

A Summary of the Kyoto Protocol and the Marrakesh Accords

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The Kyoto Protocol is an outgrowth of the United Nations Framework Convention on Climate Change. The Framework Convention, which entered into force in 1994, does not establish binding limits on greenhouse gas emissions. Rather, it sets the stage for such actions in the future. The Kyoto Protocol to the Framework Convention, which was adopted by the third Conference of the Parties to the Framework Convention at their meeting in Kyoto, Japan in December 1997, and which entered into force on February 16, 2005, does establish binding limits for greenhouse gas emissions. The United States is a party to the Framework Convention, but not to the Kyoto Protocol. The Marrakesh Accords, which contain detailed rules regarding implementation of the Kyoto Protocol, were adopted at the seventh Conference of the Parties in 2001.

I. Binding Emission Limits.

The binding limits on greenhouse gas emissions contained in the Kyoto Protocol apply to those Annex One Parties to the Framework Convention that are also Parties to the Kyoto Protocol.² In general, the Framework Convention divides Parties into two groups: (1) Annex One countries, which are primarily developed countries; and (2) Non-Annex One countries, which are primarily developing countries. The non-applicability of binding emission limits to developing countries such as China and India was one of the aspects of the Kyoto Protocol that the United States objected to. In addition, the binding emission limits contained in the Kyoto Protocol only apply during the Protocol's five year Commitment Period, which runs from 2008 to 2012.³

The objective of the Kyoto Protocol is to collectively reduce anthropogenic emissions of the six greenhouse gases covered by the Protocol (carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride) from Annex One countries to 5.2% below 1990 levels. Each Annex One Party is given an Assigned Amount of greenhouse gas emissions for the Commitment Period. For example, in negotiations, Germany agreed to limit its annual average emissions during 2008 to 2012 to 8% below the level of its 1990 emissions.⁴ The Kyoto Protocol provides that an Annex One Party's anthropogenic greenhouse gas emissions during the Commitment Period may not exceed the Party's Assigned Amount for the Commitment Period.⁵

An Annex One Party's Assigned Amount is calculated by taking the assigned percentage of the Party's Base Year emissions, and multiplying that number by five (the number of years in the Commitment Period).⁶ For most Parties, the Base Year is 1990.⁷ Certain Annex One countries that are transitioning to a market economy may be eligible to use a different Base Year.⁸ For example, transitioning countries may be eligible to use a Base Year later than 1990, during which their emissions of greenhouse gases may have been higher than in 1990. In addition, Parties may elect to use 1995 as the Base Year for three of the greenhouse gases: hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride.⁹ The global warming potential

of each of the six greenhouse gases relative to carbon dioxide has been determined by the Intergovernmental Panel on Climate Change. Each Party's limit is therefore expressed in terms of carbon dioxide equivalent tons of greenhouse gas emissions.¹⁰

II. Accounting For and Reporting Emissions.

Each Annex One Party must have a national system in place for estimating anthropogenic emissions from sources and removals by sinks of greenhouse gases by no later than one year prior to the start of the Commitment Period.¹¹ Methodologies used by an Annex One Party to estimate emissions and removals must be those approved by the Intergovernmental Panel on Climate Change and the Conference of the Parties to the Framework Convention.¹² Each Annex One Party must conduct an annual inventory of its emissions and removals, develop a national registry for tracking the holdings of credits, and submit the inventories to the appropriate governing authority.¹³ The information submitted by the Annex One Party will then be reviewed by an Expert Review Team established by the Conference of the Parties to determine compliance.¹⁴ The Expert Review Team will then submit a report to the Conference of the Parties assessing the Annex One Party's implementation of the Article 3 Commitments, and identifying any potential problems in the fulfillment of the Commitments.¹⁵

