

# Building Carbon Rights Infrastructure With REDD+ Incentives: A Multi-Scale Analysis in the Peruvian Amazon

by Patrick Wieland

Patrick Wieland earned a J.D. from Pontificia Universidad Católica del Perú, an LL.M. from Yale Law School, and an MSc. in Environmental Change and Management from the University of Oxford.

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## Summary

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Payments to avoid deforestation and forest degradation in developing countries have emerged as a key international strategy. Countries that have the greatest potential to host these market-based mechanisms are often characterized by unclear and contested land and forest rights. For example, Peru faces challenges in creating carbon rights in a context of unclear land rights and legal pluralism. Project developers are currently negotiating carbon rights, though these rights remain weak and contested because of a lack of clarity regarding title to carbon. There is a need for legislation that clarifies title to carbon in order to make carbon offsets feasible.

Payments to avoid deforestation and forest degradation (DD) have emerged as a key international strategy. The logic is simple: by paying developing countries to preserve their forests, developed countries can obtain cheap carbon offset credits while promoting economic growth, capacity building, and biodiversity conservation in developing countries. However, this simplicity has proven to be illusory because the implementation of these programs has faced multiple challenges,<sup>1</sup> including issues of monitoring, leakage, and permanence, as well as the potential violation of indigenous rights. More importantly, countries that have the greatest potential to host these mechanisms are often characterized by unclear and contested land and forest tenure, which may affect the effectiveness of such programs.

This Article examines the emergence of carbon rights in Peru in a context of unclear land rights and legal pluralism. Using several case studies, it analyzes how carbon offset project developers are currently negotiating carbon rights in the absence of legislation that defines and allocates title to carbon. It argues that carbon rights remain weak and contested as they are created through opportunistic interpretations of current legislation. Consequently, project developers not only face higher transaction costs, but also the risk that their investments might not produce expected returns.

Part I discusses the emergence of carbon rights as “Environmental Property Rights” and how they can help reduce DD in tropical countries. Part II examines the legal framework that project developers are using to transact carbon offsets and the shortcomings therein. It makes reference to several projects that are already in place, including Brazil nuts concessionaires in Madre de Dios, in the Peruvian

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1. Constance McDermott et al., *Operationalizing Social Safeguards in REDD+: Actors, Interests, and Ideas*, 21 ENVTL. SCI. & POL'Y 63 (2012).

Amazon. Part III analyzes the challenges in the creation of carbon rights in Peru. An analysis of the rights of indigenous peoples is beyond the scope of this Article.

## I. Theoretical Approaches to Carbon Rights

According to Garret Hardin's tragedy of the commons—truly, the tragedy of open access<sup>2</sup>—insecure tenure discourages long-term investment and conservation of common-pool resources.<sup>3</sup> Without secure rights, rational users shift to more profitable, short-term uses of common-pool resources considering their inability to exclude other users and benefit from their own investments. Moreover, users of common-pool resources will tend to use resources as quickly as possible to prevent others from appropriating the resources first, resulting in a wasteful race.<sup>4</sup> Putting more sheep out to graze, in Hardin's allegory, has devastating consequences for the environment and the integrity of a resource.<sup>5</sup>

DD are examples of such tragedy.<sup>6</sup> According to the literature, agricultural expansion, road construction, and logging activities are among the proximate causes of DD, while the underlying causes include insecure forest tenure, poor governance, and population growth.<sup>7</sup> This Article focuses on the role of secure property rights in preventing DD.

Forest ownership systems in developing countries are complex regimes<sup>8</sup> subject to multiple and conflicting land uses.<sup>9</sup> Precisely, the same tract of forest could include individual or communal landowners, timber concessions, non-timber forest products (NTFP), harvesting rights, mining rights, squatters, and indigenous communities claiming historical rights to the area.<sup>10</sup> Government-recognized property rights coexist (and often compete) with local or

customary property rights,<sup>11</sup> creating a mismatch between formal ownership and de facto control of the forest.<sup>12</sup>

Complex interactions between multiple property rights systems can exacerbate conflicts,<sup>13</sup> with the result that forests are treated as open-access resources.<sup>14</sup> It has been argued by Daniel Fitzpatrick that companies holding state-created property rights cannot exclude customary users merely because the government is weak or lacks legitimacy.<sup>15</sup> In turn, customary users tend to disregard formal rules and government institutions, relying on their own rules, although such rules are incapable of excluding those officially authorized to use the resource.<sup>16</sup> The result, Fitzpatrick asserts, is deadlocked exclusion between the parties and the emergence of a de facto open-access regime.<sup>17</sup>

The answer to the “tragedy of the commons” is either to impose regulation or to privatize the commons.<sup>18</sup> The former refers to government regulation imposing restrictions on access and use of common-pool resources; the latter refers to converting the resource to private property.<sup>19</sup> To date, regulation has proved to be insufficient to control DD in tropical regions. This is why there is a growing interest in addressing environmental concerns through property rights<sup>20</sup> because private property allows the owner of the property or entitlement to exclude others and creates powerful incentives for the owner to preserve the value of what she owns.<sup>21</sup>

Under the “evolutionary theory of property rights,” resources are considered “un-propriated,” which means there is open access, as long as demand is low and the resource is abundant.<sup>22</sup> When the demand for a resource increases, people start asserting property rights to manage access and prevent conflicts for resource use.<sup>23</sup> “Property rights develop to internalize externalities when the gains of internalization become larger than the cost of internalization.”<sup>24</sup> The reverse is also true: if an asset

2. ELINOR OSTROM, *GOVERNING THE COMMONS: THE EVOLUTION OF INSTITUTIONS FOR COLLECTIVE ACTION* (Cambridge Univ. Press 1990).

3. Garret Hardin, *The Tragedy of the Commons*, 162 *SCI.* 1243 (1968).

4. Carol M. Rose, *Property Rights, Development Imperatives, and Environmental Protection*, Seminario en Latinoamérica de Teoría Constitucional y Política (SELA), Argentina (2008).

5. Maron Greenleaf, *Using Carbon Rights to Curb Deforestation and Empower Forest Communities*, 18 *N.Y.U. ENVTL. L.J.* 507 (2001).

6. Rose, *supra* note 4.

7. COLIN HUNT, *CARBON SINKS AND CLIMATE CHANGE* (Edward Elgar Publ. Ltd. 2009).

8. Anna Knox et al., *The Interface of Land and Natural Resource Tenure and Climate Change Mitigation Strategies: Challenges and Options*, Expert Meeting on Land Tenure Issues for Implementing Climate Change Mitigation Policies in the AFOLU Sectors, FAO (2010).

9. William Sunderlin et al., *Forest Tenure Rights and REDD+: From Inertia to Policy Solutions*, in *REALIZING REDD+: NATIONAL STRATEGY AND POLICY OPTIONS* (Arild Angelsen ed., 2009); Daniel Fitzpatrick, *Evolution and Chaos in Property Rights Systems: The Third World Tragedy of Contested Access*, 115 *YALE L.J.* 996 (2006); Lawrence Christy et al., *Forest Law and Sustainable Development: Addressing Contemporary Challenges Through Legal Reform*, International Bank for Reconstruction and Development/The World Bank (2007).

