REDD, White, and Blue: Is Proposed U.S. Climate Legislation Adequate To Promote a Global Carbon Credits System for Avoided Deforestation in a Post-Kyoto Regime?

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Reducing emissions from deforestation and degradation (REDD) has emerged as an important, albeit controversial, component of negotiations for a new international climate change regime to succeed the Kyoto Protocol when it expires in 2012. Not permitted under the terms of the Kyoto Protocol, REDD involves paying developing countries to protect their tropical forests as a climate change mitigation strategy. REDD gained widespread attention by 2005 and took center stage in the months preceding the negotiation of the Copenhagen Accord in December 2009. After more than a decade of nonparticipation in international climate change compliance efforts, the United States has signed the Copenhagen Accord, which contains several provisions addressing REDD. Significant questions remain, however, regarding the manner and degree to which REDD mechanisms will be implemented. One of the most critical lingering questions is the potential use of REDD as a component of U.S. participation in a post-Kyoto climate change regime. The climate change legislation pending before Congress contains important provisions addressing REDD. If signed into law, the U.S. legislation would help promote the use of REDD as an indispensable component of an international carbon market and enable the United States to assume a long-overdue leadership role in international climate change regulation.

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I. INTRODUCTION

> *"People are finally getting to the point where they understand that we can't solve the climate change crisis without solving the deforestation crisis."*
>
> —Jeff Horowitz,
> Founder of Avoided Deforestation Partners[1]

The legacy of the Kyoto Protocol[2] is a painful lesson in winning the battle but losing the war in addressing global climate change. Although the international community made significant reductions in greenhouse gas emissions under the terms of the Protocol, three critical regulatory gaps stymied the regime's ultimate success. First, the Protocol did not provide an adequate international response to climate change because a significant source of the climate change problem was omitted. Deforestation and forest degradation release up to eighteen percent of annual global carbon dioxide emissions,[3] yet these significant contributing forces to the climate change problem were not included within the regulatory scheme.[4] Second, the Kyoto Protocol did not provide sufficiently effective mechanisms for developing countries to have a meaningful role in addressing global climate change.[5] Third, and

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1. Rhett Butler, *Forest Conservation in U.S. Climate Policy: An Interview with Jeff Horowitz*, MONGABAY.COM, Feb. 5, 2010, http://print.news.mongabay.com/2010/0205-adp_forests_redd.html?print (internal quotation marks omitted).

2. Kyoto Protocol to the United Nations Framework Convention on Climate Change, U.N. Doc. FCCC/CP/1997/7/Add1, Dec. 10, 1997 (1998) [hereinafter Kyoto Protocol], *available at* http://unfccc.int/resource/docs/convkp/kpeng.pdf.

3. NICHOLAS STERN, THE ECONOMICS OF CLIMATE CHANGE: THE STERN REVIEW, at xxv (2006), http://siteresources.worldbank.org/INTINDONESIA/Resources/226271-1170911056314/3428109-1174614780539/SternReviewEng.pdf.

4. Although forest projects are eligible to earn tradable credits under the Clean Development Mechanism (CDM) in the Kyoto Protocol, such projects are limited to afforestation and reforestation and do not include avoided deforestation. *See* Bernard Schlamadinger et al., *Should We Include Avoidance of Deforestation in the International Response to Climate Change?*, *in* TROPICAL DEFORESTATION AND CLIMATE CHANGE 53, 53 (Paulo Moutinho & Stephan Schwartzman eds., 2005); *see also* CLÉMENT CHENOST ET AL., BRINGING FOREST CARBON PROJECTS TO THE MARKET 8-9, *available at* http://www.unep.fr/energy/activities/forest_carbon/pdf/Guidebook%20English%20Final%2019-5-2010%20high%20res.pdf (last visited Sept. 19, 2010) (explaining why CDM forestry projects represent only 0.4% of all registered CDM projects).

5. The CDM sought to engage developing countries by authorizing emissions reduction partnerships between developed and developing nations; however, the mechanism was too narrow and plagued by administrative complexity to achieve broad-based participation. For a discussion of the CDM and some of the criticisms that have been lodged against it, see generally Ann E. Prouty, *The Clean Development Mechanism and Its Implications for Climate Justice*, 34 COLUM. J. ENVTL. L. 513 (2009); Michael Wara, *Measuring the Clean Development Mechanism's Performance and Potential*, 55 UCLA L. REV. 1759 (2008); ANITA TALBERG & LESLIE NIELSON, DEP'T OF PARLIAMENTARY SERVS., PARLIAMENT OF AUSTL., THE KYOTO PROTOCOL'S CLEAN DEVELOPMENT MECHANISM 15-20 (Apr. 23, 2009), http://www.aph.gov.au/library/pubs/bn/2008-

perhaps most significantly, the international community learned that any international climate change agreement without the full participation of the United States would be rendered virtually meaningless.

Reducing emissions from deforestation and degradation (REDD) is a climate change compliance strategy that involves an indispensable partnership between developed and developing countries to help ensure the continuing viability of an international climate change treaty regime to succeed the Kyoto Protocol upon its expiration in 2012. REDD involves developed countries paying developing countries to protect their tropical forests as an international climate change mitigation strategy.[6] Therefore, REDD is a valuable mechanism to fill the first two regulatory gaps in the Kyoto Protocol by fully engaging the developing world's participation in climate change compliance efforts while embracing the essential roles that deforestation and forest degradation play in the fight against climate change.[7]

The third regulatory gap in the Kyoto Protocol—the nonparticipation of the United States—remains a challenge; however, recent developments offer at least some reason for hope. After more than a decade of nonparticipation in international climate change compliance efforts, the United States signed the Copenhagen Accord on January 28, 2010.[8] The Copenhagen Accord contains several provisions that address

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09/KyotoProtocol_CDM.pdf; Emma Paulsson, *A Review of the CDM Literature: From Fine-Tuning to Critical Scrutiny?*, 9 INT'L ENVTL. AGREEMENTS: POL. L. & ECON. 63 (2009).

