areas of common interest among participating governments and other stakeholders. The CEM is focused on three global climate and energy policy goals: • Improve energy efficiency worldwide • Enhance clean energy supply • Expand clean energy access Improving policies and enhanced deployment of clean energy technologies is the main objective.
Both Annex-I and non-Annex-I	Mitigation Technology development and transfer	**The Carbon Sequestration Leadership Forum**	The Carbon Sequestration Leadership Forum (CSLF) has 23 member states including China, India, South Africa, Mexico, The Republic of Korea, Brazil, Saudi Arabia, and United Arab Emirates; and is today one of the most important arenas for promoting CO2 capture and storage. The CLSF has a policy group and a technical group. The CSLF has established a capacity building Fund. Norway has contributed with NOK 5 million to this Fund.
Botswana, South Africa, China, Kosovo, Indonesia, Egypt, Jordan, Maghreb, and Mexico	Mitigation Technology development and transfer	**World Bank Trust Fund on Capacity Building on Carbon Capture and Storage in Developing Countries**.	Norway initiated in 2009 the establishment of the World Bank Trust Fund on Capacity Building on Carbon Capture and Storage in Developing Countries. Since then Norway has contributed with NOK 113.5 million up to 2015 and has been one of the two greatest financial contributors to now. The trust fund has undertaken capacity building activities in about 10 countries and demonstration projects in two of them.

Both Annex-I and non-Annex-I	Mitigation Adaptation	**Sustainable Energy for All (SE4All)**	Norway has supported the SE4All initiative since its launch in Oslo in 2011. Since then Norway has contributed with NOK 30 million as well as advisory support to the SE4All Secretariat. Norway has recently announced additional support to the initiative of NOK 30 million from 2016 to 2018-
Developing countries in Africa	Mitigation	**Renewable Energy Performance Platform (REPP)**	Norway has supported UNEP and the European Investment Bank (EIB) in the conceptual development of the Renewable Energy Performance Platform (REPP). The platform aims to mobilize support to help governments and private actors in Africa to overcome investment hurdles for first mover projects operating in newly supportive policy environment.
Coastal developing countries south of Sahara through FAO	Adaptation	**EAF Nansen Project**	The aim of the project is to acquire knowledge about the marine ecosystems surrounding Africa and to assist developing countries in implementing responsible fisheries management based on ecosystem principles. Information about the marine resources and environment has been collected on a regular basis since the mid-1980-ies for some areas. Analyses of long time series of data provide information about variability and effects of climate change on the marine environment, which is useful in fisheries management.
TAP Tanzania	Adaptation	**Agriculture**	The overall Project goal is the establishment of a public-private sector platform that provides commercial and developmental support to sustainable and profitable small-holder agriculture in Tanzania.
MAP Malawi	Adaptation	**Agriculture**	The overall Project goal is the establishment of a public-private sector platform that provides commercial and developmental support to sustainable and profitable small-holder agriculture in Malawi.
Comesa, EAC, SADC Climate Change	Adaptation, Mitigation	**Agriculture**	Support to scaling up climate change mitigation and adaptation programs (Conservation Agriculture) in agriculture in the COMESA (Common Market for Eastern and Southern Africa), SADC (Southern African Development Community) and EAC (East African Community) region. Multi donor financing program.
CFU – Conservation	Adaptation, Food	**Agriculture**	Linked to the COMESA Programme on Climate Change Mitigation and Adaptation in the ESA

Agricultural Regional Program	Security, Capacity Building		(COMESA-EAC-SADC) Region. Focus on the establishment of early actions in scaling up conservation agriculture in Uganda, Malawi, Kenya and possibly in Tanzania.
CFU	Adaptation, Food Security, Capacity Building	**Agriculture**	Support to the CFU Zambia programme to scale up conservation agriculture in Zambia. The programme is implemented in collaboration with the Ministry of Agriculture
CGIAR - Consultative Group on International Agricultural Research	Adaptation, Mitigation, Technology development and transfer, Capacity Building	**Agriculture, Fisheries**	CGIAR, research is dedicated to reducing rural poverty, increasing food security, improving human health and nutrition, and ensuring more sustainable management of natural resources. It is carried out by 15 Centers. The 15 Research Centers generate and disseminate knowledge, technologies, and policies for agricultural development through 15 large development Programs.
Global Crop Diversity Trust – Crop Wild Relatives Project (CWR)	Adaptation, Mitigation, Technology development and transfer, Capacity Building	**Agriculture**	CWR- work with the wild relatives of 29 major food crops. The project collect CWR from the wild; evaluate them for the useful traits; make the resulting information widely available; provide them to genebanks for conservation; and prepare them ('pre-breeding') for use in breeding crops for new climates. Pre-bred material is fed into ongoing, active breeding initiatives in developing countries.
FAO	Adaptation	**Climate Change, Fisheries and Aquaculture**	The project aims at testing methods for vulnerability analyses related to climate, and adaptation strategies within fisheries and fish farming in various regions.

