



## Fact sheet: The Kyoto Protocol

The Kyoto Protocol was adopted at the third Conference of the Parties to the UNFCCC (COP 3) in Kyoto, Japan, on 11 December 1997. The Protocol shares the objective and institutions of the Convention. The major distinction between the two, however, is that while the Convention encouraged industrialized countries to stabilize GHG emissions, the Protocol commits them to do so. The detailed rules for its implementation were adopted at COP 7 in Marrakesh in 2001, and are called the “Marrakesh Accords.”

The Protocol places a heavier burden on developed nations under the principle of “common but differentiated responsibilities.” The Kyoto Protocol entered into force on 16 February 2005. 192 Parties have ratified the treaty to date.

Under the Protocol, 37 industrialized countries and the European Community have committed to reducing their emissions by an average of 5 percent against 1990 levels over the five-year period 2008-2012.

For this group of countries, reductions of 11% are projected for the first Kyoto commitment period from 2008 to 2012, provided policies and measures planned by these countries are put in place (see Annex). These countries will also have to make use of the Protocol’s “flexible mechanisms” in order to reach their collective emission reduction goal.

### Flexibility in meeting targets

Emission targets for industrialized country Parties to the Kyoto Protocol are expressed as levels of allowed emissions, or “assigned amounts”, over the 2008-2012 commitment period. Such assigned amounts are denominated in tonnes (of CO<sub>2</sub> equivalent emissions). Industrialized countries must first and foremost take domestic action against climate change, but the Protocol allows them a certain degree of flexibility in meeting their emission reduction commitments through three innovative market-based mechanisms.

### The Kyoto Mechanisms

The three Kyoto mechanisms are: Emissions Trading – known as “the carbon market” – the Clean Development Mechanism (CDM) and Joint Implementation (JI). The carbon market spawned by these mechanisms is a key tool in reducing emissions worldwide. It was worth 30 billion USD in 2006 and is set to increase.

JI and CDM are the two project-based mechanisms which feed the carbon market. JI enables industrialized countries to carry out joint implementation projects with other developed countries (usually countries with economies in transition), while the CDM involves investment in sustainable development projects that reduce emissions in developing countries.

Since the beginning of 2006, the estimated potential of emission reductions to be

delivered by the CDM pipeline has grown dramatically to 2.9 billion tonnes of CO<sub>2</sub> equivalent – approximately the combined emissions of Australia, Germany and the United Kingdom. Overall, more than 1230 CDM projects have been registered as at November 2008, with around 4200 more in the project pipeline.

*For more on CDM visit: <<http://cdm.unfccc.int/index.html>>*

### **Monitoring targets under the Protocol**

Under the Protocol, countries' actual emissions have to be monitored and precise records have to be kept of the trades carried out. Parties must keep a national registry to track and record transactions under the mechanisms. The secretariat keeps an **independent transaction log** to verify that transactions are consistent with the rules of the Protocol, and expert review teams have been set up to ensure compliance.

### **The International Transaction Log (ITL)**

This sophisticated computerized system became operational in November 2007, thereby giving market players the assurance that the cornerstone of the Kyoto trading system is in place before the actual start of the Kyoto accounting period on 1 January 2008.

The UNFCCC system to support the implementation of the CDM – the CDM registry – also started real-time operation in November 2007. This means that credits earned by industrialized countries through the implementation of emission reduction projects in developing countries will become tradeable as soon as their national registries begin using the ITL.

### **Adaptation**

The Kyoto Protocol, like the Convention, is also designed to assist countries in adapting to the inevitable effects of climate change and facilitates the development of techniques that can help increase resilience to climate change impacts.

The Adaptation Fund was established to finance concrete adaptation projects and programmes in developing countries that are Parties to the Kyoto Protocol. The Fund is to be financed with a share of proceeds from CDM project activities and receive funds from other sources. The share of proceeds from CDM project activities amounts to 2% of CERs issued for each project.

### **The road ahead**

The Kyoto Protocol is generally seen as an important first step towards a truly global emission reduction regime that will stabilize greenhouse gas concentrations. As a result of the Protocol, governments have already put, and are continuing to put in place legislation and policies to meet their commitments; a carbon market has been created; and more and more

businesses are making the investment decisions needed for a climate-friendly future. The Protocol provides much of the essential architecture for any new international agreement or set of agreements on climate change.