6. *See About REDD+*, UN-REDD PROGRAMME, http://www.un-redd.org/AboutREDD/tabid/582/language/en-US/Default.aspx (last visited Sept. 4, 2010). REDD seeks "to create a financial value for the carbon stored in forests, offering incentives for developing countries to reduce emissions from forested lands and invest in low-carbon paths to sustainable development." *Id.*

7. In addition to serving as a potent mechanism to promote climate change compliance, REDD also offers valuable co-benefits. Addressing climate change while offering valuable co-benefits has been referred to as the "quadruple dividends" of REDD because REDD offers:

> [C]limate dividends by sequestering carbon; environmental dividends by bolstering watersheds and filtering air and groundwater; biodiversity dividends by providing habitat for over two thirds of the world's ground based species of plants and animals; and economic dividends, through sustainable land and forest management to improve the livelihoods of forest-dependent communities, many of which are among the world's poorest.

See Reducing Emissions from Deforestation and Forest Degradation (REDD)—An Interview with Don Kanak, Chairman World Wildlife Fund Forest Carbon Initiative, CARBON INNOVATORS NETWORK, Apr. 2010, http://www.carboninnovators.net.au/sites/carboninnovators.net.au/files/images/10.4%20REDD%20-%20an%20interview%20with%20Don%20Kanak.pdf [hereinafter *Interview with Don Kanak*].

8. *See* Alex Morales, *U.S. Signs On to Copenhagen Climate Accord, Pledges to Cut CO2*, BLOOMBERG, Jan. 29, 2010, http://www.bloomberg.com/apps/news?pid=newsarchive&sid=amKfFOaRgQyA.

REDD;[9] however, significant questions remain regarding how these REDD mechanisms will be implemented.[10] One of the most critical lingering questions is the potential use of REDD as a component of U.S. participation in a post-Kyoto climate change regime. The climate change legislation pending before Congress in 2010 contains important provisions addressing REDD.

Part I of this Article traces the evolution of REDD, from its exclusion from the Kyoto Protocol to its rise to prominence on the road to Copenhagen. Part II discusses the REDD provisions in the Copenhagen Accord and considers the role of REDD+ as a vehicle to promote an international carbon market in a post-Kyoto climate change agreement. Part III describes the relevant provisions of the climate change legislation pending before Congress and considers the effectiveness of the provisions of the House and Senate versions of the legislation that address the use of REDD. This Article concludes that the pending U.S. legislation would promote an international carbon market and would provide a foundation for the U.S. to embrace a long-overdue opportunity for leadership in international climate change compliance efforts.

II. FROM KYOTO TO COPENHAGEN: REDD'S PATH TO PROMINENCE

During the Kyoto Protocol negotiations, REDD was considered, and ultimately rejected, for inclusion as one of the flexibility mechanisms[11] in the Protocol.[12] Several concerns were cited to support the exclusion of REDD from the Protocol's regulatory framework: "Many believed that the challenges and uncertainties inherent to quantifying forest sector emissions would weaken the overall strength of the climate regime, and developing countries worried that a plan to reduce deforestation would threaten their sovereignty over land use decisions, and subsequently their right to develop."[13]

Although REDD was excluded from the Kyoto Protocol, the Clean Development Mechanism (CDM) nevertheless provided a narrow

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9. *See* United Nations Framework Convention on Climate Change Conference of the Parties, Copenhagen, Den., Dec. 7-18, 2009, *Copenhagen Accord*, ¶¶ 6, 8, 10, U.N. Doc. FCCC/CP/2009/11/Add.1 (Dec. 18, 2009) [hereinafter *Copenhagen Accord*].

10. For a discussion of these implementation concerns, see *infra* Part III.B.

11. The flexibility mechanisms in the Kyoto Protocol are: (1) emissions trading in article 17, (2) joint implementation in article 6, and (3) the Clean Development Mechanism in article 12. Kyoto Protocol, *supra* note 2, arts. 6, 12, 17.

12. Crystal Davis, *Protecting Forests To Save the Climate: REDD Challenges and Opportunities*, EARTH TRENDS, Apr. 23, 2008, http://earthtrends.wri.org/updates/node/303.

13. *Id.*

window of opportunity for the forestry sector to be considered within the Protocol's climate change compliance framework.[14] The CDM allows industrialized countries to earn carbon credits from reforestation and afforestation projects in developing countries.[15] To date, however, this mechanism has involved forestry projects to a very limited degree.[16]

Following on the coattails of the CDM's failure to promote protection and enhancement of forests, REDD seeks to ensure that the daunting scope of deforestation's impacts on climate change is no longer overlooked. "'[A]nnual emissions from deforestation are approximately equivalent to the annual carbon emissions from the United States, and are a greater contributor to pollution than all of the world's cars, trains, planes, and ships combined.'"[17] REDD's journey in international climate change diplomacy since the negotiation of the Kyoto Protocol has been a circuitous yet productive progression that has gained momentum within the past two years.[18]

The formal inclusion of REDD in climate change negotiations began in 2005 at the Eleventh Conference of the Parties to the Kyoto Protocol (COP 11) in Montreal.[19] Spearheaded by the Coalition of Rainforest Nations,[20] a group of developing nations with a high percentage of tropical rainforests that support the use of carbon credits to curb tropical deforestation, REDD was proposed as a way to enhance developing nations' contribution to climate change compliance.[21]

REDD made a significant step forward at COP 13 in Bali in December 2007. REDD was expressly included as part of the Bali

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14. *Id.*

15. Afforestation refers to anthropogenic conversion of nonforested areas into forested land that has not been forested for at least fifty years, whereas reforestation refers to such conversion of nonforested areas that have not been forested since December 31, 1989. Rômulo Silveira da Rocha Sampaio, *Seeing the Forest for the Treaties: The Evolving Debates on Forest and Forestry Activities Under the Clean Development Mechanism Ten Years After the Kyoto Protocol*, 31 FORDHAM INT'L L.J. 634, 643 (2008).