[a] To be reported to the extent possible

[b] Each party included in Annex II to the Convention shall provide information, to the extent possible on how it has provided capacity building support that responds to the existing and emergency capacity-building needs identified by Parties not included in Annex I to the Convention in the areas of mitigation, adaptation and technology development transfer.

[c] Additional information may be provided on, for example, the measure of activity and co-financing arrangements

7 OTHER REPORTING MATTERS

7.1 Process of self-assessment

The UNFCCC biennial reporting guidelines encourages Parties to report to the extent possible, on the domestic arrangements established for the process of the self-assessment of compliance with emission reductions in comparison with emission reduction commitments or the level of emission reduction that is required by science.

Norway has had a quantitative emission reduction commitment for the Kyoto Protocol's first commitment period and now has a quantitative emission reduction commitment for the Kyoto Protocol's second commitment period. Through its annual submissions of its GHG inventory and the review of these inventories, Norway has a sound knowledge of its emissions and removals. Chapter 4 of our sixth National Communication shows that Norway has implemented several policies and measures that have reduced emissions and chapter 4.1 of this BR2 presents some of the mitigation actions implemented or planned to be implemented since 2014. Moreover, chapter 4.4 of the BR2 explains how we have used the Kyoto mechanisms to fulfil our commitment for the first commitment period (2008-2012) and how we plan to fulfil our commitment for the second commitment period (2013-2020). Norway has through its submission of the SEF tables reported the number of units transferred to its retirement account each year.

7.2 National rules for taking local action against domestic non-compliance

The UNFCCC biennial reporting guidelines encourages Parties to report, to the extent possible, on the progress made in the establishment of national rules for taking local action against domestic non-compliance with emission reduction targets. In Norway’s environmental legislation, there are provisions for enforcement of different obligations and decisions made in accordance with the law. For more information about the Pollution Control Act and the Greenhouse Gas Emissions Trading Act, see chapter 4.3 of NC6.

7.3 Other matters

The UNFCCC biennial reporting guidelines encourages Parties to report any other information that the Party considers relevant to the achievement of the objective of the Convention and suitable for inclusion in its biennial report. Norway does not have any other information to report on this matter in its BR2.

LIST OF ACRONYMS

AAU	Assigned Amount Unit
ASAP	Automated Shipboard Aerological Programme
AWG	Ad-hoc Working Group
BAT	Best Available Techniques
BR	Biennial Report
BRA	Available area
CAEP	Civil Aviation Environment Programme
CASTOR	CO_2 from Capture to Storage
CCAP	Center for Clean Air Policy
CCS	Carbon Capture and Storage
CDM	Clean Development Mechanism
CER	Certified Emission Reduction
CICERO	Centre for International Climate and Environmental Research
CRF	Common Reporting Format
CSEUR	Consolidated System of European Union Registries
CTF	Common Tabular Format
CTCN	Climate and Technology Centre and Network
DDR	Disaster Risk Reduction
DES	Data Exchange Standards
ECAC	European Civil Aviation Conference
ECAS	European Commission Authentication Service
EEA	European Economic Area
ERT	Expert Review Team
ERU	Emission Reduction Unit
EU	European Union
EU ETS	European Union Emission Trading System
EUR	Euros

GAW	Global Atmosphere Watch of WMO
GCIAR	Consultative Group on International Agricultural Research
GCOS	Global Climate Observing System
GDP	Gross Domestic Product
GEF	Global Environment Facility
GHG	Greenhouse gases
GIS	Gas-insulated switchgear
GNI	Gross National Income
GTOS	Global Terrestrial Observation System
GWP	Global Warming Potential
HFC	Hydrofluorcarbon
ICAO	International Civil Aviation Organization
ICSU	International Council for Science
IEA	International Energy Agency
IEF	Implied Emission Factor
IGBP	International Geosphere-Biosphere Programme
IMO	International Maritime Organisation
INDC	Intended Nationally Determined Contribution
IPCC	Intergovernmental Panel on Climate Change
ITL	International Transaction Log
JCOMM	Joint Technical Commission for Oceanography and Marine Meteorology
JI	Joint Implementation
KP	Kyoto Protocol
LDC	Least Developed Countries
LDCF	Least Developed Country Fund
LPG	Liquefied Petroleum Gas
LULUCF	Land Use and Land Use Change and Forestry
MW	Megawatt
NC	National Communication