10. Sunderlin et al., *supra* note 9; Annalisa Savaresi & Elisa Morgera, *Ownership of Land, Forest, and Carbon*, in *LEGAL FRAMEWORKS FOR REDD: DESIGN AND IMPLEMENTATION AT THE NATIONAL LEVEL* (John Costenbader ed., 2009); Esteve Corbera et al., *Rights to Land, Forests, and Carbon in REDD+: Insights From Mexico, Brazil, and Costa Rica*, 2 *FORESTS* 301-42 (2011).

11. Knox et al., *supra* note 8; Savaresi & Morgera, *supra* note 10; Corbera et al., *supra* note 10.

12. Christy et al., *supra* note 9.

13. Thomas Greiber & James Salzman, *Marcos Jurídicos*, in *PAGOS POR SERVICIOS AMBIENTALES* (Thomas Greiber ed., 2010).

14. Fitzpatrick, *supra* note 9; ROXANA BARRANTES & CAROLINA TRIVELLI, *BOSQUES Y MADERA: ANÁLISIS ECONÓMICO DEL CASO PERUANO* (Lima: Instituto de Estudios Peruanos 1996); Arild Angelsen, *Policy Options to Reduce Deforestation*, in *REALIZING REDD+: NATIONAL STRATEGY AND POLICY OPTIONS* (Arild Angelsen ed., 2009).

15. Fitzpatrick, *supra* note 9.

16. *Id.*

17. *Id.* Roxana Barrantes and Carolina Trivelli claim that in Peru, poor forest governance and weak enforcement lead to open access. BARRANTES & TRIVELLI, *supra* note 14.

18. OSTROM, *supra* note 2; Hardin, *supra* note 3.

19. Daniel Cole, *Clearing the Air: Four Propositions About Property Rights and Environmental Protection*, 10 *DUKE ENVTL. L. & POL'Y F.* 103 (1999).

20. Jonathan Adler, *Back to the Future of Conservation: Changing Perceptions of Property Rights & Environmental Protection*, 1 *N.Y.U. J.L. & LIBERTY* 987 (2005).

21. Rose, *supra* note 4; TERRY L. ANDERSON & DONALD R. LEAL, *FREE MARKET ENVIRONMENTALISM* (Oxford: Westview 1991).

22. Rose, *supra* note 4.

23. *Id.* Carol M. Rose, *Liberty, Property, Environmentalism*, 26 *ARIZ. L. REV.* 1-25 (2009).

24. Harold Demsetz, *Toward a Theory of Property Rights*, 57 *AM. ECON. REV. PAPERS & PROC.* 348 (1967).

becomes more abundant and less valuable, less effort will be spent protecting it.<sup>25</sup>

According to this evolutionary theory, the first step away from open access is through informal, community-based rules.<sup>26</sup> These rules “are closed to outsiders, require community involvements, and involve few transfers and trade.”<sup>27</sup> Assets held under traditional property arrangements are rigid because they cannot be turned into capital or traded outside local circles.<sup>28</sup> Hence, when the value of the resource justifies more “precise” forms of property rights, informal, community-based rules may develop into individual property entitlements.<sup>29</sup> Based on this evolutionary story, the destiny of all societies is to “progress” from open access into communal property and then into individual ownership (characterized by “modernist” features).<sup>30</sup>

The final step in this evolutionary story is the commoditization of environmental components. As deforestation renders forests more valuable or as pollution makes clean air more appreciated, modernist property rights may evolve into Environmental Property Rights (EPR), such as rights to trade emission offsets in the carbon markets, conservation easements, or individual transferrable quotas in the fishing industry.<sup>31</sup> EPRs rely on the following modernist features: (i) well-defined, measurable, relatively simple, and uniform rights; (ii) subject to monitoring and enforcement through public policing and judicial systems; and (iii) subject to trade in the market.<sup>32</sup> Yet, EPRs are likely to be “latecomers” in the evolution of property rights due to their complexity, high costs, lack of political support, and need for sophisticated monitoring and enforcement.<sup>33</sup>

The evolutionary theory of property rights is rather optimistic.<sup>34</sup> The theory has been contested because it denies the value of communal tenure.<sup>35</sup> The literature notes that state regulation and private property are not the only governance alternatives for natural resource use.<sup>36</sup> Indeed, under certain circumstances, communal tenure can be as effective as individual property rights.<sup>37</sup> Some contend that common property and private property “are equivalent from the standpoint of the efficiency

of resource use.”<sup>38</sup> Thus, holding property communally should not be presumed defective or anarchic as the evolutionary account suggests.<sup>39</sup>

The evolutionary story of property rights is described further in Part III in connection with the discussion of the challenges that the emergence of carbon rights, a novel EPR, poses to developing countries where modernist property rights are not in place.

### A. Reducing Emissions From Deforestation and Forest Degradation (REDD+)

Forests sequester and store vast amounts of carbon dioxide (CO<sub>2</sub>) and play a fundamental role in global climate regulation.<sup>40</sup> DD release the carbon stored within forest ecosystems and impair their ability to sequester additional carbon.<sup>41</sup> DD of tropical areas is accelerating dramatically. Forest loss is responsible for 3.6 to 4.5 billion tons of CO<sub>2</sub> emissions per year, representing 17-20% of global greenhouse gas (GHG) emissions.<sup>42</sup>

The carbon sequestration and storage functions of the world’s forests provide ecosystem services.<sup>43</sup> But ecosystem services are generally taken for granted. Countries and citizens benefit from the clean air and carbon offsetting services that forests provide but do not equally share the costs for their preservation.<sup>44</sup> To address this situation, mechanisms to value ecosystem services through economic incentives have developed as an international policy.<sup>45</sup> Such incentives “would help minimize the current market failures that allow for the destruction of tropical forests worldwide.”<sup>46</sup> Though still in its infancy, REDD+ is one such incentive scheme.<sup>47</sup>

25. ANDERSON & LEAL, *supra* note 21; THOMAS W. MERRILL & HENRY E. SMITH, *PROPERTY: PRINCIPLES AND POLICIES* (Foundation Press, Thomson West 2007).

26. Demsetz, *supra* note 24.

27. Carol M. Rose, *Invasion, Innovation, Environment*, in HERNANDO DE SOTO AND PROPERTY IN A MARKET ECONOMY 32-33 (Benjamin Barros ed., 2010).

28. HERNANDO DE SOTO, *THE MYSTERY OF CAPITAL: WHY CAPITALISM TRIUMPHS IN THE WEST AND FAILS EVERYWHERE ELSE* (Basic Books 2000).

29. ANDERSON & LEAL, *supra* note 21; Demsetz, *supra* note 24.

30. Celestine Nyamu, *De Soto and Land Relations in Rural Africa: Breathing Life Into Dead Theories About Property Rights*, 28 *THIRD WORLD Q.* 1457-78 (2007).

31. Rose, *supra* note 4.

32. *Id.*; ANDERSON & LEAL, *supra* note 21; Rose, *supra* note 27.

33. Carol M. Rose, *Big Roads, Big Rights: Varieties of Public Infrastructure and Their Impact on Environmental Resources*, 50 *ARIZ. L. REV.* 408-43 (2008).

34. Rose, *supra* note 4.

35. Nyamu, *supra* note 30.

36. Arun Agrawal, *Sustainable Governance of Common-Pool Resources: Context, Methods, and Politics*, 32 *ANN. REV. ANTHROPOLOGY* 243-62 (2003).