16. *See* CHENOST ET AL., *supra* note 4, at 8-9 (explaining why CDM forestry projects represent only 0.4% of all registered CDM projects).

17. *See* Butler, *supra* note 1 (quoting Jeff Horowitz).

18. For a comprehensive summary of the evolution of REDD from Kyoto to Copenhagen, see generally VIVIENNE HOLLOWAY & ESTEBAN GIANDOMENICO, CARBON PLANET WHITE PAPER: THE HISTORY OF REDD POLICY (2009), http://www.carbonplanet.com/protected_downloads/white_papers/The_History_of_REDD.pdf.

19. *See* Butler, *supra* note 1.

20. *See generally* COALITION FOR RAINFOREST NATIONS, http://www.rainforestcoalition.org (last visited Sept. 4, 2010).

21. *See* Butler, *supra* note 1.

Action Plan,[22] which was a strategy of necessary steps in moving toward a post-Kyoto climate change treaty in 2012. The Bali Action Plan calls for "[p]olicy approaches and positive incentives on issues relating to reducing emissions from deforestation and forest degradation in developing countries; and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries."[23] Despite the progress on REDD in Bali, many implementation challenges remained before REDD could be integrated effectively into a post-Kyoto climate change treaty regime.[24]

The implementation challenges that critics have raised about REDD led to the creation of REDD+ as a "new and improved" way of thinking about REDD for the future. REDD's evolution into REDD+ at the Poznan negotiations in December 2008, and the Bonn negotiations in March 2009, helped propel the hope that REDD would be instrumental at Copenhagen. REDD's evolution to REDD+ involved a transition to an enhanced, broad-based approach that includes conservation, sustainable forest management, and forest carbon stock enhancement.[25]

In addition to REDD+, two other dimensions of REDD's evolution also were active in the two years prior to Copenhagen: the World Bank Forest Carbon Partnership Facility (FCPF)[26] and the UN-REDD Programme.[27] Established in 2007 at COP 13 in Bali, the FCPF evaluates the feasibility of proposals from developing countries to receive REDD

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22. *See* United Nations Framework Convention on Climate Change Conference of the Parties, Bali, Indon., Dec. 3-15, 2007, *Bali Action Plan*, art. 1(b)(iii), U.N. Doc. FCCC/CP/2007/6/Add.l (Mar. 14, 2008), http://unfccc.int/resource/docs/2007/cop/3/eng/06a01.pdf.

23. *Id.*

24. *See* Steve Zwick & Katherine Hamilton, *REDD Hot in Bali—and Very Confusing*, EARTH NEWS, Dec. 28, 2007, http://www.earthportal.org/news/?p=766 ("[B]ecause of the challenges of commoditizing REDD activities into the general carbon markets, several groups have proposed that REDD activities be separated from the current Kyoto carbon markets."). One example, proposed by Greenpeace, is "Tropical Deforestation Emission Reduction Units," which would treat REDD credits as separate from those earned under the Clean Development Mechanism. *Id.* Other implementation concerns involve "the negative impacts REDD payments might have on forest-dependent communities, primarily through further weakening of their land and resource rights" and "complex links with agriculture" that could impact food supply and other agricultural products. *REDD: Protecting Climate, Forests, and Livelihoods*, INT'L INST. FOR ENV'T & DEV., http://www.iied.org/natural-resources/key-issues/forestry/redd-protecting-climate-forests-and-livelihoods (last visited Aug. 31, 2010).

25. CHARLIE PARKER ET AL., GLOBAL CANOPY PROGRAMME, THE LITTLE REDD+ BOOK 14 (2009), http://www.globalcanopy.org/themedia/file/PDFs/LRB_lowres/lrb_en.pdf; HOLLOWAY & GIANDOMENICO, *supra* note 18, at 4. For a detailed discussion of REDD+ and its possible role as a component of a post-Kyoto climate change treaty, see *infra* Part III.B.

26. For more information about the World Bank Forest Carbon Partnership Facility, see *About the FCPF*, FOREST CARBON PARTNERSHIP, http://www.forestcarbonpartnership.org/fcp/node/12 (last visited Aug. 31, 2010).

27. *About REDD+*, *supra* note 6.

financing for climate-related projects.[28] To be eligible for funding and technical assistance, the developing countries must establish that they have a valid method in place to measure and monitor climate-related benefits.[29] Similarly, the UN-REDD Programme was developed in 2008 as a source of funding for REDD projects in developing countries.[30] The program, which features a multidonor fund, is a collaborative initiative of the U.N. Food and Agriculture Organization, the U.N. Development Programme, and the U.N. Environment Programme.[31]

The months leading up to COP 15 in Copenhagen in December 2009 were filled with anticipation that a new international climate change treaty would be negotiated. Part of that optimism was due to the ongoing evolution of REDD and its status as the possible missing link to break the stalemate in international climate change negotiations. Prior to Copenhagen, forest countries worked hard to make progress toward the goal of incorporating REDD as part of a post-Kyoto climate change regime. This work has many facets, including "collaboration on laws and regulations to establish . . . a governance structure for REDD, clarifying who owns forest carbon rights . . ., and promoting REDD projects on the ground to demonstrate the ability to measure and monitor and account for forest carbon."[32] COP 15 in Copenhagen offered the promise to be the first significant step forward for REDD as a component of the future climate change regime. As Part III of this Article discusses, at least part of that promise was fulfilled.