NE	Not Estimated
NEFCO	Nordic Environment Finance Corporation
NFI	National Forest Inventory
NFLI	Norwegian Forest and Landscape Institute
NGL	Natural Gas Liquids
NIBIO	Norwegian Institute of Bioeconomy Research
NILU	Norwegian Institute for Air Research
NIR	National Inventory Report
NMVOC	Non-methane Volatile Organic Compound
NOK	Norwegian Kroner
NORAD	Norwegian Agency for Development Cooperation
NORKLIMA	Climate Change and Impacts in Norway
NOU	Official Norwegian Report
NSDS	National Strategy for Sustainable Development
NTP	National Transport Plan
ODA	Official Development Assistance
OECD	Organisation for Economic Cooperation and Development
PaM	Policies and Measures
PCF	Prototype Carbon Fund
PDO	Plans for Development and Operation
PFC	Perfluorcarbon
PPCR	Pilot Program for Climate Resilience
QA/QC	Quality Assurance/Quality Control
REDD	Reducing emissions from deforestation and forest degradation
RegClim	Regional Climate Development under Global Warming
RMU	Removal Unit
SCCF	Special Climate Change Fund
SEF	Standard Electronic Format
SD	Sustainable Development

SPF	Specific Fan Power
SWDS	Solid Waste Disposal Sites
TEK	Technical building regulation code
TWh	Terawatt hour
UN	United Nations
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
USD	US Dollar
VAT	Value Added Tax
VRU	Vapour Recovery Unit
WCRP	World Climate Research Programme
WMO	World Meteorological Organization
WRI	World Resources Institute

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ANNEX 1. SEF TABLE 4 PRODUCED AFTER NORWAY'S TRUE UP

Party	Norway
Submission Year	2015
Reported Year	2015
Commitment Period	1

Table 4. Total quantities of Kyoto Protocol units by account type at end of reported year

Account type	Unit type					
	AAUs	ERUs	RMUs	CERs	tCERs	lCERs
Party holding accounts	5 984 774	738 305	NO	2 249 869	NO	NO
Entity holding accounts	2 590 611	6 077 656	NO	1 330 545	17 712	NO
Article 3.3/3.4 net source cancellation accounts	1 824 462	NO	9 947 523	NO		
Non-compliance cancellation account	NO	NO	NO	NO		
Other cancellation accounts	5 928 507	480 480	7 333 333	19 698 979	17 712	NO
Retirement account	253 134 092	2 605 670	1 824 462	9 260 279	NO	NO
tCER replacement account for expiry	NO	NO	NO	NO	NO	
lCER replacement account for expiry	NO	NO	NO	NO		
lCER replacement account for reversal of storage	NO	NO	NO	NO		NO
lCER replacement account for non-submission of certification report	NO	NO	NO	NO		NO
Total	269 462 446	9 902 111	19 105 318	32 539 672	35 424	NO

ANNEX 2. INFORMATION TABLE ON ACCOUNTING FOR ACTIVITIES UNDER ARTICLES 3.3 AND 3.4 OF THE KYOTO PROTOCOL

INFORMATION TABLE ON ACCOUNTING FOR ACTIVITIES UNDER ARTICLES 3.3 AND 3.4 OF THE KYOTO PROTOCOL

NORWAY
Inventory 2012
Submission 2014 v3.1

Commitment period accounting: YES
Annual accounting: NO

Number of the reported year in the commitment period: 5

GREENHOUSE GAS SOURCE AND SINK ACTIVITIES	BY(5)	Net emissions/removals(1)						Accounting Parameters[7]	Accounting Quantity [8]
		2008	2009	2010	2011	2012	Total[6]		
	(Gg CO_2 equivalent)								
A. Article 3.3 activities									
A.1. Afforestation and Reforestation									-2 614.190
A.1.1. Units of land not harvested since the beginning of the commitment period[2]		-478.174	-508.305	-529.832	-537.055	-560.824	-2 614.190		-2 614.190
A.1.2. Units of land harvested since the beginning of the commitment period[2]									0.000
01-Norway		23.853	23.853	23.853	-14.464	-10.614	46.479		0.000
A.2. Deforestation		2 095.583	2 232.667	2 386.401	2 473.521	2 583.813	11 771.985		11 771.985
B. Article 3.4 activities									
B.1. Forest Management (if elected)		-30 378.979	-32 505.680	-30 331.355	-31 103.764	-30 187.295	##########		-16 491.128
3.3 offset[3]								9 157.795	-9 157.795
FM cap[4]								7 333.333	-7 333.333
B.2. Cropland Management (if elected)	0.000	NA	NA	NA	NA	NA	NA	0.000	0.000
B.3. Grazing Land Management (if elected)	0.000	NA	NA	NA	NA	NA	NA	0.000	0.000
B.4. Revegetation (if elected)	0.000	NA	NA	NA	NA	NA	NA	0.000	0.000

