

## **Quantified emission limitation and reduction objectives expressed as percentage of base year and absolute emission levels<sup>#</sup>**

The tables on the following page attempt to capture the state of technical work by the AWG-KP spin-off group on Chapter I (amendments/numbers) on the transformation of emission reduction targets to quantified economy-wide limitation or reduction commitments (the transformation of pledges to QELROs). They have been prepared by the secretariat at the request of the co-facilitators of the spin-off group on the basis of discussions of the group at the third part of the sixteenth session of the AWG-KP using the information contained in the updated version of the technical paper on issues relating to the transformation of pledges for emission reductions into quantified emission limitation and reduction objectives (FCCC/TP/2010/3).

The tables are intended to assist the spin-off group in further discussions on the technical issues of the transformation of pledges to QELROs. They have been prepared with full acknowledgment that the final inscription of QELROs in Annex B to the Kyoto Protocol is a Party-driven and political process.

The values contained in the tables are based on the economy-wide emission reduction targets to be implemented by Parties included in Annex I to the Convention contained in document FCCC/SBI/2011/INF.1/Rev.1 and in the annual submissions submitted in 2009 and 2010 by Parties included in Annex I in accordance with Article 7, paragraph 1, of the Kyoto Protocol.

The tables do not take into account the quantitative impacts of the rules to be agreed upon by Parties to the Kyoto Protocol in relation to land use, land-use change activities under Article 3, paragraphs 3 and 4, of the Kyoto Protocol and the mechanisms established under Articles 6, 12 and 17 of the Kyoto Protocol and any other mechanisms agreed to by Parties as well as the options for addressing the surplus and carry-over of Kyoto units for the second and subsequent commitment periods of the Kyoto Protocol.

Party	GHGs emissions excluding LULUCF in 2008, in percentage of reference year emissions	QELRO (2008–2012) (percentage of base year or period)	Pledges in percentage of reference year emissions	QELRO (percentage of base year or period)					
				Commitment period (2013–2017)			Commitment period (2013–2020)		
				QELRO estimated from QELRO for the first commitment period	QELRO estimated from current (2007) level of emissions	QELRO estimated from current (2008) level of emissions	QELRO estimated from QELRO for the first commitment period	QELRO estimated from current (2007) level of emissions	QELRO estimated from current (2008) level of emissions
Australia	100	108	NA	103 - 93	98 - 85	99 - 87	101 - 88	98 - 83	98 - 84
Australia (2000)	97	NA	-5% to -25%	100 - 90	95 - 83	96 - 84	99 - 86	95 - 81	96 - 82
Belarus	65	92	-5% to -10%	94 - 91	83 - 80	83 - 80	94 - 91	86 - 83	86 - 83
Croatia (7/CP12)	98 89	95 95	6% -5%	100 95	104 94	103 92	102 95	105 94	104 93
European Union (EU-27)	87	92	-20% to -30%	86 - 81	83 - 77	83 - 77	84 - 78	82 - 75	82 - 75
Iceland	143	110	-15% to -30%	98 - 90	103 - 94	109 - 100	94 - 84	98 - 87	102 - 91
Kazakhstan	76	100	-15%	93	81	81	90	82	82
Liechtenstein	115	92	-20% to -30%	86 - 81	90 - 84	94 - 89	84 - 78	87 - 80	90 - 83
Monaco	89	92	-30%	81	78	78	78	76	75
New Zealand	123	100	-10% to -20%	95 - 90	103 - 97	104 - 98	94 - 87	99 - 92	100 - 93
Norway	108	101	-30% to -40%	86 - 81	86 - 80	86 - 80	81 - 74	81 - 74	81 - 74
Switzerland	101	92	-20% to -30%	86 - 81	87 - 81	89 - 83	84 - 78	85 - 77	86 - 79
Ukraine	46	100	-20%	90	67	66	87	71	70