III. THE COPENHAGEN ACCORD, REDD, AND THE GLOBAL CARBON MARKET

Carbon markets have developed rapidly since the Kyoto Protocol's emissions reduction commitments entered into force in 2005.[33] During this period, mandatory carbon markets, both within and outside of the Kyoto Protocol's compliance scheme, and voluntary carbon markets were established.[34] However, the mandatory regimes have been limited to

28. *See About the FCPF*, *supra* note 26.
29. *Id.*
30. *See REDD: Protecting Climate, Forests, and Livelihoods*, *supra* note 24.
31. *Id.*
32. *See Interview with Don Kanak*, *supra* note 7.
33. In 2010, the value of the global carbon market climbed to $170 billion, up thirty-three percent from 2009. *Global Carbon Market Worth $170 Billion in 2010, Up 33 Per Cent*, CPI FIN., Feb. 3, 2010, http://www.cpifinancial.net/v2/print.aspx?pg=news&aid=4234.
34. CHENOST ET AL., *supra* note 4, at 24. For a discussion of the evolution and functions of voluntary carbon markets, see generally Michelle Passero, *The Voluntary Carbon Market: Its Contributions and Potential Legal and Policy Issues*, *in* LEGAL ASPECTS OF CARBON TRADING: KYOTO, COPENHAGEN, AND BEYOND 517-33 (David Freestone & Charlotte Streck eds., 2009).

regional efforts and have not drawn on avoided deforestation credits.[35] The most prominent among these regional carbon markets is the European Union Emissions Trading System (EU-ETS), which has received considerable attention.[36] In addition, within the past few years, voluntary carbon markets based on REDD have emerged and are working effectively.[37] The success of the EU carbon market, and the preliminary promise of voluntary carbon markets using avoided deforestation credits, offer hope that an international carbon market bolstered by the authorized use of avoided deforestation credits and the full participation of the United States could evolve in the wake of Copenhagen.

A. "REDD-Eyed" Assessment of the Copenhagen Accord

The much-anticipated Fifteenth Conference of the Parties to the Kyoto Protocol was held in Copenhagen, Denmark in December 2009. In the months leading up to the meeting, hopes were high that the conference would produce a mandatory agreement with ambitious emissions reduction targets. Within weeks of the meeting, however, major industrialized nations had already conceded that such an agreement would not be achieved at Copenhagen.[38] Toward the end of the meeting, many feared that even a nonbinding agreement would not be forthcoming. In the end, the Copenhagen Accord emerged as the product of two weeks of intensive negotiations. The outcome of Copenhagen

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35. CHENOST ET AL., *supra* note 4, at 32 (noting that the European emissions trading system does not accept forest carbon credits).

36. The EU-ETS is the largest carbon market in the world, both in terms of value and volume. *Id.* For a critical review of the EU-ETS, see generally Marisa Martin, *Trade Law Implications of Restricting Participation in The European Union Emissions Trading Scheme*, 19 GEO. INT'L ENVTL. L. REV. 437 (2007); Jonathan Donehower, Comment, *Analyzing Carbon Emissions Trading: A Potential Cost Efficient Mechanism To Reduce Carbon Emissions*, 38 ENVTL. L. LEWIS & CLARK L. SCH. 177 (2008); Brettny Hardy, Note, *How Positive Environmental Politics Affected Europe's Decision To Oppose and Then Adopt Emissions Trading*, 17 DUKE ENVTL. L. & POL'Y F. 297 (2007).

37. *See, e.g.*, CHENOST ET AL., *supra* note 4, at 35 (discussing a voluntary REDD project in the Juma Reserve in the Brazilian Amazon). For a discussion of the challenges involved in seeking to integrate REDD principles into a post-Kyoto international climate change treaty regime, see generally Robert O'Sullivan & Rick Saines, *International Market Solutions To Protect Topical Rainforests*, *in* LEGAL ASPECTS OF CARBON TRADING: KYOTO, COPENHAGEN, AND BEYOND, *supra* note 34, at 584-605.

38. *See* Suzanne Goldenberg & John Vidal, *US Scales Down Hopes of Global Climate Change Treaty in Copenhagen*, GUARDIAN, Nov. 4, 2009, http://www.guardian.co.uk/environment/2009/nov/04/us-climate-change-copenhagen-treaty.

generated significant debate as to whether the meeting was a positive step forward or a tremendous disappointment.[39]

In some respects, the Copenhagen Accord represents important progress in international climate change diplomacy. First, almost all major industrialized nations, including the United States, have signed the agreement.[40] Second, references to REDD and REDD+ appear throughout its provisions.[41] For example, paragraph 6 acknowledges the critical role of reducing emissions from deforestation and forest degradation to "enable the mobilization of financial resources from developed countries" to reduce global greenhouse emissions.[42] To implement this objective, paragraph 8 provides that developed countries will provide $30 billion in adaptation funding in the period 2010-2012 to the "most vulnerable developing countries, such as the least developed countries, small island developing States and Africa."[43] Third, the Accord reflects the shift from Kyoto's exclusive focus on mitigation to the need to address adaptation as an essential component of any post-Kyoto international climate change agreement.

Notwithstanding these positive steps, Copenhagen critics had ample grounds on which to be disappointed with the outcome of the meeting. First, no binding emission reduction targets were established and there was not even a commitment to a binding post-Kyoto treaty.[44] Second, the Accord contains little guidance regarding how to implement the REDD provisions in the agreement.

