

SUMMARY OF THE KYOTO PROTOCOL

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It took all of one year for the member countries of the Framework Convention on Climate Change to decide that **the Convention had to be augmented by an agreement with stricter demands for reducing greenhouse-gas emissions.** The Convention took effect in 1994, and by 1995 governments had begun negotiations on a protocol -- an international agreement linked to the existing treaty, but standing on its own. The text of the Kyoto Protocol was adopted unanimously in 1997; it entered into force on 16 February 2005.

* The Protocol's major feature is that it has **mandatory targets on greenhouse-gas emissions for the world's leading economies which have accepted it.** These targets range from -8 per cent to +10 per cent of the countries' individual 1990 emissions levels "with a view to reducing their overall emissions of such gases by at least 5 per cent below existing 1990 levels in the commitment period 2008 to 2012." In almost all cases -- even those set at +10 per cent of 1990 levels -- the limits call for significant reductions in currently projected emissions. Future mandatory targets are expected to be established for "commitment periods" after 2012. These are to be negotiated well in advance of the periods concerned.

* **Commitments under the Protocol vary from nation to nation.** The overall 5 per cent target for developed countries is to be met through cuts (from 1990 levels) of 8 per cent in the European Union (EU[15]), Switzerland, and most Central and East European states; 6 per cent in Canada; 7 per cent in the United States (although the US has since withdrawn its support for the Protocol); and 6 per cent in Hungary, Japan, and Poland. New Zealand, Russia, and Ukraine are to stabilize their emissions, while Norway may increase emissions by up to 1 per cent, Australia by up to 8 per cent (subsequently withdrew its support for the Protocol), and Iceland by 10 per cent. The EU has made its own internal agreement to meet its 8 per cent target by distributing different rates to its member states. These targets range from a 28 per cent reduction by Luxembourg and 21 per cent cuts by Denmark and Germany to a 25 per cent increase by Greece and a 27 per cent increase by Portugal.

* To compensate for the sting of "binding targets," as they are called, the agreement offers **flexibility in how countries may meet their targets.** For example, they may partially compensate for their emissions by increasing "sinks" -- forests, which remove carbon dioxide from the atmosphere. That may be accomplished either on their own territories or in other countries. Or they may pay for foreign projects that result in greenhouse-gas cuts. Several mechanisms have been set up for this purpose. (See the sub-chapters on "emissions trading," the "clean development mechanism," and "joint implementation.")

* The Kyoto Protocol is a complicated agreement that has been slow in coming--there are reasons for this. **The Protocol not only has to be an effective against a**

complicated worldwide problem -- it also has to be politically acceptable. As a result, panels and committees have multiplied to monitor and referee its various programmes, and even after the agreement was approved in 1997, further negotiations were deemed necessary to hammer out instructions on how to "operate" it. These rules, adopted in 2001, are called the "Marrakesh Accords."

* There is a **delicate balance** to international treaties. Those appealing enough to gain widespread support often aren't strong enough to solve the problems they focus on. (Because the Framework Convention was judged to have this weakness, despite its many valuable provisions, the Protocol was created to supplement it.) Yet treaties with real "teeth" may have difficulty attracting enough widespread support to be effective.

* **Some mechanisms of the Protocol had enough support that they were set up in advance of the Protocol's entry into force.** The Clean Development Mechanism, for example -- through which industrialized countries can partly meet their binding emissions targets through "credits" earned by sponsoring greenhouse-gas-reducing projects in developing countries -- already had an executive board before the Kyoto Protocol entered into force on 16 February 2005.

Emissions Trading – The carbon market

* The limits on greenhouse-gas emissions set by the Kyoto Protocol **are a way of assigning monetary value to the earth's shared atmosphere -- something that has been missing up to now.** Nations that have contributed the most to global warming have tended to benefit directly in terms of greater business profits and higher standards of living, while they have not been held proportionately accountable for the damages caused by their emissions. The negative effects of climate change will be felt all over the world, and actually the consequences are expected to be most severe in least-developed nations which have produced few emissions.

* The Kyoto Protocol sets limits on total emissions by the world's major economies, a prescribed number of "emission units." **Individual industrialized countries will have mandatory emissions targets they must meet. . . but it is understood that some will do better than expected, coming in under their limits, while others will exceed them.**

* The Protocol allows countries that have emissions units to spare -- emissions permitted them but not "used" -- to sell this excess capacity to countries that are over their targets. **This so-called "carbon market" -- so-named because carbon dioxide is the most widely produced greenhouse gas, and because emissions of other greenhouse gases will be recorded and counted in terms of their "carbon dioxide equivalents" -- is both flexible and realistic.** Countries not meeting their commitments will be able to "buy" compliance. . . but the price may be steep. The higher the cost, the more pressure they will feel to use energy more efficiently and to research and promote the development of alternative sources of energy that have low or no emissions.

* A global "stock market" where emissions units are bought and sold is simple in concept -- but in practice the Protocol's emissions-trading system has been complicated to set up. The details, weren't specified in the Protocol, and so additional negotiations were held to hammer them out. These rules were among the workaday specifics included in the 2001 "Marrakesh Accords." The problems are clear: countries' actual emissions have to be monitored and guaranteed to be what they are reported to be; and precise records have to be kept of the trades carried out. Accordingly, "registries"-- like bank accounts of a nation's emissions units -- are being set up, along with "accounting procedures," an "international transactions log," and "expert review teams" to police compliance.