(1) All values are reported in table 5(KP) of the CRF for the relevant inventory year as reported in the current submission and are automatically entered in this table.
(2) In accordance with paragraph 4 of the annex to decision 16/CMP.1, debits resulting from harvesting during the first commitment period following Afforestation and Reforestation since 1990 shall not be greater than credits accounted for on that unit of land.
(3) In accordance with paragraph 10 of the annex to decision 16/CMP.1, for the first commitment period, a Party included in Annex I that incurs a net source of emissions under the provisions of Article 3.3 may account for anthropogenic greenhouse gas emissions by sources and removals by sinks in areas under Forest Management under Article 3.4, up to a level that is equal to the net source of emissions under the provisions of Article 3.3, but not greater than 9.0 megatonnes of carbon times five, if the total anthropogenic greenhouse gas emissions by sources and removals by sinks in the managed forest since 1990 is equal to, or larger than, the net source of emissions incurred under Article 3.3.
(4) In accordance with paragraph 11 of the annex to decision 16/CMP.1, for the first commitment period only, additions to and subtractions from the assigned amount of a Party resulting from Forest Management under Article 3.4, after the application of paragraph 10 of the annex to decision 16/CMP.1 and resulting from Forest Management project activities undertaken under Article 6, shall not exceed the value inscribed in the appendix of the annex to decision 16/CMP.1, times five.
(5) Net emissions and removals in the Party's base year, as established by decision 9/CP.2.
(6) Cumulative net emissions and removals for all years of the commitment period reported in the current submission.
(7) The values in the cells "3.3 offset" and "FM cap" are absolute values.
(8) The accounting quantity is the total quantity of units to be added to or subtracted from a Party's assigned amount for a particular activitity in accordance with the provisions of Article 7.4 of the Kyoto Protocol.

ANNEX 3 FOLLOW-UP TO ERT RECOMMENDATIONS

Reference	Recommendation	Follow-up
$ 82a	Improve the timeliness of its reporting by submitting its next BR and CTF tables on time, as required by the UNFCCC reporting guidelines on BRs	The BR2 was submitted within the deadline.
$ 82b, i)	Information on how Norway seeks to ensure that the resources it provides effectively address the needs of non-Annex I Parties with regard to climate change adaptation and mitigation.	The requested information is to the best of our capabilities provided in chapter 6 of the BR2.
$ 82b, ii)	Information on financial support provided, committed and/or pledged for the purpose of assisting non-Annex I Parties to adapt to any economic and social consequences of response measures.	We have no such activities to report on.
$ 82c, i)	More detailed information in textual and tabular formats on its target under the Convention, including associated conditions and assumptions. In addition, include a transparent description clarifying that the commitment under the second commitment period of the KP is consistent with Norway's target under the Convention	Chapter 3 includes more information on the consistency between Norway's target under the Convention and Norway's commitment under the second commitment period of the KP.
$ 82c, ii)	Follow the UNFCCC reporting guidelines on BRs more closely and provide transparent and accurate textual and tabular information, also in the form of footnotes, on financial support to developing country Parties.	UNFCCC BR guidelines are followed in BR2.
$ 82c, iii)	More detailed information on the tracking methodology, assumptions or indicators used for the financial support provided.	The requested information is provided in chapter 6 of the BR2.
$ 82c, iv)	More detailed information on measures that will contribute to the technology benefits of non-Annex I Parties and on the support of the development and enhancement of endogenous capacities and technologies in non-Annex I Parties.	The requested information is provided in chapter 6 of the BR2.
$ 82c, v)	More detailed information on how it has provided capacity-building support that responds to the emerging capacity needs of developing country Parties.	The requested information is provided in chapter 6 of the BR2. Still, we only provide information about a selection of activities, because describing all the activities we undertake would have added 100 pages to the report.