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39. *See, e.g.*, Leslie Carothers, *Closing Statement: Wonderful Copenhagen*, ENVTL. F., Mar./Apr. 2010, at 56, 56; Tom Mounteer, *Did Copenhagen Give Climate Change Legislation Any "Bounce" in the Senate?*, [Mar. 2010] 40 Envtl. L. Rep. (Envtl. Law Inst.) at 10248; CLIMATICO, COPENHAGEN DE-BRIEFING: AN ANALYSIS OF COP15 FOR LONG-TERM COMPARISON (Jan. 2010), http://www.climaticoanalysis.org/wp-content/uploads/2010/01/post-cop15-report52.pdf; WORLD WIDE FUND FOR NATURE (WWF), THE COPENHAGEN ACCORD: A STEPPING STONE? (Jan. 2010), http://assets.panda.org/downloads/the_stepping_stone_final_280110.pdf.

40. *See* Alex Morales, *World's Biggest Emitters Sign Up to Copenhagen Accord*, BLOOMBERG, Feb. 1, 2010, http://www.bloomberg.com/apps/news?pid=20601081&sid=aD.MbbEYBSZE.

41. *See Copenhagen Accord*, *supra* note 9, ¶¶ 6, 8, 10.

42. *Id.* ¶ 6.

43. *Id.* ¶ 8. Developed nations also pledged significant funding (up to $100 billion/year by 2020) to support developing nations' efforts to mitigate greenhouse gas emissions. *Id.*

44. *See* Alden Meyer, *The Copenhagen Accord: Not Everything We Wanted, But Something To Build On*, UNION OF CONCERNED SCIENTISTS, http://www.ucsusa.org/global_warming/solutions/big_picture_solutions/the-copenhagen-accord.html (last modified Dec. 23, 2009); *see also* John O. Niles, *Chaos and the Accord: Climate Change, Tropical Forests and REDD+ After Copenhagen*, MONGABAY.COM, Apr. 6, 2010, http://news.mongabay.com/2010/0406-niles_copenhagen_accord.html ("The Copenhagen Accord rests in legal, political and environmental limbo.").

Nevertheless, the negotiations on REDD were deemed so important that some commentators regarded the progress on REDD at Copenhagen as a ray of hope in an otherwise disappointing conference.[45] Transforming that sense of hope regarding REDD's potential into an effective component of a post-Kyoto climate change treaty's compliance regime will be a tremendous challenge.

B. REDD+ and the Post-Copenhagen Outlook

The REDD concept is elegant in its simplicity and easy to support in principle; however, the challenge of how to implement it effectively has generated significant controversy. The devil is in the details. This controversy has generated several proposals for how REDD can be implemented to fulfill its objectives.[46] Chief among these proposals is the approach known as REDD+. One commentator effectively summarized the range of challenges reflected in REDD implementation with the following series of questions:

> What financing mechanism should be used for a REDD scheme? A market-based system? A Fund? Should a ton of carbon from a forest project sold on a carbon exchange be fungible with a ton of carbon emission reductions from a factory? At what scale do you measure forest protection? At a project scale? At a national scale? Should REDD schemes be restricted to tropical forests? Or does it even make sense to limit it to forests when other systems, such as wetlands, are also critically important from a climate perspective? How do you make sure local and indigenous benefits participate so that their rights are fully respected and the financial benefits don't all get swallowed up by governments and large corporations?[47]

As the leading effort to address these daunting challenges, REDD+ is the next step in the evolution of crediting avoided tropical deforestation as a climate change compliance mechanism. REDD+ is more broad-

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45. For a critique of the adequacy of the REDD language in the Copenhagen Accord, see Steve Zwick, *Bright REDD Spot in Otherwise Dismal Copenhagen Accord*, ECOSYSTEM MARKETPLACE, Dec. 19, 2009, http://www.ecosystemmarketplace.com/pages/dynamic/article.page.php?page_id=7395&section=home#close; *REDD May Yet Survive Copenhagen Failures*, CARBONPOSITIVE.NET, Dec. 21, 2009, http://www.carbonpositive.net/viewarticle.aspx?articleID=1786.

46. *See* Crystal Davis, *Protecting Forests To Save the Climate: REDD Challenges and Opportunities*, EARTH TRENDS, Apr. 23, 2008, http://earthtrends.wri.org/updates/node/303 (discussing how "questions of how to design and implement a mechanism to achieve REDD are proving exceptionally complex and controversial," which is generating "uncertainty that it will generate real benefits for the global climate, forests and forest communities").

47. Wild Guy, *REDD Alert*, WILD FOUND. (Sept. 23, 2008), http://www.wild.org/blog/red-alert/.

based than REDD in that it also includes conservation of carbon stocks in low deforestation countries, sustainable forest management, and afforestation and reforestation.[48] REDD+ also benefits from U.N. support, which is essential for its viability.[49] REDD+ seeks to establish a single international agency for monitoring and financing REDD activities.[50] REDD+ may, however, need to be phased in over time after REDD mechanisms are implemented.

Although long-term financing of REDD activities is not specified in the Copenhagen Accord, within two months after Copenhagen "six countries pledged $3.5 billion over three years to fund activities needed to lay the groundwork for an eventual REDD mechanism."[51] In a welcome break from its track record of disengagement from climate change diplomacy, the United States contributed $1 billion to the $3.5 billion pool.[52]

Two recent international meetings addressed funding and implementation strategy for REDD+ as a potentially viable mechanism for a post-Kyoto treaty. In May 2010, fifty-two nations gathered in Oslo, Norway, for a climate change and forests conference.[53] The meeting was regarded as an important step forward for REDD+ negotiations as the international community prepares for the climate change treaty negotiations at COP 16 in Cancun, Mexico, in December 2010.[54] Several countries, including the United States, pledged $4 billion for the period 2010-2012 to assist developing countries in reducing emissions from deforestation and forest degradation.[55]

At the climate talks in Bonn, Germany, in June 2010, provisions for REDD were discussed in the Ad Hoc Working Group on Long-Term

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48. *See* Butler, *supra* note 1.

49. *See About REDD+*, *supra* note 6.