37. OSTROM, *supra* note 2; Agrawal, *supra* note 36; Eric Smith & Mark Wishnie, *Conservation and Subsistence in Small-Scale Societies*, 29 *ANN. REV. ANTHROPOLOGY* 493-524 (2000).

38. JEAN-MARIE BALAND & JEAN-PHILIPPE PLATTEAU, *HALTING DEGRADATION OF NATURAL RESOURCES: IS THERE A ROLE FOR RURAL COMMUNITIES* 175 (Clarendon 1996).

39. Nyamu, *supra* note 30.

40. David Takacs, *Carbon Into Gold: Forest Carbon Offsets, Climate Change Adaptation, and International Law*, 15 *HASTINGS W.-NW. J. ENVTL. L. & POL’Y* 39 (2009).

41. Randall Abate & Todd Wright, *A Green Solution to Climate Change: The Hybrid Approach to Crediting Reductions in Tropical Deforestation*, 20 *DUKE ENVTL. L. & POL’Y F.* 87 (2010); Laurie Wayburn & Anton Chiono, *The Role of Federal Policy in Establishing Ecosystem Service Markets*, 20 *DUKE ENVTL. L. & POL’Y F.* 385 (2002).

42. IPCC 2007, Fourth Assessment Report: Climate Change 2007 (AR4); Constance McDermott, *REDDuced: From Sustainability to Legality to Units of Carbon—The Search for Common Interests in International Forest Governance*, *J. ENVTL. SCI. & POL’Y* (2012).

43. James Salzman, *Creating Markets for Ecosystem Services*, 80 *N.Y.U. L. REV.* 870 (2005); Wayburn & Chiono, *supra* note 41, at 393 (defining “ecosystem processes” as “processes of ecosystems that directly or indirectly support human well-being”).

44. Charlotte Streck et al., *Climate Change and Forestry: An Introduction*, in *CLIMATE CHANGE AND FORESTS: EMERGING POLICY AND MARKET OPPORTUNITIES* (Charlotte Streck et al., eds., 2008).

45. Esteve Corbera & Heike Schroeder, *Governing and Implementing REDD+*, 14 *ENVTL. SCI. & POL’Y* 89-99 (2011).

46. Rosimeiry Portela et al., *The Idea of Market-Based Mechanisms for Forest Conservation and Climate Change*, in *CLIMATE CHANGE AND FORESTS: EMERGING POLICY AND MARKET OPPORTUNITIES* 23 (Charlotte Streck et al. eds., 2008).

47. Corbera & Schroeder, *supra* note 45.

The central idea behind REDD+ is to pay developing countries to stop DD.<sup>48</sup> It can be characterized as an international Payment for Ecosystem Services (PES) scheme for carbon sequestration and storage in forests.<sup>49</sup> Indeed, REDD+ is characterized by its multilevel nature, in which global, national, and local actors interplay.<sup>50</sup> Currently, different multilateral or country-based funding programs aim to support developing countries prepare strategies or pilot projects for REDD+.<sup>51</sup> Some countries have adopted REDD+ at subnational levels, the so-called nested approach,<sup>52</sup> which allows private-sector actors to invest in REDD+ projects on the ground.

REDD+ relies on historical data to establish the projected rate of emissions in a business-as-usual scenario, which then can be used to issue “additional”<sup>53</sup> carbon offset credits to be traded in the market.<sup>54</sup> It purports to provide economic incentives to forest managers to reduce DD and stimulate forest cover.<sup>55</sup> These transactions might be set forth in voluntary contracts, for example, by which someone buys a well-defined environmental service or pays for land use proxies.<sup>56</sup> Thus, it aims to slow down the wasteful race to use forest resources<sup>57</sup> by putting value on deforestation and thereby increasing the opportunity cost of forest conversion.<sup>58</sup>

REDD+ raises a number of concerns, such as possible methodological limitations, violation of community or indigenous rights, and issues of “additionality,” monitoring, leakage, and permanence.<sup>59</sup> Despite these concerns, it is generally considered a cost-effective climate change mitigation strategy.<sup>60</sup>

First, protecting forests can reduce GHG emissions considerably, preserving their provision of carbon sequestration services. There is a growing consensus that forest carbon mitigation measures are central in any post-2012 climate change international agreement.<sup>61</sup>

Second, REDD+ is appealing due to its potential simplicity. Under this system, “external beneficiaries [of eco-

system services] pay land stewards to change their usual land use practices so that the land provides environmental services.”<sup>62</sup> In this way, REDD+ represents a new form of private forest governance or “contractual conservation”<sup>63</sup> and “a major change in a world in which forests are traditionally governed in a highly centralised manner by states.”<sup>64</sup> However, implementing this seemingly simple system is “by far the most complex international forest governance venture ever attempted.”<sup>65</sup> Many commentators reject the privatization of forests, underscoring the benefits of communal forest tenure instead.<sup>66</sup>

Third, this scheme is considered cheaper than reducing carbon emissions from industrial sources of GHG.<sup>67</sup> It can also reduce GHG emissions faster because it requires no technological innovation.<sup>68</sup>

Fourth, REDD+ has a number of co-benefits, such as economic growth and reduction of poverty; capacity building; protection of biodiversity, forest-dwelling people, and watersheds; and prevention of soil erosion.<sup>69</sup> As Stephen DeCanio argues, REDD+ “could simultaneously protect the global environment while assisting developing countries making the transition to sustained economic growth.”<sup>70</sup>

To be effective, REDD+ requires clearly defined and allocated carbon rights.<sup>71</sup> Few countries have recognized the need to clarify carbon ownership within existing tenure systems.<sup>72</sup> This is especially cumbersome in countries where REDD+ would be most beneficial, for example, tropical countries, which are still characterized by land and resource conflicts.

## B. Creating Carbon Rights

Carbon rights are a new form of property rights, an EPR, created by national law to commoditize carbon.<sup>73</sup> Although there is no academic consensus on the definition of a car-

48. Greenleaf, *supra* note 5; McDermott et al., *supra* note 1.

49. Sven Wunder, *Can Payments for Environmental Services Reduce Deforestation and Forest Degradation?*, in *REALIZING REDD+: NATIONAL STRATEGY AND POLICY OPTIONS* (Arild Angelsen et al., 2009).

50. Angelsen, *supra* note 14.

51. Corbera & Schroeder, *supra* note 45.

52. Arild Angelsen et al., *What Is the Right Scale for REDD? The Implications of National, Subnational, and Nested Approaches*, CIFOR Infobriefs (2008).

53. “Additionality” is the requirement that the GHG removals after the implementation of the project activity are greater than those that would have occurred in the baseline scenario (the most plausible alternative scenario to the implementation of the project activity). Baker & McKenzie, CDM Rulebook: Clean Development Mechanisms Rules, Practice & Procedures [Online], available at <http://cdmrulebook.org/204>.