III. Meeting the Commitment Not to Exceed the Assigned Amount.

The way that an Annex One Party achieves its Article 3 Commitment not to exceed its Assigned Amount is largely up to it.¹⁶ However, active measures to reduce anthropogenic emissions of greenhouse gases from sources are preferred. For example, the European Union has adopted a cap and trade system to reduce emissions from member countries. Prior to the beginning of the Commitment Period in 2008, an Annex One Party must issue to its account in its national registry the number of Assigned Amount Units (AMUs) equal to its Assigned Amount.¹⁷ Each AAU represents one metric ton of carbon dioxide equivalent greenhouse gas emissions, and each AAU must have a unique serial number.¹⁸

At the end of the five year Commitment Period, an Annex One Party may meet its Commitment by presenting and retiring the number of individual AAUs equal to its actual anthropogenic emissions of greenhouse gases during the Commitment Period.¹⁹ If an Annex One Party does not hold sufficient AAUs to cover its emissions, then that Annex One Party has failed to meet its Commitment. In contrast, if an Annex One Party holds more than a sufficient number of AAUs to cover its emissions, then any excess AAUs may be "banked," and carried over to the next Commitment Period.²⁰

Annex One Parties may agree to meet their Article 3 Commitments jointly, as the European Union Parties have done.²¹ In such a case, the Parties acting jointly will be deemed to have met their Article 3 Commitment if their total combined aggregate greenhouse gas emissions do not exceed their combined Assigned Amounts.²² The Parties acting jointly must decide how to divide the combined Assigned Amounts among themselves.²³ The European Union Parties have done this by instituting the European Union Emissions Trading System. Any such agreement to act jointly must remain in operation for the duration of the Commitment Period.²⁴

An Annex One Party may also meet its Article 3 Commitment by using certain human-induced land use, land use change and forestry project activities implemented after 1990 to remove greenhouse gas emissions from the atmosphere.²⁵ These measures include actions such as reforestation, afforestation, forest management, revegetation, cropland management, and grazing land management. In such a situation, the Annex One Party will issue to its account in its national registry the number of Removal Units (RMUs) equal to the amount of greenhouse gases removed from the atmosphere by the activity.²⁶ The RMUs in the Annex One Party's account are then added to the Party's AAUs in the account to determine whether the Annex One Party has met its Article 3 Commitment.²⁷

The proper treatment of land use, land use change and forestry project activities has been a continuing source of controversy in the Conference of the Parties, and there exists detailed rules and significant limitations regarding such projects.²⁸ For example, unlike AAUs, unused RMUs may not be "banked", or carried over for use in subsequent Commitment Periods.²⁹ In addition, the total amount of removals from forest management measures that are recognized for purposes of meeting the Kyoto Protocol Commitments are capped, and the cap is divided among the Annex One Parties.³⁰ For example, the United Kingdom is limited to .37 million tons of carbon times five.³¹ The term "forest management" is defined as "a system of practices for stewardship and use of forest land aimed at fulfilling relevant ecological (including biological diversity), economic and social functions of the forest in a sustainable manner."³² There are additional limitations on the use of land use, land use change and forestry measures in the context of Clean Development Mechanism projects as described later herein.

An Annex One Party may also increase its Assigned Amount by engaging in certain market-based activities called Flexible Mechanisms, and thereby obtaining credits that it can add to its Assigned Amount. There are three types of Flexible Mechanisms set forth in the Kyoto Protocol: (1) International Emissions Trading; (2) Joint Implementation; and (3) Clean Development Mechanism. The purpose of these market-based Flexible Mechanisms is to allow the reduction in greenhouse gas emissions to occur in the place where such measures can be taken most cost effectively. Each of the three Flexible Mechanisms is discussed below.