50. Ian Macdougall, *Germany, Norway Give $1.5B To Fight Deforestation*, USA TODAY, May 26, 2010, http://www.usatoday.com/tech/science/environment/2010-05-26-germany-forests_N.htm.

51. *See* Butler, *supra* note 1.

52. *Id.*

53. *Climate Change Commission Joins 52 Countries in REDD+ Partnership—Alvarez*, BALITA.PH, May 30, 2010, http://balita.ph/2010/05/30/climate-change-commission-joins-52-countries-in-redd-partnership-alvarez/.

54. *Id.* Robert Zoellick, chief of the World Bank, remarked that the outcome of the Oslo meeting may "be the first comprehensive component for a future international agreement on climate change." *Oslo Climate Change Conference Report—May Feature*, COOLEARTH.ORG, http://www.coolearth.org/371/news-32/features-147/oslo-climate-change-conference-report-may-feature-1400.html (last visited Sept. 7, 2010).

55. Ian MacDougall, *Rich Countries Pledge $4B To Stop Deforestation*, SIGN ON SAN DIEGO, May 27, 2010, http://www.signonsandiego.com/news/2010/may/27/rich-countries-pledge-4b-tl-stop-deforestation/.

Cooperative Action (AWG-LCA). The United Nations Framework Convention on Climate Change (UNFCCC) issued a guideline text to facilitate negotiations among parties in the AWG-LCA. These guidelines call for enhanced action on mitigation and its associated means of implementation for developed and developing countries.[56] The guidelines also recognize

> the crucial role of reducing emission from deforestation and forest degradation and the need to enhance removals of greenhouse gas emission by forests, and . . . the need to provide positive incentives to such actions through immediate establishment of a mechanism including REDD-plus, to enable the mobilization of financial resources from developed countries.[57]

Developing countries are encouraged to contribute to mitigation actions, pursuant to provisions of REDD+ as described in chapter VI of the guidelines, by undertaking activities such as reducing emissions from deforestation and forest degradation, conserving forest carbon stocks, instituting sustainable management practices, and enhancing carbon stock.[58] The guidelines also encourage financial assistance and investment mechanisms for developing countries.[59]

As these developments demonstrate, the "evolution and progress of the new REDD+ mechanism will significantly influence the overall trajectory of international climate change policy."[60] However, despite the valuable first step that the Copenhagen Accord may represent, and despite the promising developments that have unfolded at Oslo and Bonn in the months following Copenhagen, two significant obstacles remain in the path of the future success of REDD. First, there are some concerns and limitations associated with REDD implementation such as its impacts on indigenous peoples[61] and a possible increase in forest fires from REDD implementation.[62] Second, the ultimate success of any post-

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56. United Nations Framework Convention on Climate Change Conference of the Parties, Ad Hoc Working Group on the Long-Term Cooperative Action Under the Convention, Bonn, Ger., June 1-11, 2010, *Text To Facilitate Negotiations Among Parties*, Annex 1, at 6, U.N. Doc. FCCC/AWGLCA/2010/6 (May 17, 2010), http://vnfcc.int/resource/docs/2010/awglica10/eng/06.pdf.

57. *Id.* at 11.

58. *Id.*

59. *Id.* at 12.

60. Niles, *supra* note 44.

61. *See* Rhett A. Butler, *REDD May Harm Forest People, Alleges Report*, MONGABAY.COM, Dec. 2, 2008, http://news.mongabay.com/2008/1202-fern_redd.html.

62. *See* Helen Mendes, *REDD Alert for Forest Climate Change Policy*, SCI. & DEV. NETWORK, June 7, 2010, http://www.scidev.net/en/news/redd-alert-for-forest-climate-change-policy.html.

Kyoto treaty regime weighs heavily on the shoulders of the United States. If the United States fails to enact cap-and-trade legislation in the wake of Copenhagen, the opportunity for an effective global carbon credits market would be all but lost.

IV. HOW EFFECTIVE IS PROPOSED U.S. LEGISLATION IN PROMOTING THE GOALS OF A GLOBAL CARBON MARKET?

For political and legal reasons, the United States has been conspicuously parked on the sidelines of the international climate change compliance regime for more than a decade.[63] Long-awaited progress in seeking to establish federal and international action on climate change has been achieved under the Obama Administration, however. The Waxman-Markey Bill passed the House of Representatives in 2009 by a 219-212 vote.[64] The Kerry-Lieberman Bill, pending before the Senate as of this writing, is facing many obstacles. Both of these bills seek to "slow deforestation by allowing international [avoided deforestation] projects to receive tradable offset credits for sequestered carbon."[65] This Part of the Article reviews the relevant provisions of the House and Senate bills and how they relate to the development of an international market for avoided deforestation credits. It concludes that both bills offer a solid foundation for U.S. leadership in promoting a global carbon market for avoided deforestation credits.

A. Summary of Proposed U.S. Climate Change Legislation

The REDD provisions in the House and Senate climate change bills offer hope that some version of U.S. climate change legislation will pass in 2010 or 2011. The reason for optimism lies in the "win-win" situation that these provisions offer to simultaneously protect the environment and

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63. For a discussion of the legal and policy challenges that the United States faces in entering an emissions trading market and the relationship that such a market would have on its environmental laws and trade policy, see generally K. Russell LaMotte, David M. (Max) Williamson & Lauren A. Hopkins, *Emissions Trading in the U.S.: Legal Issues*, *in* LEGAL ASPECTS OF CARBON TRADING: KYOTO, COPENHAGEN, AND BEYOND, *supra* note 34, at 391-422.

64. Greg Hitt & Stephen Power, *House Passes Climate Bill*, WALL ST. J., June 27, 2009, at A1, *available at* http://online.wsj.com/article/SB124602039232560485.html.