54. Greenleaf, *supra* note 5.

55. Sunderlin et al., *supra* note 9; Angelsen, *supra* note 14.

56. Wunder, *supra* note 49.

57. Greenleaf, *supra* note 5.

58. Hunt, *supra* note 7.

59. Abate & Wright, *supra* note 41.

60. NICHOLAS STERN, *THE ECONOMICS OF CLIMATE CHANGE: THE STERN REVIEW* (2007).

61. Abate & Wright, *supra* note 41; Corbera & Schroeder, *supra* note 45; Darryl Vhugen et al., *REDD+ and Carbon Rights: Lessons From the Field, Property Rights and Resource Governance Project*. USAID (2012).

62. Wunder, *supra* note 49, at 214.

63. *Id.*

64. Stéphane Gueneau & Pascal Tozzi, *Towards the Privatization of Global Forest Governance?*, 10 INT’L FORESTRY REV. 552 (2008).

65. McDermott, *supra* note 42, at 12.

66. James Barsimantov & Jake Kendall, *Community Forestry, Common Property, and Deforestation in Eight Mexican States*, XX J. ENVT. & DEV. 1-24 (2012).

67. Greenleaf, *supra* note 5; Abate & Wright, *supra* note 41; STERN, *supra* note 60; TOM TIETENBERG & LYNNE LEWIS, *ENVIRONMENT AND NATURAL RESOURCE ECONOMICS* (Pearson Education Inc., 8th ed. 2009).

68. Greenleaf, *supra* note 5.

69. *Id.* Abate & Wright, *supra* note 41; McDermott, *supra* note 42; VIRGILIO VIANA, *SEEING REDD IN THE AMAZON: A WIN FOR PEOPLE, TREES, AND CLIMATE* (2009), available at <http://www.iied.org/pubs/display.php?o=17052IIED>.

70. Stephen DeCanio, *Carbon Rights and Economic Development*, 6 CRITICAL REV. 391 (1992).

71. Greenleaf, *supra* note 5; Angelsen, *supra* note 14; Charles Palmer, *Property Rights and Liability for Deforestation Under REDD+: Implications for Permanence*, 70 ECOLOGICAL ECON. 571-76 (2011); Leo Peskett et al., *Making REDD Work for the Poor, Poverty Environmental Partnership* (2008).

72. Corbera & Schroeder, *supra* note 45; CRYSTAL DAVIS ET AL. *A REVIEW OF 25 READINESS PLAN IDEA NOTES FROM THE WORLD BANK FOREST CARBON PARTNERSHIP FACILITY* (2009).

73. Lorenzo Cotula & James Mayars, *Tenure in REDD—Start-Point or Afterthought?*, International Institute for Environment and Development 9-10 (2009).

bon right, some argue that it is a legal right created under national law to benefit from the carbon sequestered and stored in a tract of forest.<sup>74</sup> A carbon right confers upon the holder “all of the intangible commercial and economic benefits that may flow from the [carbon] sequestration process.”<sup>75</sup> The scope and character of carbon rights are difficult to conceptualize<sup>76</sup> and define more specifically.<sup>77</sup> Indeed, the nature of carbon sequestration challenges traditional property systems.<sup>78</sup> For this reason, rigorous carbon rights legislation is essential.<sup>79</sup>

Carbon rights should be distinguished from carbon offsets (commodities that can be traded internationally). The distinction has been described by Maron Greenleaf: “[A carbon right] is a property right that would be defined under national law; [whereas a carbon offset] is a commodity issued by a regulatory body upon a showing of some reduction in emissions or avoided DD.”<sup>80</sup> The creation of property rights to carbon offset only occurs “when the corresponding tonnes of carbon dioxide sequestered have been accounted for, verified and issued by an external organisation.”<sup>81</sup>

Having said this, unless carbon rights are recognized and protected as a property entitlement, it is difficult to reward the relevant parties or to establish responsibilities and liabilities in the future.<sup>82</sup> The carbon right holder should be able to exclude others and trade, record, and mortgage his right.<sup>83</sup> In short, carbon rights should be a “new stick to be added to the bundle of rights already associated with forests.”<sup>84</sup>

Most countries will have to evaluate whether their legal systems permit them to engage in an international, market-based REDD+ approach.<sup>85</sup> They may choose to pass explicit legislation or deal with carbon rights implicitly.<sup>86</sup> Australia, Indonesia, and New Zealand have enacted legislation to explicitly address carbon rights.<sup>87</sup> It is expected

that most countries will prefer to adapt or modify their current laws on forests.<sup>88</sup>

How countries define carbon rights will vary according to their own legal traditions. Common and civil law countries will likely differ in their response to these new property interests, though they are both governed by the *numerus clausus* rule, which sets forth a narrow category of property interests subject to state recognition.<sup>89</sup> This rule may deter the creation of new forms of property rights in consideration of “the structural and socioeconomic concerns that underpin such creation.”<sup>90</sup> In addition, the regulation of carbon rights may be more heterogeneous in federalist countries, as evidenced by Australia, where each state has passed specific legislation.<sup>91</sup>

The literature is divided over whether an explicit or implicit approach is better-suited to work with a market-based REDD+ system. Samantha Hepburn argues that the implementation of specific rules that establish the form, content, and scope of this unique interest is the most effective way to create carbon rights.<sup>92</sup> New legislation, she contends, would provide greater visibility and clarity in the development of a carbon offset market.<sup>93</sup> John Costenbender also believes that a single REDD+ legislation increases clarity in attracting international investments rather than reliance on a wide array of environmental laws.<sup>94</sup> Not all legislatures look with favor on the creation of new forms of property right, however.<sup>95</sup>

Other commentators have favored adapting or streamlining existing rules to adopting new ones.<sup>96</sup> However, the transaction costs of determining who owns carbon may be considerable, requiring “a great deal of legal analysis of each country’s property laws, land-use laws, forest laws, policies regarding customary law, inheritance and succession laws, and contract laws.”<sup>97</sup> This may discourage the use of carbon offsets in the absence of explicit legislation.

In summary, whatever legislative approach countries choose to create carbon rights, the resulting outcome should be well-defined, tradable, and enforceable.<sup>98</sup>

### C. Allocating Carbon Rights

As important as defining carbon rights is determining who is entitled to receive or control them.<sup>99</sup> Lack of clarity over who owns carbon could deter the channelling

74. Vhugen et al., *supra* note 61.

75. Samantha Hepburn, *Carbon Rights as New Property: The Benefits of Statutory Verification*, 31 SYDNEY L. REV. 243 (2009).

76. *Id.*

77. Travis Allan & Kathy Baylis, *Who Owns Carbon? Property Rights Issues in a Market for Greenhouse Gases?*, 7 CURRENT AGRICULTURE, FOOD & RESOURCES ISSUES 104-12 (2006).

78. Savaresi & Morgera, *supra* note 10.

79. Cotula & Mayars, *supra* note 73.

80. Greenleaf, *supra* note 5, at 529.

81. Esteve Corbera & Katrina Brown, *Offsetting Benefits? Analyzing Access to Forest Carbon*, 42 ENVT. & PLAN. 1742-43 (2010).

82. Savaresi & Morgera, *supra* note 10; Palmer, *supra* note 71; Cotula & Mayars, *supra* note 73; Nicola Durrant, *Legal Issues in Biosequestration: Carbon Sinks, Carbon Rights, and Carbon Trading*, 31 U. NEW S. WALES L.J. 906-18 (2008); Baker & McKenzie, Background Analysis of REDD Regulatory Frameworks: Report prepared for the Terrestrial Carbon Group and UN-REDD Programme (2009).