Party	GHGs emissions excluding LULUCF in 2008, in Mega ton CO2 equivalent	Average emissions in the period (2008–2012) associated with the QELRO for the first commitment period	Emissions associated with the pledge (2020), in Mega ton CO2 equivalent	Average emissions in the commitment period associated to QELROs (in Mega ton CO2 equivalent)					
				Commitment period (2013–2017)			Commitment period (2013–2020)		
				Average emissions in the commitment period estimated from QELRO for the first commitment period	Average emissions in the commitment period estimated from current (2007) level of emissions	Average emissions in the commitment period estimated from current (2008) level of emissions	Average emissions in the commitment period estimated from QELRO for the first commitment period	Average emissions in the commitment period estimated from current (2007) level of emissions	Average emissions in the commitment period estimated from current (2008) level of emissions
Australia	550.8	594.0	537.4 - 424.2	565.7 - 509.1	539.2 - 469.6	543.0 - 477.0	557.2 - 483.6	538.6 - 456.0	541.3 - 461.2
Australia (2000)	550.8	NA	537.4 - 424.2	565.7 - 509.1	539.2 - 469.6	543.0 - 477.0	557.2 - 483.6	538.6 - 456.0	541.3 - 461.2
Belarus	90.6	128.0	132.2 - 125.3	130.1 - 126.7	115.0 - 110.7	114.9 - 110.8	130.8 - 126.2	120.1 - 115.0	120.1 - 115.2
Croatia (7/CP12)	31.0 31.0	29.9 33.2	33.2 33.2	31.5 33.2	32.8 33.2	32.3 32.8	32.0 33.2	32.9 33.2	32.5 32.9
European Union (EU-27)	4 969.1	5 292.6	4 590.5 - 4 016.7	4 941.6 - 4 654.7	4 775.5 - 4 422.3	4 748.2 - 4 413.5	4 836.3 - 4 463.3	4 720.0 - 4 300.6	4 700.9 - 4 294.5
Iceland	4.9	3.8	2.9 - 2.4	3.3 - 3.1	3.5 - 3.2	3.7 - 3.4	3.2 - 2.9	3.3 - 3.0	3.5 - 3.1
Kazakhstan	245.9	321.7	273.4	297.6	260.3	261.9	290.3	264.2	265.4
Liechtenstein	0.3	0.2	0.2 - 0.2	0.2 - 0.2	0.2 - 0.2	0.2 - 0.2	0.2 - 0.2	0.2 - 0.2	0.2 - 0.2
Monaco	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
New Zealand	72.8	59.1	53.2 - 47.3	56.2 - 53.2	60.9 - 57.3	61.4 - 57.9	55.3 - 51.4	58.6 - 54.3	58.9 - 54.7
Norway	53.7	50.3	34.8 - 29.9	42.6 - 40.1	42.7 - 39.6	42.7 - 39.8	40.2 - 37.0	40.3 - 36.7	40.4 - 36.8
Switzerland	53.4	48.9	42.5 - 37.2	45.7 - 43.0	46.1 - 42.8	47.1 - 44.0	44.7 - 41.3	45.0 - 41.1	45.7 - 41.9
Ukraine	426.4	931.4	745.1	838.3	627.3	612.3	810.3	662.7	652.2
<b>Total</b>	<b>6 499.0</b>	<b>7 463.3</b>	<b>6 445.6 - 5 734.9</b>	<b>6 954.4 - 6 599.1</b>	<b>6 503.5 - 6 066.1</b>	<b>6 467.8 - 6 053.3</b>	<b>6 801.8 - 6 339.9</b>	<b>6 486.1 - 5 966.8</b>	<b>6 461.2 - 5 957.8</b>

NA = not applicable, QELRO = Quantified emission limitation and reduction objectives

# In presenting their pledges for emission reduction Parties provided a number and conditions and assumptions which are summarized below.

### **Australia**

Australia's emission reduction target range for 2020 is pledged on a 2000 base year. Australia has committed to reduce its GHG emissions by 25 per cent from 2000 levels by 2020 if the world agrees on an ambitious global deal capable of stabilizing levels of GHGs in the atmosphere at 450 ppm CO<sub>2</sub> eq or lower. Australia will unconditionally reduce its emissions by five per cent from 2000 levels by 2020, and to reduce emissions by up to 15 per cent by 2020, if there is a global agreement which falls short of securing atmospheric stabilization at 450 ppm CO<sub>2</sub> eq, and under which major developing economies commit to substantially restraining emissions and advanced economies take on commitments comparable to those of Australia. Australia's emissions reduction targets are based on net national emissions; that is, any imported units will be counted as contributing to meeting the national target, and any exported units will not be counted. The 2020 targets refer to Australia's net emissions from the sector/source categories included in Annex A of the Kyoto Protocol as well as from afforestation, reforestation and deforestation (AR&D). The same sectoral coverage applies to both the base year (the year 2000) and 2020 emissions.

### **Belarus**

Belarus has stated that if the amendment adopted under decision 10/CMP.2 comes into effect before the end of the first commitment period, for the period after 2012 (Annex B to the Kyoto Protocol was amended to include Belarus with a quantified emission reduction commitment of 92 per cent. This amendment has not yet entered into force.), Belarus will consider the option of assuming the commitment to meet the target of 90–95 per cent of 1990 emission levels. If this amendment does not come into effect, Belarus will refrain from voluntary commitments for the post-Kyoto period that would establish the target lower than 100 per cent of 1990 emission levels.

### **Croatia**

The Croatian medium-term target for the period 2013–2020 is 33.2 Mt CO<sub>2</sub> eq, which is a decrease by five per cent according to the base year established by decision 7/CP.12, or an increase by six per cent according to Croatia's 1990 level of 31.3 Mt CO<sub>2</sub> eq. Croatia's target has been established according to the Croatian obligation in respect of its implementation of the European Union (EU) energy-climate package, including emission trading scheme ETS, and fulfillment of the GHG emission limit in 2020 as compared to 2005 GHG levels in non-ETS sectors. Upon the accession of Croatia to the EU, the Croatian target will be replaced by a relevant arrangement in line with and as part of the EU mitigation effort.