65. KEN ALLINSON ET AL., INTERNATIONAL AVOIDED DEFORESTATION OFFSET PROJECTS: INSURING THE RISK OF REVERSAL PENALTIES 2 (May 2010), http://www.law.unc.edu/documents/clear/adoffsetreversalpenaltyinsurance.pdf. Debate continues on the viability of international offsets as a climate change mitigation strategy. This lack of consensus on the value of offsets could significantly impair the potential success of the pending climate change legislation in the United States. For a helpful analysis of the principal concerns and possible solutions regarding how to integrate international offsets into climate legislation, see generally *The Forum: The Upset About International Offsets*, ENVTL. F., May/June 2010, at 48, 48-53.

boost the economy. "'Beyond the obvious and most significant benefits of reducing pollution, saving our biodiversity and protecting forest-dependent communities, protecting tropical forests will cut the cost of U.S. climate legislation almost in half—saving Americans billions.'"[66]

The relationship between tropical deforestation and domestic enterprises provides an additional hidden benefit to help secure the necessary votes for passage of climate legislation in the Senate. "'[E]nding tropical deforestation will provide direct economic benefits to American farmers, cattle ranchers and timber industry workers. Illegal and unsustainable overseas ranching, soy, and timber operations are undercutting more sustainable and responsible operations, potentially jeopardizing American jobs in our heartland.'"[67]

In addition, both bills address rights and needs of indigenous peoples and forest-dependent communities by requiring consultations with, and the participation of, these communities in the process.[68] There are, however, some differences in how the bills address the promotion of international offsets for avoided deforestation.

The Waxman-Markey Bill (H.R. 2454), also known as the American Clean Energy and Security Act,[69] contains several provisions that are relevant for considering its impact on the global carbon credits market. The Bill would rely on the Environmental Protection Agency (EPA) for implementation.[70]

The Waxman-Markey Bill would establish a federal cap-and-trade system that would include international avoided deforestation offsets as part of its scheme.[71] The Bill contains more detail than the Kerry-Lieberman Bill on the administration and implementation of REDD projects. For example, the Waxman-Markey Bill addresses the types of activities that could be funded and addresses monitoring and reporting requirements.[72] It would also provide flexibility in determining the amount of eligible international offsets based on the EPA's assessment of domestic offsets.[73]

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66. Butler, *supra* note 1 (quoting Jeff Horowitz).

67. *Id.* (quoting Jeff Horowitz).

68. PERVAZE A. SHEIKH & ROSS W. GORTE, CONG. RESEARCH SERV., INTERNATIONAL FORESTRY ISSUES IN CLIMATE CHANGE BILLS: COMPARISON OF PROVISIONS OF S. 1733 AND H.R. 2454, at 12-13 (2009).

69. American Clean Energy and Security Act of 2009, H.R. 2454, 110th Cong. (2009), http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=111_cong_bills&docid=f:h2454pcs.txt.pdf.

70. SHEIKH & GORTE, *supra* note 68, at 3.

71. H.R. 2454, § 734(e).

72. SHEIKH & GORTE, *supra* note 68, at 5-6.

73. *Id.* at 9.

The Kerry-Lieberman Bill, also known as the American Power Act,[74] has been plagued by controversy from its inception. It does not appear to be as ambitious as the Waxman-Markey Bill in promoting international offset opportunities. Nevertheless, for the reasons outlined below, the Kerry-Lieberman Bill still offers a workable start for the United States to enter the international offsets playing field.

While the Kerry-Lieberman Bill provides for substantial use of offsets as part of its cap-and-trade scheme, the benefits from those offsets would stay largely within U.S. borders.[75] The Bill would create two new agencies to administer the international offsets program: the Greenhouse Gas Emission Reduction and Sequestration Advisory Committee[76] and the International Offsets Integrity Advisory Committee.[77] Although the Bill would provide domestic benefits for U.S. forestry and landowners, it does not offer significant support for international offset credits generated from avoided deforestation in developing countries.[78]

There are several limitations that the Bill imposes on international offsets and REDD projects.[79] First, international offsets are available only to developing countries that are involved in a bilateral or multilateral agreement with the United States.[80] Second, international offsets can be generated only by developing countries that adopt policies to reduce emissions across an entire sector of the nation's economy.[81] Third, the REDD provision of the Bill only allows for national and subnational level REDD projects, rather than approving such offsets on a project-by-project basis.[82] Nevertheless, taken as a whole, the Kerry-Lieberman Bill

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74. American Power Act, S. 1733, 111th Cong. (2010) (discussion draft), http://kerry.senate.gov/imo/media/doc/APAbill3.pdf.

75. *Climate Bill Mixed for Forest Carbon Offsets*, CARBONPOSITIVE.NET, May 14, 2010, http://www.carbonpositive.net/viewarticle.aspx?articleID=1999.

76. S. 1733, § 732. This agency would provide "scientific and technical advice on the establishment and implementation of the offset project program." *Id.* § 732(a)(1).

77. *Id.* § 752. This agency would be responsible for "promulgating and revising regulations," "ensuring the overall environmental integrity of the programs established pursuant to those regulations," and conducting a "scientific review of international offset and deforestation reduction programs." *Id.* § 752(a)(2)(A)-(B), (d).

78. *Climate Bill Mixed for Forest Carbon Offsets*, *supra* note 75.

79. The international offset provisions of the Bill appear in sections 751-763; the REDD provision appears in section 5004.

80. Jake Schmidt, *Tools for Supporting International Action on Global Warming: American Power Act*, SWITCHBOARD: NAT. RESOURCES DEF. COUNCIL STAFF BLOG (May 13, 2010), http://switchboard.nrdc.org/blogs/jschmidt/apa_intl_provisions.html.

81. *Id.*; *see also Climate Bill Mixed for Forest Carbon Offsets*, *supra* note 75.