83. Durrant, *supra* note 82; Baker & McKenzie, *supra* note 82.

84. Lindsay Saunders et al., *Social Capital From Carbon Property: Creating Equity for Indigenous People*, 360 PHIL. TRANSACTIONS: MATHEMATICAL, PHYSICAL & ENGINEERING SCI. 1768 (2002).

85. Vhugen et al., *supra* note 61.

86. *Id.*

87. John Costenbender, *Introduction, in LEGAL FRAMEWORKS FOR REDD: DESIGN AND IMPLEMENTATION AT THE NATIONAL LEVEL* (John Costenbender ed., 2009); Charlotte Streck, *Rights and REDD+: Legal and Regulatory Considerations, in REALIZING REDD+: NATIONAL STRATEGY AND POLICY OPTIONS* (Arild Angelsen ed., 2009).

88. Vhugen et al., *supra* note 61.

89. Hepburn, *supra* note 75.

90. *Id.* at 241.

91. Durrant, *supra* note 82.

92. Hepburn, *supra* note 75.

93. *Id.*

94. Costenbender, *supra* note 87.

95. Hepburn, *supra* note 75.

96. Savaresi & Morgera, *supra* note 10.

97. Vhugen et al., *supra* note 61, at 11.

98. *Id.* at 13 (“Whether legally explicit, implicit, or contractual, [carbon rights] must be reasonably secure and enforceable or they are essentially worthless.”).

99. *Id.*; Cotula & Mayars, *supra* note 73; Saunders et al., *supra* note 84; Rupa Basnet-Parasai, *Who Owns Carbon in Community Managed Forest?*, 8 J. FOREST & LIVELIHOOD 77-83 (2009); JOSÉ LUIS CAPELLA & MILAGROS SANDOVAL, CONSERVATION INTERNATIONAL, REDD EN EL PERÚ: CONSIDERACIO-

of REDD+ incentives, as project developers would not know whether their investments will be profitable.<sup>100</sup> But allocating carbon rights is complex<sup>101</sup> and raises complex political pressures.<sup>102</sup>

One important factor in the allocation of carbon rights is whether carbon sequestration is a natural resource under governmental control, an independent proprietary interest, or a proprietary interest tied to land or forest use.<sup>103</sup> The United Nations Framework Convention on Climate Change (UNFCCC) does not mandate a particular way of allocating carbon rights, leaving this decision to national governments,<sup>104</sup> which engenders heterogeneity in the allocation of carbon rights across nations.<sup>105</sup> In any case, there is no generally accepted formula for allocation,<sup>106</sup> and a top-down approach could overlook domestic idiosyncrasies.<sup>107</sup>

The Clean Development Mechanism (CDM) provides an interesting example of a methodology for allocating carbon rights in forest projects. To secure carbon rights, the UNFCCC requires project developers to prove “control over the forest management” but not landownership.<sup>108</sup> Whether this same rule should be applied for REDD+ projects is debatable as REDD+ adds an extra layer of complexity to conventional CDM projects.<sup>109</sup>

To date, the voluntary carbon market has also failed to define clear rules regarding the ownership of property rights to carbon.<sup>110</sup> Project developers of forest carbon investments “have operated on an *ad hoc*, project-by-project, country-by-country basis, with some uncertainty on whether and to what extent their investments will bear fruit.”<sup>111</sup> Over time, though, the voluntary market is becoming more demanding and will likely establish more stringent rules.

In this context, countries are left with great discretion in the allocation of carbon rights. Carbon right holders could be national governments, individual or communal landowners, native communities and forest concessionaires,<sup>112</sup> or a mix of stakeholders.<sup>113</sup> Some of the possible formulas to create carbon rights are summarized next.

## I. Carbon Rights Vested in Governments

In some cases, governments may have the authority to mandate that carbon sequestration is a public asset or a natural resource vested in the government,<sup>114</sup> resembling oil and gas rights systems in many countries. If so, the government may claim that it is the sole owner and seller of carbon rights.<sup>115</sup> This scenario may be more likely in developing countries where forests are generally state-owned and governments may wish to capture the benefit of REDD+ money.<sup>116</sup>

If a government is to claim ownership of carbon rights, it is critical to determine whether it will grant concessions to private parties to develop, enhance, and trade ecosystem services,<sup>117</sup> essentially creating carbon rights through concession contracts between government entities and project developers.<sup>118</sup> If such rights can be transferred, the contract should specify how carbon offset credits will be distributed among the various stakeholders and if the government will retain any benefits.<sup>119</sup>

New Zealand was the first country to allocate forest carbon ownership to the government,<sup>120</sup> nationalizing carbon.<sup>121</sup> This policy proved to be controversial because it alienated the forest stewards and discouraged carbon sequestration.<sup>122</sup> New Zealand’s policy created a perverse incentive as landowners saw no benefit in preserving forests.<sup>123</sup> This policy was later reversed. New Zealand’s experience supports the notion that the “removal of carbon rights from landowners is always likely to prove inflammatory.”<sup>124</sup>

## 2. Carbon Rights Vested in Landowners

An alternative approach would be to vest carbon rights in landowners. Because carbon sinks are located on land, “those who possess rights to land could be assumed to hold rights to the carbon sinks and therefore the carbon.”<sup>125</sup> In Australia, before the passing of explicit carbon laws, there was a common-law presumption that “trees growing upon the land and the carbon contained within those trees are a natural part of the land and therefore belong to the landowner.”<sup>126</sup> Alternatively, under civil law, carbon

NES PARA SU IMPLEMENTACIÓN (2010); DAVID TAKACS, *FOREST CARBON—LAW AND PROPERTY RIGHTS* (2009).

100. TAKACS, *supra* note 99.

101. *Id.*

102. Greenleaf, *supra* note 5.

103. Savaresi & Morgera, *supra* note 10.

104. TAKACS, *supra* note 99.

105. Durrant, *supra* note 82.

106. Milagros Sandoval, *El Contexto Normativo de REDD+ en la Región Andina, in PERSPECTIVAS Y POSIBILIDADES DE REDD+ EN BOSQUES ANDINOS* (Verónica Galmeiz & Roberto Kometter eds., 2009).

107. Vhugen et al., *supra* note 61.

108. *Id.*

109. “A REDD+ regime will measure net emission reductions on a larger scale (subnational or country level) and thus will require the allocation of rights among a wider set of actors, including governments, communities, and other subnational entities participating in the shared effort.” *Id.* at 6.

110. TAKACS, *supra* note 99.

111. *Id.* at 10.

112. Palmer, *supra* note 71.

113. Vhugen et al., *supra* note 61.

114. Greiber & Salzman, *supra* note 13; MARIA SOCORRO MANGUIAT ET AL., *LEGAL ASPECTS IN THE IMPLEMENTATION OF CDM FORESTRY PROJECTS* (IUCN 2005).

115. TAKACS, *supra* note 99.

116. Sunderlin et al., *supra* note 9.

117. Savaresi & Morgera, *supra* note 10; TAKACS, *supra* note 99.

118. Although Vhugen et al. refer to this scheme as a “contractual” way of creating carbon rights, I prefer to frame this possibility as the granting of concession rights to use a public asset or natural resource, such as oil and gas leases. Vhugen et al., *supra* note 61.