### **The European Union and its Member States**

The European Union agreed in 2008 on its "Climate and energy package", which includes a unilateral commitment to jointly reducing GHG emissions of the European Union and its 27 Member States (EU-27) by at least 20 per cent by 2020 relative to 1990 levels and by 30 per cent relative to 1990 levels provided that other developed countries commit themselves to comparable emission reductions and that economically more advanced developing countries contribute adequately according to their responsibilities and respective capabilities consistent with staying below 2°C.

### **Iceland**

Iceland has pledged 30 per cent reduction of GHG emissions, in a joint effort with the European Union, as part of a global and comprehensive agreement for the period beyond 2012, provided that other developed countries commit themselves to comparable emissions reductions and that developing countries contribute adequately according to their responsibilities and respective capabilities. Previously, Iceland had pledged to reduce its net GHG emissions by 15 per cent from 1990 levels by 2020. This target is dependent upon the continued application of the decisions included in the Marrakesh Accords, in particular the continuation of land use, land-use change and forestry (LULUCF) and of decision 14/CP.7. Iceland previously adopted the long-term goal of reducing emissions by 50 to 75 per cent by 2050.

### **Kazakhstan**

Kazakhstan has submitted a proposal to amend the Kyoto Protocol to include its name in annex B with a quantitative emission limitation or reduction commitment of 100 per cent for the first commitment period (FCCC/KP/CMP/2010/4). Kazakhstan informed the secretariat in a letter by the Prime Minister dated 9 November 2009, of its decision to reduce GHG emissions by 15 per cent by 2020 and by 25 per cent by 2050 compared to 1992 levels.

**Liechtenstein**

In the context of an ambitious global agreement, Liechtenstein intends to achieve a 20 per cent reduction in GHG emissions from 1990 levels by 2020. If other developed countries commit themselves to comparable emission reduction efforts and if economically more advanced developing countries take appropriate mitigation actions, Liechtenstein is prepared to consider a reduction target of up to 30 per cent within the framework of a comprehensive global agreement. The emission reduction goals mentioned above do not take into account activities from LULUCF. Liechtenstein will achieve the emission reduction targets through the implementation of domestic actions and the use of the Kyoto Protocol mechanisms such as the Clean Development Mechanism (CDM).

**Monaco**

The Government of Monaco decided to reduce its GHG emissions by 30 per cent from 1990 levels by 2020 and to achieve carbon neutrality by 2050 at the latest. These targets do not take into account activities from LULUCF. It is expected that Monaco will achieve these emission reduction targets through the implementation of domestic actions, and eventually, the use of carbon credits.

**New Zealand**

New Zealand is prepared to take on a responsibility target for GHG emission reductions of between 10 per cent and 20 per cent below 1990 levels by 2020, if there is a comprehensive global agreement. This means that: (a) the global agreement sets the world on a pathway to limiting temperature rise to no more than 2°C; (b) developed countries make comparable efforts to those of New Zealand; (c) advanced and major emitting developing countries take action fully commensurate with their respective capabilities; (d) there is an effective set of rules for LULUCF; and (e) there is full recourse to a broad and efficient international carbon market. It is expected that New Zealand will meet its target through a mixture of domestic emission reductions, the storage of carbon in forests and the purchase of emission reduction units from other countries.

**Norway**

In the context of an ambitious global agreement, Norway intends to cut global emissions equivalent to 100 per cent of its own GHG emissions, becoming a carbon neutral nation by 2030. Norway will undertake to reduce total GHG emissions by 30 per cent relative to 1990 levels by 2020. The aim is to reduce about two-thirds of emissions domestically in relation to the reference scenario, setting Norway on the pathway to becoming a low carbon society. Norway is prepared to reduce total GHG emissions by 40 per cent of its 1990 emissions by 2020, provided that major emitting Parties agree on adequate emission reductions in line with the 2°C goal.

**Switzerland**

On 26 August 2009, Switzerland's Federal Council adopted a draft legal text concerning the national climate policy after 2012. It has been passed on to Parliament for consideration and the final adoption by Parliament is expected in 2011. The proposed legal text includes an objective to reduce GHG emissions by at least 20 per cent by 2020 compared to 1990 levels. In the context of a binding international agreement for the period 2013–2020, Switzerland would consider a higher reduction target of 30 per cent by 2020 compared to 1990 levels, under the condition that other developed countries commit themselves to comparable emissions reductions and that economically more advanced developing countries contribute adequately according to their responsibilities and respective capabilities.

**Ukraine**

Ukraine is ready to commit to reducing GHG emissions by 20 per cent by 2020 and by 50 per cent by 2050. Imposing stricter obligations on Ukraine will not only restrict economic growth in a significant way, but will also prevent social and economic recovery of that country (FCCC/KP/AWG/2009/MISC.15, page 5).