82. John Vidaurrazaga, *Trees Fare Well in Latest US Climate Bill*, ECOSYSTEM MARKETPLACE, May 24, 2010, http://www.ecosystemmarketplace.com/pages/dynamic/article.page.php?page_id=7565&section=news_articles&eod=1.

appears to be an "imperfect but necessary step in the right direction" for development of the international REDD market.[83]

B. Proposed U.S. Legislation Would Help Advance a Global Carbon Market

The forecast for potential inclusion of avoided deforestation credits in a post-Kyoto regime remains cloudy. There are several complicating factors involved. First, the concept of REDD needs to garner an even broader base of support. For example, there are influential organizations within the environmental community, such as Greenpeace, that oppose REDD and maintain that "[i]nclusion of forest conservation in a market-based mechanism for reducing greenhouse gas emissions would crash carbon prices by swamping the market with cheap credits."[84] For REDD to succeed the second time around and avoid being excluded as it was in the Kyoto negotiations, it is imperative that a consensus be established for a minimum baseline model of REDD that has unconditional support from the environmental community. Otherwise, a post-Kyoto treaty could return to "business as usual" and exclude REDD from its regulatory framework because it is too controversial and fraught with uncertainty.

Second, and more importantly, the implementing mechanisms and processes for REDD need to be further developed. The concept of REDD has become increasingly popular since 2005, but even its biggest supporters acknowledge that it faces many challenges to be implemented effectively. Significant progress has been made in this regard in the past few years with REDD+ and building "REDD readiness"[85] in developing countries, but much work remains.

Third, as is true in seeking to regulate any international environmental law problem, adequate funding is essential to ensure success. REDD is off to a good start in this regard, but failure to pass climate change legislation in the United States could change that reality abruptly.

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83. *Id.*

84. *Carbon Credits from Forest Conservation Would Crash Carbon Market, Says Greenpeace*, MONGABAY.COM, Mar. 30, 2009, http://news.mongabay.com/2009/0330-greenpeace_redd.html.

85. REDD readiness refers to "developing a baseline reference scenario for a country's historical and projected deforestation rates, as well as adopting strategies to reduce forest clearing and designing systems to monitor, report and verify reductions in greenhouse gas emissions from avoided deforestation." *REDD Readiness Plans for Panama, Guyana Approved but Rejected for Indonesia*, MONGABAY.COM, July 2, 2009, http://news.mongabay.com/2009/0702-fcpf.html.

The Waxman-Markey and Kerry-Lieberman Bills fare well on all three of these challenges. The Bills embrace the concept of REDD as an important dimension of the U.S. approach to climate change mitigation and include provisions addressing how the United States could be involved in this aspect of climate change regulation. While the implementing mechanisms and funding for avoided deforestation projects require clarification and additional attention, they nonetheless provide an adequate foundation upon which the United States can lead the post-Kyoto regime in advancing the availability of such offset credits in a global carbon market.

The remainder of 2010 will hold many answers for the fate of the proposed U.S climate change legislation. Further complicating the prospect for U.S. involvement in international avoided deforestation projects is that the Kerry-Lieberman Bill could become incorporated as part of a larger clean energy bill to ensure passage of some form of climate bill. This potential manipulation could further dilute the already-limited international offset provisions of the Kerry-Lieberman Bill.

V. CONCLUSION

In his opening remarks at the climate change and forests conference in Oslo in May 2010, Norwegian Prime Minister Jens Stoltenberg declared, "Forests are worth more dead than alive. Today we commit to change that equation."[86] He further remarked that curbing deforestation can achieve the "largest, fastest and cheapest cuts in global emissions" of greenhouse gases.[87] REDD and REDD+ are the mechanisms to make his vision a reality in a post-Kyoto international climate change treaty.

REDD fills three regulatory gaps left by the Kyoto Protocol: (1) the need to address avoided deforestation as a compliance strategy, (2) the need to more fully engage developing countries in international climate change compliance, and (3) the need to involve the United States in the international climate change regulatory landscape. If a post-Kyoto climate change agreement fails to address avoided tropical deforestation adequately, the overall compliance goals in the agreement would be extremely difficult, if not impossible, to attain. But even if such an agreement is forged in the coming years, it would be doomed to fall short of its goals, as Kyoto did, without full participation from the United States. If enacted, the pending U.S. climate legislation would provide a

86. Ian Macdougall, *International Conference To Save Forests Opens in Oslo*, USA TODAY, May 27, 2010, http://www.usatoday.com/tech/science/environment/2010-05-27-oslo-conference_N.htm (internal quotation marks omitted).

87. *Id.* (internal quotation marks omitted).

critical boost to promote the use of REDD as an indispensable component of an international carbon market.

In the wake of the Deepwater Horizon catastrophe in the Gulf of Mexico in May 2010, the timing could not be better for the United States to not only enter the international climate change playing field, but assume a long-overdue leadership role in defining its future. International offsets for avoided deforestation must be a part of the United States' participation in this challenge. Regardless of the details of the language that ultimately appears in the U.S. climate legislation, the fate of the post-Copenhagen era in international climate change diplomacy rests largely within U.S. control. Kyle Danish, head of the climate change practice at Van Ness Feldman in Washington, D.C., remarked on this reality:

> [T]he likelihood that the climate negotiations can progress from the accord blueprint to a fully elaborated program may be a function of further developments in the United States. Other countries have limited incentives to follow through on mitigation commitments without corresponding action by the United States. And the financial assistance program relies significantly on participation by the United States.[88]

The same can be said about the fate of the role of REDD in a post-Kyoto climate change treaty. All eyes are on the United States to provide much-needed leadership on this issue.

88. Kyle Danish, *New and Improved Course for a Climate Regime*, ENVTL. F., Mar./Apr. 2010, at 48.