119. Greenleaf, *supra* note 5.

120. Savaresi & Morgera, *supra* note 10.

121. Leo Peskett & Zoe Harkin, *Risk and Responsibility in Reduced Emissions From Deforestation and Degradation*, Forestry Briefing (2007).

122. Savaresi & Morgera, *supra* note 10.

123. Leo Peskett et al., *Making REDD Work for the Poor*, Poverty Environment Partnership (2008).

124. Cotula & Mayars, *supra* note 73, at 9-10.

125. Knox et al., *supra* note 8, at 11.

126. Sandra Eckert & Richard McKellar, *Securing Rights to Carbon Sequestration: The Western Australian Experience*, 8 SUSTAINABLE DEV. L. & POL’Y 247

may be considered a “fruit” tied to the estate and hence the property of whoever owns the land. If this is the case, carbon could be traded separately from land in the same way that a landowner can trade the apples that grow on her property.

### 3. Carbon Rights Vested in Forest Users

Some countries may choose to vest carbon ownership in holders of timber or NTFP concessionaires.<sup>127</sup> “[S]ince carbon is sequestered in carbon sinks (trees, other vegetation, and soils), conventional logic dictates that rights to carbon benefits would accrue to those who have rights to carbon sinks.”<sup>128</sup> Under this approach, resource tenure and carbon ownership would become intertwined with each other.<sup>129</sup>

Yet, carbon sequestration does not necessarily fit into the timber or NTFP definition because carbon cannot be physically removed from the forest,<sup>130</sup> as can timber and other tangible products such as Brazil nuts. This supports the argument that carbon should be recognized by national legislation as a unique category and rights to carbon not treated as falling within timber or NTFP rights.<sup>131</sup>

Allocating carbon rights to forest right holders could also be problematic when they lack formal title.<sup>132</sup> In many jurisdictions, forest communities or indigenous peoples are granted only the right to use the forest products for their own consumption and must apply for a license in order to commercially exploit the timber or NTFP located within the forest they inhabit.<sup>133</sup> Such right to subsistence consumption may not be broad enough to allow indigenous peoples to benefit from REDD+.<sup>134</sup>

### 4. Carbon Rights as Separate Property

The holder of a carbon right does not have to be the owner of a tract of land or the holder of a forest concession. Carbon rights could be treated as independent of rights to land or forest ownership.<sup>135</sup> Such disaggregation of rights facilitates carbon trading<sup>136</sup> and has been described as “a vital constituent in a more fundamental strategic approach to climate change.”<sup>137</sup> Some commentators, however, believe that separating tenure rights from carbon rights could favor rent-seeking behavior and block benefits to local people.<sup>138</sup>

In Australia, carbon rights are considered separate assets in six states.<sup>139</sup> Legislators have adapted carbon rights as a common-law nonpossessory interest called *profit à prendre*, which gives its holder the right to take profit from something (e.g., a natural resource) on someone else’s land.<sup>140</sup> This regime is complemented by a registration system of carbon rights on the certificate of title to provide greater security and to prevent multiple transactions in respect of the same carbon asset.<sup>141</sup>

Although carbon rights may remain separate from the land or forest in this system, they still impact land ownership rights. Indeed, a carbon right may limit the right to access, manage, and harvest forest products or to live within a parcel of forest.<sup>142</sup> To address this, the Western Australia Carbon Act stipulates that the carbon right can only be registered if all the persons who have an interest in the land have consented to it.<sup>143</sup>

In sum, whatever system a country chooses to create to allocate carbon rights, the outcome should be secure property rights; contested rights will deter investors from trading carbon rights in the market.<sup>144</sup>

#### D. Some Challenges in the Creation of Carbon Rights

Simply passing specific legislation to regulate carbon will not be effective, since even “the most elegant forest carbon property laws may be of little use if governments are corrupt, underfinanced, politically fragile, or favor elites over the poor.”<sup>145</sup> This section addresses two concrete challenges to REDD+: unclear tenure and respect of indigenous peoples’ rights.

#### I. Land and Forest Tenure

Clearly defined land and forest tenure are prerequisites for the effective application of REDD+.<sup>146</sup> As mentioned earlier, problems in land and forest tenure create confusion on who should receive the benefits and who is responsible for forest conservation.<sup>147</sup> For this reason, countries with more stable and clear tenure rights will reap the greatest opportunities from REDD+.<sup>148</sup>

The extent to which REDD+ can provide a solution to insecure land tenure is disputed. Although some commen-

(2007-2008).

127. Savaresi & Morgera, *supra* note 10; Corbera et al., *supra* note 10.

128. Knox et al., *supra* note 8, at 10.

129. Corbera et al., *supra* note 10.

130. Vhugen et al., *supra* note 61.

131. *Id.*

132. TAKACS, *supra* note 99.

133. Vhugen et al., *supra* note 61.

134. *Id.*

135. Savaresi & Morgera, *supra* note 10.

136. *Id.*; Hepburn, *supra* note 75; Andrew Thompson & Rob Campbell-Watt, *Carbon Rights—Development of the Legal Framework for a Trading Market*, 23 AUSTRALIAN RESOURCES & ENERGY L.J. 156-62 (2004); Baker & McKenzie, *supra* note 82.

137. Hepburn, *supra* note 75, at 171.

138. Sunderlin et al., *supra* note 9.

139. Rosemary Lyster, *REDD+, Transparency, Participation, and Resource Rights: The Role of Law*, 14 ENVTL. SCI. & POL’Y 118-26 (2011).

140. Cotula & Mayars, *supra* note 73.

141. Spike Boydell et al., *Carbon Property Rights in Context*, 11 ENVTL. PRAC. 105-14 (2009).

142. Greenleaf, *supra* note 5.

143. GOVERNMENT OF WESTERN AUSTRALIA, *CARBON RIGHTS IN WA—A NEW INTEREST IN THE LAND* (2005).

144. “The more insecure the carbon rights, the more appealing the alternative uses will be, or the more likely that the land user may be evicted or separated from the land.” Vhugen et al., *supra* note 61, at 15.

145. TAKACS, *supra* note 99, at 6.

146. Greenleaf, *supra* note 5; Savaresi & Morgera, *supra* note 10; Angelsen, *supra* note 14; Palmer, *supra* note 71; DAVIS ET AL., *supra* note 72.