An Annex One Party that fails to meet its Article 3 Commitment is subject to a penalty. Among other things, if an Annex One Party's greenhouse gas emissions exceed its Assigned Amount, the amount of excess emissions plus thirty percent will be deducted from the Party's Assigned Amount for the second Commitment Period.³³ In addition, the Party must develop a Compliance Action Plan, and submit that plan to the Enforcement Branch of the Compliance Committee for approval.³⁴ Further, a Party that fails to meet its Article 3 Commitment will be suspended from using the Flexible Mechanisms until it is determined that the Party's rights regarding the use of Flexible Mechanisms should be reinstated.³⁵

IV. Flexible Mechanisms.

A. International Emissions Trading.

The first type of Flexible Mechanism is called International Emissions Trading. Pursuant to this Mechanism, an Annex One Party may buy, sell, or trade AAUs, RMUs, and other types of units issued pursuant to the other two Flexible Mechanisms, for purposes of meeting its Article 3

Commitment.³⁶ The Protocol urges that any such trading be supplemental to domestic action to reduce greenhouse gas emissions in meeting a Party's Commitment.³⁷ This Mechanism resembles the trading system established by the Acid Rain Program under the United States Clean Air Act.³⁸ In fact, it was the United States that urged the adoption of a cap and trade system for the Kyoto Protocol to begin with, while it was still involved in negotiations.

In order to be eligible to engage in International Emissions Trading, an Annex One Party must have met its requirements to estimate, inventory and report its greenhouse gas emissions.³⁹ A Party will be deemed to have met such requirements sixteen months after the submission of its report to calculate its Assigned Amount, unless before then the Enforcement Branch of the Compliance Committee finds that the Party does not meet the requirements.⁴⁰ An Annex One Party could be deemed to have met the requirements earlier than sixteen months after submission of its report, if the Enforcement Branch decides that further examination of a Party's compliance with the requirements to estimate, inventory and report its greenhouse gas emissions is not necessary.⁴¹

An Annex One Party may authorize legal entities, such as private companies, to participate in the International Emissions Trading mechanism.⁴² Of course, the Party must itself be eligible to participate in International Emissions Trading before it can authorize a legal entity to participate. In order to prevent an Annex One Party from overselling AAUs, an Annex One Party must maintain in its account a reserve of at least ninety percent of the Party's Assigned Amount, or five times the Party's most recent annual inventory of greenhouse gas emissions, whichever is lower.⁴³ If an Annex One Party's holdings of AAUs fall below the required reserve, the Party must bring its holdings up to the required reserve within thirty days of notice of the deficiency.⁴⁴ The effect of this provision is that most countries can only trade ten percent of their Assigned Amounts. The reserve requirement does not apply to transfers by a Party of verified Joint Implementation Emission Reduction Units.⁴⁵

B. Joint Implementation.

The Second Flexible Mechanism is called Joint Implementation. Under Joint Implementation, one Annex One Party may acquire from another Annex One Party credits called Emission Reduction Units (ERUs) resulting from projects conducted in the host Annex One country to reduce anthropogenic emissions of greenhouse gases from sources or enhance removals of anthropogenic emissions of greenhouse gases by sinks.⁴⁶ The acquiring Annex One Party may then add the ERUs to its Assigned Amount. Banking of Joint Implementation ERUs is limited to 2.5% of a Party's Assigned Amount.⁴⁷

In order to take advantage of Joint Implementation, several requirements must be met: (1) the project must have the approval of both Annex One Parties; (2) the project must provide a reduction or removal of greenhouse gases that is in addition to any that would otherwise occur absent the project (this is referred to as the "additionality" requirement); (3) the party acquiring the ERUs must be in compliance with its obligations to estimate, inventory and report greenhouse gas emissions; and (4) the acquisition of ERUs should be supplemental to domestic actions to reduce greenhouse gas emissions for purposes of meeting the Party's Commitment.⁴⁸ An Annex One Party may authorize legal entities, such as companies, to participate in Joint Implementation projects.⁴⁹