### GHG projections to 2010 for Annex I Parties to Convention<sup>1</sup>

| Party                 | Projected change in GHG emissions excluding LULUCF from 1990 to 2010 (%) |                            | Projected change in GHG emissions including LULUCF from 1990 to 2010 (%) |                            |
|-----------------------|--|----------------------------|--|----------------------------|
|                       | “with measures”  | “with additional measures” | “with measures”  | “with additional measures” |
| Australia             | 35.0   | –                          | 10.5   | –                          |
| Austria               | 17.1   | –1.2                       | –  | –                          |
| Belarus*              | –25.5  | –                          | –  | –                          |
| Belgium               | 1.9  | 0.0                        | 1.8  | –0.1                       |
| Bulgaria*             | –34.5  | –40.4                      | –  | –                          |
| Canada                | 38.2   | –                          | –  | –                          |
| Croatia* <sup>a</sup> | –0.2   | –11.8                      | –  | –                          |
| Czech Republic*       | –24.3  | –26.7                      | –25.6  | –28.0                      |
| Denmark               | 4.6  | –                          | 2.6  | –                          |
| Estonia*              | –56.0  | –56.0                      | –  | –                          |
| European Community    | –1.6   | –6.8                       | –  | –                          |
| Finland               | 9.9  | –2.5                       | –  | –                          |
| France                | 6.3  | 0.2                        | 0.2  | –6.1                       |
| Germany               | –21.3  | –29.3                      | –  | –                          |
| Greece                | 37.5   | 27.5                       | 37.1   | –                          |
| Hungary*              | –28.5  | –28.7                      | –28.4  | –28.9                      |

**United Nations Framework Convention on Climate Change**

|                            |       |       |       |       |
|----------------------------|-------|-------|-------|-------|
| Iceland                    | 37.7  | –     | –     | –     |
| Ireland                    | 30.3  | –     | 26.3  | –     |
| Italy                      | 11.3  | 3.7   | –     | –     |
| Japan                      | 10.4  | 3.6   | –     | –     |
| Latvia*                    | –46.1 | –48.6 | –23.2 | –30.8 |
| Liechtenstein              | 4.0   | –     | –     | –     |
| Lithuania*                 | –39.9 | –     | –46.4 | –     |
| Netherlands                | 2.0   | –0.6  | 0.8   | –     |
| New Zealand                | 34.0  | –     | 81.3  | –     |
| Norway                     | 23.3  | –     | –     | –     |
| Poland*                    | –26.1 | –     | –25.9 | –     |
| Portugal                   | 46.7  | 42.7  | –     | –     |
| Romania*                   | –26.6 | –30.8 | –22.8 | –27.8 |
| Russian Federation*        | –21.3 | –     | –     | –     |
| Slovakia*                  | –22.4 | –24.7 | –20.4 | –22.9 |
| Slovenia*                  | 5.0   | –1.4  | –     | –     |
| Spain                      | 52.5  | –     | –     | –     |
| Sweden                     | –1.0  | –     | 11.9  | –     |
| Switzerland                | –3.2  | –5.7  | –4.0  | –6.5  |
| Turkey**                   | 157.6 | –     | –     | –     |
| Ukraine*                   | –47.9 | –     | –     | –     |
| United Kingdom             | –18.5 | –21.7 | –19.0 | –22.3 |
| United States <sup>b</sup> | 26.4  | –     | 32.8  | –     |

*Abbreviations:* LULUCF = land use, land-use change and forestry; EIT = economy in transition.

*a* For Croatia, 3.5 Tg CO<sub>2</sub> eq are added to the 1990 emissions to calculate the base year level as per decision 7/CP.12.

*b* For the United States, the reported 2012 value is used as a 2010 estimate; GHG projections for 2010 have not been reported in the NC4.

\* A Party undergoing the process of transition to a market economy (an EIT Party).

\*\* Decision 26/CP.7 invited Parties to recognize the special circumstances of Turkey, which place Turkey in a situation different from that of other Parties included in Annex I to the Convention.

*Notes:* (1): For those Parties which have not reported 2010 data but reported average emissions in the period 2008–2012, the 2008–2012 averages are used as 2010 emissions. (2): The ‘with measures’ projection includes the policies and measures that are either implemented or adopted, whereas the ‘with additional measures’ projection also includes that policies and measures that are only planned (at the time when the projections were prepared). (3): The definition of additional policies and measures differs considerably from Party to Party.

1 *Source:* FCCC/SBI/2007/INF.6/Add.1 (UNFCCC’s compilation and synthesis report on the fourth national communications from Annex I Parties).