147. Savaresi & Morgera, *supra* note 10.

148. Costenbender, *supra* note 87.

tators emphasize that it may provide the momentum and the necessary funding to define land tenure insecurity in developing countries,<sup>149</sup> others emphasize that tenure reform is an end in itself and not just a means to help REDD+ succeed.<sup>150</sup> Clarifying land tenure in remote areas and on a large scale may be cost-prohibitive,<sup>151</sup> take decades,<sup>152</sup> or exclude the less powerful stakeholders.<sup>153</sup> Moreover, efforts to formalize unrecognized traditional, informal property rights increase the investment costs<sup>154</sup> and cause damage to indigenous governance and culture.<sup>155</sup>

The coexistence of different bodies of laws and governance authorities (legal pluralism) in many developing countries is also problematic as players without state-recognized rights may risk being excluded from REDD+ incentives.<sup>156</sup> Additionally, this could exacerbate land and resource conflicts.<sup>157</sup> David Takacs contends that local, customary laws should be integrated into REDD+ projects to ensure the success of forest carbon projects over time.<sup>158</sup> There are some successful examples of forest carbon projects that have integrated local, customary laws.<sup>159</sup> Nevertheless, even when customary rights are legally accepted, they may not be enforced.<sup>160</sup>

For all of the above, allocating carbon rights can be a daunting task in a legal environment of overlapping claims and legal pluralism.<sup>161</sup>

## 2. Rights of Indigenous Peoples and Forest Communities

The creation of new carbon rights could potentially affect the rights and livelihoods of those people already using forest resources, whether formally or informally.<sup>162</sup> Approximately 500 million small-scale farmers and indigenous

peoples depend on the world's forests for their livelihood.<sup>163</sup> Such communities should be regarded as having some proprietary rights over forest carbon because they "exercise a significant degree of control over either forest or land resources."<sup>164</sup> As regards indigenous peoples, the allocation of carbon rights as a result of their activities within their own territories should be carefully considered because failure to do so could impinge on their rights protected under national and international laws.<sup>165</sup>

As mentioned earlier, REDD+ benefits will restrict the long-term land uses for specific areas of the forest.<sup>166</sup> For example, a carbon transaction may prevent forest dwellers from accessing or utilizing forest products.<sup>167</sup> In addition, governments may create new protected areas, biological corridors, or other types of forest management zones that could displace indigenous peoples.<sup>168</sup> Social safeguards to REDD+ investment are central.<sup>169</sup>

Denying forest communities access to the benefits derived from carbon rights would be counterproductive from an economic standpoint, as they would have no incentive to keep carbon stored in trees.<sup>170</sup> But, even if carbon rights are vested in forest communities, they may lose them due to unfamiliarity with the relevant trading markets.<sup>171</sup> In this regard, the 1971 Alaska Native Claims Settlement Act (ANCSA), which created native corporations as recipients of land and money in the United States, exemplifies the divergence between indigenous values and markets. Many Alaska natives struggled to adapt to the new corporate model that ANCSA put forward due to their inexperience in business, low levels of education, and lack of familiarity with corporate management.<sup>172</sup>

Failure to consider forest communities in the allocation of carbon rights could also impair the developmental goals of REDD+.<sup>173</sup> As Greenleaf posits, access to carbon rights may allow forest communities to monetize their property rights; such access can create rents that can be used as collateral to help reduce forest poverty and politically empower indigenous groups.<sup>174</sup> Furthermore, the allocation of carbon entitlements can provide one means of redressing past social injustices.<sup>175</sup>

149. Savaresi & Morgera, *supra* note 10; DAVIS ET AL., *supra* note 72.

150. Sunderlin et al., *supra* note 9. "Putting the burden for resolving historical land use and property rights conflicts on REDD+ is a fallacy that must be put to rest [ . . . ] [F]uture REDD+ incentives may not cover the incremental costs associated with property rights regularization and the enforcement of resource management legal provisions." Corbera & Brown, *supra* note 81, at 323.

151. Wunder, *supra* note 49; Palmer, *supra* note 71; Ruth Meinzen-Dick & Esther Mwangi, *Cutting the Web of Interests: Pitfalls of Formalizing Property Rights*, 26 LAND USE POL'Y 36-43 (2009).

152. Melissa Farris, *Sound of Falling Trees: Integrating Environmental Justice Principles Into the Climate Change Framework for Reducing Emissions From Deforestation and Degradation (REDD)*, 20 FORDHAM ENVTL. L. REV. 515 (2009).

153. TAKACS, *supra* note 99.

154. Wunder, *supra* note 49; Palmer, *supra* note 71; Meinzen-Dick & Mwangi, *supra* note 151.

155. Rose, *supra* note 4; Steven Hendrix, *Myths of Property Rights*, 12 ARIZ. J. INTL. & COMP. L. 183-223 (1995); Brian Tamanaha, *The Rule of Law and Legal Pluralism in Development*, 3 HAGUE J. RULE L. 1-17 (2011).

156. Knox et al., *supra* note 8.

157. *Id.*; Sunderlin et al., *supra* note 9; Fitzpatrick, *supra* note 9; Savaresi & Morgera, *supra* note 10; Rose, *supra* note 33; Baker & McKenzie, *supra* note 82.

158. TAKACS, *supra* note 99.

159. For instance, FFI's project in West Kalimantan, Indonesia, is an example of a project that respects customary rights through REDD+ in a context of legal pluralism. FOREST CARBON, FAUNA FLORA INTERNATIONAL (FFI)—DEVELOPMENT OF REDD AND COMMUNITY FOREST PROJECTS IN WEST KALIMANTAN, INDONESIA (2012), available at <http://forest-carbon.org/project-list/ffi-redd-and-community-forest-west-kalimantan/>.

160. Costenbender, *supra* note 87.

161. Peskett & Harkin, *supra* note 121.

162. Palmer, *supra* note 71; Farris, *supra* note 152.

163. Greenleaf, *supra* note 5.

164. Lyster, *supra* note 139, at 23.

165. Irene Ramos, *Entendiendo REDD a Través de los Derechos de los Pueblos Indígenas: Apuntes Conceptuales Para los Países Andino Amazónicos, Derecho y Recursos Naturales*, DAR (2010).

166. Peskett et al., *supra* note 123.

167. Greenleaf, *supra* note 5; Peskett et al., *supra* note 123; Adriana Casas, *Marcos Legales Para el Pago por Servicios Ambientales en América Latina y el Caribe: Análisis de Ocho Países* (2008).

168. Savaresi & Morgera, *supra* note 10; Wunder, *supra* note 49; Lyster, *supra* note 139; Farris, *supra* note 152.

169. Saunders et al., *supra* note 84; Christoph Schwarte, *Social Safeguards in REDD: A Review of Possible Mechanisms to Protect the Rights and Interests of Indigenous and Forest-Dependent Communities in a Future System for REDD*, 6 MCGILL INT'L J. SUSTAINABLE DEV. L. & POL'Y 55 (2010).

170. Saunders et al., *supra* note 84; Basnet-Parasai, *supra* note 99.

171. Greenleaf, *supra* note 5.

172. Marilyn Ward, *Indian Country and Inherent Tribal Authority: Will They Survive ANCSA?*, 12 ALASKA L. REV. 443-70 (1997).