* **More than actual emissions units will be involved in trades and sales.** Countries will get credit for reducing greenhouse-gas totals by planting or expanding forests ("removal units"); for carrying out "joint implementation projects" with other developed countries, usually countries with "transition economies"; and for projects under the Protocol's Clean Development Mechanism, which involves funding activities to reduce emissions by developing nations. Credits earned this way may be bought and sold in the emissions market or "banked" for future use.

* Some national registry systems under the Protocol have already been set up, as countries are eager to "bank" emissions reductions already accomplished while they wait for the

Protocol to win its final ratifications and become legally binding.

* Smaller "**carbon markets**" were established by the European Union and other groups of countries; they were operating before the Protocol entered into force. These emissions-trading systems were intended to start the process and to link up with the Protocol's global market once it becomes operational.

The Clean Development Mechanism Getting developing countries involved

* The Kyoto Protocol does not set limits on the greenhouse-gas emissions of developing nations. Yet **the greenhouse-gas emissions of developing countries are growing**, especially in the case of enormously populous states such as China and India, which are rapidly expanding their industrial output.

* **Because the atmosphere is equally damaged by greenhouse-gas emissions wherever they occur and equally helped by emissions cuts wherever they are made, the Protocol includes an arrangement for reductions to be "sponsored" in countries not bound by emissions targets.** The so-called Clean Development Mechanism is loaded with complicated details and acronyms, but in simplified form it works this way: Industrialized countries pay for projects that cut or avoid emissions in poorer nations -- and are awarded credits that can be applied to meeting their own emissions targets. The recipient countries benefit from free infusions of advanced technology that allow their factories or electrical generating plants to operate more efficiently -- and hence at lower costs and higher profits. And the atmosphere benefits because future emissions are lower than they would have been otherwise.

* The mechanism has drawn extensive interest from rich and poor countries alike, and steps have been taken to put it into operation even before the Protocol takes effect. In particular, it is **cost-effective and offers a degree of flexibility** to industrialized countries trying to meet their targets. It can be more efficient for them to carry out environmentally useful work in developing countries than at home, where land, technology, and labor are generally more costly. The benefits to the climate are the same.

* **The system also appeals to private companies and investors.** The mechanism is meant to work bottom-up -- to proceed from individual proposals to approval by donor and recipient governments to the allocation of "certified emissions reduction" credits. Countries earning the credits may apply them to meeting their emissions limits, may "bank" them for use later, or may sell them to other industrialized countries under the Protocol's emissions-trading system. Private firms are interested in the mechanism because they may earn profits from proposing and carrying out such work and because they may develop good reputations for their technology which will lead to further sales. A possible benefit for everyone is that the potential for profits may lead these businesses to develop even more useful technologies.

* The Clean Development Mechanism is overseen by an Executive Board. To be certified, by the Clean Development Mechanism Executive Board, **a project must be approved by all involved parties, demonstrate a measurable and long-term ability to reduce emissions, and promise reductions that would be additional to any that would otherwise occur.**

* A special provision allows credits earned under clean-development schemes to be valid and "bankable" now, although the Protocol has yet to take legal effect.

* Options are being considered. Less red tape, for example, may be required for small-scale projects, such as renewable energy facilities below 15 megawatts of installed capacity. Another proposal is to allow afforestation and reforestation projects to be included in the scheme.

Joint Implementation

Mutual help for countries with emissions targets

* "Joint implementation" is a programme under the Kyoto Protocol that **allows industrialized countries to meet part of their required cuts in greenhouse-gas emissions by paying for projects that reduce emissions in other industrialized countries. In practice, this will likely mean facilities built in the countries of Eastern Europe and the former Soviet Union -- the "transition economies" -- paid for by Western European and North American countries.**

* The sponsoring governments will receive credits that may be applied to their emissions targets; the recipient nations will gain foreign investment and advanced technology (but not credit toward meeting their own emissions caps; they have to do that themselves). **The system has advantages of flexibility and efficiency.** It often is cheaper to carry out energy-efficiency work in the transition countries, and to realize greater cuts in emissions by doing so. The atmosphere benefits wherever these reductions occur.

* The operation of the joint implementation mechanism is similar to that of the "clean development mechanism" (see related sub-chapter) -- and similarly complicated. To go ahead with joint implementation projects, industrialized countries must meet requirements under the Protocol for accurate inventories of greenhouse-gas emissions and for detailed registries of emissions "units" and "credits" (steps that also are required for the international trading of emissions on the "carbon market"). If these requirements are met, countries may carry out projects and receive credits beginning in 2008.

* A pilot phase begun in 1995 allowed countries to gain experience in cooperating and in sharing technology. Most of the numerous pilot projects carried out will not be translated into credits under the Protocol, but schemes begun after 1 January 2002 which meet all requirements may be registered under the joint implementation programme.

* If industrialized countries have not yet set up approved registries and greenhouse-gas inventory systems -- complicated technical and bureaucratic hoops some nations still have to jump through -- they may carry out joint-implementation projects under a "second track" process that involves greater international oversight. The oversight, which may be assigned to private companies, will ensure that emissions actually are reduced, and will certify by how much.