An Annex One host Party that has met its requirements to estimate, inventory and report its greenhouse gas emissions is entitled to itself verify Joint Implementation projects in its country without external third party review.⁵⁰ If a host Party has not met the estimation, inventory and reporting requirements, then verification of a Joint Implementation project must be obtained from the Joint Implementation Supervisory Committee.⁵¹ The Supervisory Committee consists of representatives of Parties to the Kyoto Protocol.⁵² Alternatively, an Annex One host Party that has met the estimation, inventory and reporting requirements may voluntarily elect to have the Supervisory Committee verify Joint Implementation projects in its country.⁵³

Pursuant to the Supervisory Committee process, Joint Implementation project participants must submit a Design Report for the project to an Independent Entity accredited by the Supervisory Committee to review projects.⁵⁴ The Independent Entity will determine, among other things, whether the project meets the additionality requirement, whether the project has an appropriate greenhouse gas emissions baseline, and whether the project has an adequate emissions monitoring plan.⁵⁵ The “baseline” is defined as the emissions of greenhouse gases that would occur in the absence of the proposed project activity.⁵⁶ The purpose of the monitoring plan is to determine whether the project activities are leading to greenhouse gas reductions or removals beyond conditions set forth in the baseline.⁵⁷ The Marrakesh Accords contain detailed rules regarding the calculation of the baseline and the conducting of monitoring. The Design Report must be made available for public comment, and those comments must be taken into account in the approval process.⁵⁸ A Party may appeal the decision of the Independent Entity to the Supervisory Committee.⁵⁹

After the implementation of the project and the commencement of greenhouse gas emissions monitoring, the project participants must submit a report to the Independent Entity detailing the reduction in emissions or enhancement in removals of greenhouse gases resulting from the project.⁶⁰ The independent entity will review the report and determine the appropriate reduction in emissions and increase in removals for purposes of issuing ERUs.⁶¹ As before, the decision of the Independent Entity may be appealed to the Supervisory Committee.⁶²

C. Clean Development Mechanism.

The third Flexible Mechanism is called the Clean Development Mechanism. Under the Clean Development Mechanism, an Annex One Party may acquire Certified Emission Reductions (CERs) from a non-Annex One Party (developing nation) resulting from projects in the non-Annex One country to reduce emissions of greenhouse gases or enhance removals of greenhouse gases below baseline levels.⁶³ These emissions reductions or removals must be certified by a Designated Entity on the basis of the following: (1) voluntary participation approved by each Party involved (each Party participating in the CDM must designate a National Authority for the CDM); (2) real, measurable, and long-term benefits related to the mitigation of climate change; and (3) reduction in emissions that are additional to any that would occur in the absence of the activity (additionality requirement).⁶⁴ In addition, in order to be eligible to use CERs to meet Article 3 Commitments, an Annex One Party must be in compliance with its obligations to estimate, inventory and report greenhouse gas emissions.⁶⁵

There are some limits on the types of projects that can qualify as Clean Development Mechanism projects. For example, Annex One Parties are to refrain from using CERs generated from nuclear facilities in meeting their Article 3 Commitments.⁶⁶ Further, the eligibility of land use, land use change and forestry project activities under the Clean Development Mechanism is limited to afforestation and reforestation.⁶⁷ Further, the total of additions to an Annex One Party's Assigned Amount from eligible land use, land use change and forestry projects under the Clean Development Mechanism is limited to one percent of that Annex One Party's Base Year emissions times five.⁶⁸

A share of the proceeds from the certified Clean Development Mechanism project activities must be used to cover administrative expenses, as well as to assist developing country Parties that are particularly vulnerable to the adverse effects of climate change to meet the costs of adaptation.⁶⁹ As an additional benefit, in meeting its Article 3 Commitment, an Annex One Party may use CERs obtained from 2000 to 2007 (prior to the start of the first Commitment Period).⁷⁰ This "prompt start" feature is different from the Joint Implementation mechanism, where a Party must wait until 2008 to begin to generate Emission Reduction Units. The banking of unused CERs is limited to 2.5% of the Annex One Party's Assigned Amount.⁷¹ As with Joint Implementation, participation under the Clean Development Mechanism may involve private and/or public entities authorized by the Party to participate.⁷² The Clean Development Mechanism is the primary mechanism for the involvement of developing country (non-Annex One) Parties during the First Commitment Period.