### **GHG projections to 2008-2012 for Annex I Parties to Kyoto Protocol<sup>2</sup>**

| Party     | Projected change in GHG emissions<br>from the base year to 2008-2012 on average (%) |                                  |   | Emission<br>reduction<br>target<br>under<br>Kyoto<br>Protocol<br>(%) |
|-----------|---|----------------------------------|---|--|
|           | "with<br>measures"  | "with<br>additional<br>measures" | "with additional<br>measures" minus expected<br>RMUs and credits from<br>mechanisms |  |
| Austria   | 17.1  | -1.2                             | -2.1  | -13.0  |
| Belarus*  | -25.5   | -                                | -   | -8.0 <sup>c</sup>  |
| Belgium   | 1.1   | -0.8                             | -6.6  | -7.5   |
| Bulgaria* | -37.1   | -42.0                            | -   | -8.0   |

**United Nations Framework Convention on Climate Change**

|                      |       |       |       |       |
|----------------------|-------|-------|-------|-------|
| Canada               | 38.2  | -     | -     | -6.0  |
| Croatia*             | 11.4  | -1.6  | -     | -5.0  |
| Czech Republic*      | -24.4 | -26.7 | -     | -8.0  |
| Denmark              | 4.2   | -     | -2.7  | -21.0 |
| Estonia*             | -56.0 | -56.0 |       | -8.0  |
| European Community   | -1.6  | -6.8  | -9.4  | -8.0  |
| Finland              | 11.8  | 2.1   | 0.0   | 0.0   |
| France <sup>a</sup>  | -0.3  | -     | -     | 0.0   |
| Germany              | -21.3 | -29.3 | -     | -21.0 |
| Greece               | 34.1  | 24.4  | -     | 25.0  |
| Hungary*             | -28.0 | -28.2 | -     | -6.0  |
| Iceland <sup>b</sup> | 0.4   | -     | -     | 10.0  |
| Ireland              | 30.2  | -     | -     | 13.0  |
| Italy                | 13.1  | 0.9   | -5.3  | -6.5  |
| Japan                | 6.0   | -0.5  | -6.0  | -6.0  |
| Latvia*              | -46.1 | -48.6 | -     | -8.0  |
| Liechtenstein        | 4.0   | -     | -     | -8.0  |
| Lithuania*           | -39.9 | -     | -     | -8.0  |
| Netherlands          | 0.0   | -2.5  | -11.8 | -6.0  |
| New Zealand          | 34.0  | -     | 11.9  | 0.0   |
| Norway               | 23.3  | -     | -     | 1.0   |
| Poland*              | -26.2 | -     | -     | -6.0  |
| Portugal             | 44.7  | 40.8  | 30.1  | 27.0  |

**United Nations Framework Convention on Climate Change**

|                     |       |       |       |              |
|---------------------|-------|-------|-------|--------------|
| Romania*            | -26.6 | -30.8 | -     | -8.0         |
| Russian Federation* | -21.3 | -     | -     | 0.0          |
| Slovakia*           | -22.4 | -24.7 | -     | -8.0         |
| Slovenia*           | 4.7   | -1.6  | -8.1  | -8.0         |
| Spain               | 51.3  | -     | 44.3  | <i>15.0</i>  |
| Sweden              | -1.0  | -     | -2.4  | <i>4.0</i>   |
| Switzerland         | -3.2  | -5.7  | -12.2 | -8.0         |
| Ukraine*            | -47.9 | -     | -     | 0.0          |
| United Kingdom      | -19.0 | -22.2 | -22.7 | <i>-12.5</i> |

*Abbreviations:* RMU = removal unit; LULUCF = land use, land-use change and forestry; EIT = economy in transition.

*Notes:* (1): For most Parties, the 2010 value is used as an estimate for an average value in the 2008–2012 period. (2): The ‘with measures’ projection includes the policies and measures that are either implemented or adopted, whereas the ‘with additional measures’ projection also includes that policies and measures that are only planned (at the time when the projections were prepared). (3): The definition of additional policies and measures differs considerably from Party to Party. (4): Targets under the “burden-sharing” agreement of the European Community are shown in italics; (4) The base year data used by Parties in their projections are not always consistent with the base year data reported in the annual GHG inventories; (5) The base year under the Kyoto Protocol may slightly differ from that under the Convention because of a difference in definition (e.g., 1995 can be used as the base year for fluorinated gases).

*a* The French report on demonstrable progress (RDP) contains quantitative data for one scenario only, which is used here as a ‘with measures’ scenario; however, by the relative change from the base year to 2010, this ‘with measures’ scenario of the RDP is close to the ‘with additional measures’ scenario of the fourth national communication (NC4).

*b* This projection for Iceland does not include the emissions that fall under decision 14/CP.7.

*c* An amendment to Annex B of the Kyoto Protocol concerning the emission reduction target for Belarus was adopted by decision 10/CMP.2; at the time of the preparation of this report, this amendment had not yet entered in force.



2 *Source:* FCCC/SBI/2007/INF.7/ (UNFCCC's compilation and synthesis report on the supplementary information reported by Annex I Parties under the Kyoto Protocol).