A Clean Development Mechanism Executive Board is established to oversee the administration of the program.⁷³ The Board consists of ten members from Parties to the Kyoto Protocol.⁷⁴ The Executive Board accredits Operational Entities to assist in administering the Clean Development Mechanism program.⁷⁵ The Parties involved in a Clean Development Mechanism project must select an Operational Entity and submit a Design Document.⁷⁶ The Operational Entity reviews the Design Document to determine, among other things, whether the Clean Development Mechanism project meets the additionality requirement, whether the participants have determined an appropriate baseline of greenhouse gas emissions, and whether the project has an adequate emissions monitoring plan.⁷⁷ In addition, in the Design Document, the project participants will select one of the two available crediting periods: (1) a maximum ten-year period with no option of renewal; or (2) a maximum seven-year period which may be renewed at most two times.⁷⁸

The Design Document must also demonstrate that the public was given the opportunity to comment on the document, and that the comments were taken into account.⁷⁹ Further, the Operational Entity must give the public the opportunity to comment on the validation process for the project and take public comments into account.⁸⁰ If the Operational Entity determines that the project meets the applicable requirements, it will issue a Validation Report requesting registration of the project by the Clean Development Mechanism Executive Board.⁸¹ The project will be deemed to be registered by the Executive Board unless, within eight weeks of receipt by the Executive Board of the request for registration, either a Party to the project or at least three members of the Executive Board request a review of the project.⁸² A project that is not accepted for validation and subsequent registration may be reconsidered after appropriate revisions are made to the project.⁸³

After registration, the project participants must periodically prepare a Monitoring Report setting forth the reduction of anthropogenic emissions or increase in removals of greenhouse gases resulting from the project during a specified time period.⁸⁴ The Report should also set forth any leakage, which is the increase in anthropogenic emissions of greenhouse gases outside of the project boundary which is attributable to project activity.⁸⁵ The Monitoring Report is submitted by the project participants for verification and certification to a different designated Operational Entity than the Operational Entity that reviewed the Design Document.⁸⁶

Upon verification, the Operational Entity will submit a Verification Report and Certification of reductions to the Clean Development Mechanism Executive Board.⁸⁷ The Certification constitutes a request for issuance of CERs equal to the verified amount of emission reductions or increased removals.⁸⁸ The decision to issue CERs will be deemed final unless, within fifteen days after the receipt of the request for issuance of CERs, a Party involved in the project or at least three members of the Executive Board request a review of the proposed issuance of CERs.⁸⁹ Such a review is limited to issues of fraud, malfeasance, or incompetence of the designated Operational Entity.⁹⁰

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² Kyoto Protocol, art. 2.1.

³ *Id.*, art. 3.1.

⁴ *Id.*, Annex B.

⁵ *Id.*

⁶ *Id.*, art. 3.7.

⁷ *Id.*

⁸ *Id.*, art. 3.5.

⁹ *Id.*, art. 3.8.

¹⁰ *Id.*, art. 3.1.

¹¹ *Id.*, art. 5.1.

¹² *Id.*, art. 5.2.

¹³ *Id.*, art. 7.1.

¹⁴ *Id.*, art. 8.1.

¹⁵ *Id.*, art. 8.3.

¹⁶ *Id.*, art. 2.1.

¹⁷ Decision 19/CP.7, annex ¶ 23.

¹⁸ *Id.*, ¶ 24.

¹⁹ *Id.*, ¶ 34.

²⁰ Kyoto Protocol, art. 3.13.

²¹ *Id.*, art. 4.1.

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- ²² *Id.*
- ²³ *Id.*
- ²⁴ *Id.*, art. 4.3.
- ²⁵ *Id.*, arts. 3.3, 3.4.
- ²⁶ Decision 19/CP.7, annex ¶ 25.
- ²⁷ *Id.*, ¶ 11(e).
- ²⁸ *See* Decision 11/CP.7.
- ²⁹ Decision 19/CP.7, annex ¶ 16.
- ³⁰ Decision 11/CP.7.
- ³¹ *Id.*, appendix.
- ³² *Id.*, annex ¶1(f).
- ³³ Decision 24/CP.7, annex (Consequences Applied by the Enforcement Branch) ¶ 5(a).
- ³⁴ *Id.* ¶ 5(b).
- ³⁵ *Id.*, ¶ 5(c).
- ³⁶ Kyoto Protocol, art. 17; Decision 18/CP.7, annex ¶ 2.
- ³⁷ Kyoto Protocol, art. 17.
- ³⁸ *See* 42 U.S.C. § 7651 *et. seq.*
- ³⁹ Decision 18/CP.7, annex ¶ 2.
- ⁴⁰ *Id.*, ¶ 3.
- ⁴¹ *Id.*
- ⁴² *Id.*, ¶ 5.
- ⁴³ *Id.*, ¶ 6.
- ⁴⁴ *Id.*, ¶ 9.
- ⁴⁵ *Id.*, ¶ 10.
- ⁴⁶ Kyoto Protocol, art. 6.1.
- ⁴⁷ Decision 19/CP.7, annex ¶ 15.
- ⁴⁸ Kyoto Protocol, art. 6.1.
- ⁴⁹ *Id.*, art. 6.3.
- ⁵⁰ Decision 16/CP.7, annex ¶ 23.
- ⁵¹ *Id.*, ¶ 24.
- ⁵² *Id.*, ¶ 4.
- ⁵³ *Id.*, ¶ 25.
- ⁵⁴ *Id.*, ¶ 31.
- ⁵⁵ *Id.*, ¶ 32.
- ⁵⁶ *Id.*, appendix B.
- ⁵⁷ *Id.*

⁵⁸ Decision 16/CP.7, annex, ¶ 32.

⁵⁹ *Id.*, ¶ 35.

⁶⁰ *Id.*, ¶ 36.

⁶¹ *Id.*, ¶ 37.

⁶² *Id.*, ¶ 39.

⁶³ Kyoto Protocol, art. 12.2.

⁶⁴ *Id.*, art. 12.5.

⁶⁵ Decision 17/CP.7, annex ¶ 31.

⁶⁶ *Id.*, preamble.

⁶⁷ Decision 17/CP.7, ¶ 7(a).

⁶⁸ *Id.*, ¶ 7(b).

⁶⁹ Kyoto Protocol, art. 12.8.

⁷⁰ *Id.*, art. 12.10.

⁷¹ Decision 19/CP.7, annex ¶ 15.

⁷² Kyoto Protocol, art. 12.9.

⁷³ Decision 17/CP.7, annex ¶ 5.

⁷⁴ *Id.*, ¶ 7.

⁷⁵ *Id.*, ¶ 20.

⁷⁶ *Id.*, ¶ 35.

⁷⁷ *Id.*, ¶ 37.

⁷⁸ *Id.*, ¶ 49.

⁷⁹ *Id.*, ¶ 37.

⁸⁰ *Id.*, ¶ 40.

⁸¹ *Id.*, ¶ 40(f).

⁸² *Id.*, ¶ 41.

⁸³ *Id.*, ¶ 42.

⁸⁴ *Id.*, ¶ 60.

⁸⁵ *Id.*, ¶ 50, 51.

⁸⁶ *Id.*, ¶ 60.

⁸⁷ *Id.*, ¶ 63.

⁸⁸ *Id.*, ¶ 64.

⁸⁹ *Id.*, ¶ 65.

⁹⁰ *Id.*