173. Greenleaf, *supra* note 5.

174. *Id.*

175. Saunders et al., *supra* note 84.



In order to minimize the risk that indigenous peoples and forest communities will be deprived from the benefits of carbon rights, displaced, or have their land uses abridged by REDD+ incentives,<sup>176</sup> the application of environmental justice principles is vital.<sup>177</sup>

## II. Carbon Transactions in Peru: How Are Project Developers Operating in the Market?

Peru has the ninth largest forest cover in the world and the second in South America after Brazil.<sup>178</sup> Sixty percent of Peruvian territory is covered with forests.<sup>179</sup> However, DD is rapidly growing. Between 2000 and 2005, the rate of deforestation was 147,000 hectares per year, but this number is increasing.<sup>180</sup> Forests are threatened by the construction of the interoceanic highway connecting Brazil and Peru (*Iniciativa Para la Integración y la Infraestructura Regional Sudamericana—IIRSA*), plantations for agro-industrial products, mining and oil exploitation, drug trafficking, and infrastructure projects.<sup>181</sup>

Unlike other Latin American countries such as Bolivia or Ecuador, where the governments have prevented the negotiation of carbon rights by private actors, Peru has opted for a “nested approach,” which allows the adoption of early initiatives at the subnational level.<sup>182</sup> The nested approach is designed to reduce carbon emissions as quickly as possible at a scale compatible with developing countries’ capacities and governance levels<sup>183</sup> by moving progressively from subnational to national scales.<sup>184</sup>

Civil society, communities, and private companies are leading REDD+ projects in Peru.<sup>185</sup> There are at least 40 REDD+ early initiatives being implemented, and at least three companies have announced the acquisition of carbon offset credits from such projects: Pacifico Insurance, Scotiabank, and the Dakar Rally.<sup>186</sup>

This section describes the legal framework on which REDD+ project developers are relying to transact carbon rights.<sup>187</sup>

### A. Definition and Allocation of Carbon Rights

To date, Peru has not passed explicit legislation to regulate the reduction of emissions from DD.<sup>188</sup> This is typical of most other Latin American countries.<sup>189</sup> Although the 2005 Environment Act (*Ley General del Ambiente—Ley N° 28611*) and the 2000 Forest Law (*Ley Forestal y de Fauna Silvestre—Ley N° 27308*) explicitly recognize carbon sequestration and storage as ecosystem services, Peru lacks specific regulation that clarifies who owns carbon rights and who can sell the carbon offset credits from forest carbon projects.<sup>190</sup> Thus, one may debate whether the existing framework is well-suited to host REDD+ projects.<sup>191</sup> Some commentators assert that although PES legislation would be positive, it is not indispensable for conducting REDD+ in Peru.<sup>192</sup>

### I. Are Ecosystem Services Natural Resources?

In most legal systems, natural resources such as oil and gas are vested in the government, regardless of whose land they are on or under.<sup>193</sup> Extractive activities in such countries are undertaken either by the government itself<sup>194</sup> or by private companies under licenses or concessions.<sup>195</sup> The

176. Knox et al., *supra* note 8.

177. Farris, *supra* note 152.

178. CARLOS ANDALUZ, *MANUAL DE DERECHO AMBIENTAL* (Lima: Llama Gráfica SAC 2006).

179. Hugo Che Piu & Tania García, *Estudio REDD Perú: La Situación de REDD en el Perú, Derecho, Ambiente y Recursos Naturales—DAR* (2011).

180. Peru21, *Perú Perdió 153 Mil Hectáreas de Bosques Desde 2005*, Peru21 (2012), available at <http://peru21.pe/actualidad/peru-perdio-153-mil-hectareas-bosques-desde-2005-2038742>.

181. Che Piu & García, *supra* note 179; Peru21, *supra* note 180.

182. Conservation International, *El Enfoque Anidado Para REDD+*; Veronica Galmez & Roberto Kometter, *Perspectivas y Posibilidades de REDD+ en Bosques Andinos, Programa Regional ECOBONA-INTERCOOPERATION Fundación Suiza Para el Desarrollo y la Cooperación Internacional* (2009).

183. Conservation International, *supra* note 182.

184. Galmez & Kometter, *supra* note 182.

185. Conservation International, *supra* note 182.

186. REDD+ critics argue that REDD+ carbon offset credits could allow “green-washing” of polluting companies. Joanna Cabello, *Enrejando los Bosques y Sus Pueblos: REDD y la Carretera Interoceánica en el Perú*, Carbon Trade Watch (2010). Along the same lines, the government is also concerned that companies with a bad environmental reputation use these credits to clean their public image. Interview with Milagros Sandoval, Environmental Policy Coordinator at Conservation International-Peru (Aug. 8, 2012).

187. Between July and August 2012, the author conducted 15 interviews in Peru, including with one congresswoman, two public servants, an advisor to an indigenous association, representatives from NGOs, project developers, and environmental consultants. The interviewees were selected according to the institutions they represent to cover the most relevant REDD+ players. Although a list of questions was prepared, the interviews were allowed to flow as naturally as possible. On average, interviews lasted around 20-30 minutes. All the interviewees quoted in this Article authorized the inclusion of their names and the information provided. A site visit to the Brazil Nuts Concessionaires REDD+ Project in Madre de Dios was conducted from July 23 to 26, 2012. In Puerto Maldonado, interviews with Bosques Amazónicos SAC’s employees, the President of the Federation of Brazil nuts producers and a public servant from the Regional Government of Madre de Dios were undertaken. Research work also included a site visit to one Brazil nuts concession located in Centro Poblado Alegría, one hour away from Puerto Maldonado on the IIRSA highway. The results of this case study are discussed below. In addition, a copy of the AIDER’s Management Agreement to administer a Natural Protected Area (NPA) was obtained through public transparency mechanisms before the NPA agency.

188. Che Piu & García, *supra* note 179.

189. Sandoval, *supra* note 106; Casas, *supra* note 167.

190. Greiber & Salzman, *supra* note 13; Ramos, *supra* note 165; Thomas Greiber, *Anexo IV: Informe Sobre Perú*, in *PAGOS POR SERVICIOS AMBIENTALES: MARCOS JURÍDICOS E INSTITUCIONALES* (Thomas Greiber ed., 2010). Che Piu & García, *supra* note 179.

191. Pablo Peña, Thesis: *Apuntes Sobre los Mecanismos de Reducción de Emisiones por Deforestación y Degradación—REDD en el Marco Jurídico Peruano*, Pontificia Universidad Católica del Perú (2011).

192. Capella & Sandoval, *supra* note 99.

193. Yinka Omorogbe & Peter Oniemola, *Property Rights and Gas Under Domestical Regimes*, in *PROPERTY AND THE LAW IN ENERGY AND NATURAL RESOURCES* (Aileen McHarg et al. eds., 2010).

194. MARTÍN BELAUNDE, *DERECHO MINERO Y CONCESIÓN* (San Marcos 1998).

195. Jonnette Watson & Nigel Banks, *Different Views of the Cathedral: The Literature on Property Law Theory*, in *PROPERTY AND THE LAW IN ENERGY AND NATURAL RESOURCES* (Aileen McHarg et al. eds., 2010).

main justification for this rule is that natural resources should be managed for the welfare of all citizens.<sup>196</sup>

Peru follows such a model.<sup>197</sup> Article 66 of the 1993 Constitution declares that all natural resources are the “patrimony of the nation,” which means that the government has authority over the country’s natural assets and the power to establish limits to their use.<sup>198</sup> The Constitution outlaws private-property rights over the “source” of natural resources (e.g., a natural forest), though the “fruits” and “products” belong to the holder of the concession once they are extracted.<sup>199</sup>

Natural forests in Peru, located on both public and private lands, are state-owned natural resources.<sup>200</sup> The law does not specify whether the ecosystem services provided by such forests are *also* natural resources. There seems to be a consensus among experts that this represents a legal vacuum that needs to be addressed.<sup>201</sup> There are two possible interpretations: ecosystem services can be either *natural resources* (the ecosystem-services-as-natural-resources interpretation) or the *fruits* of natural resources (the ecosystem-services-as-fruits interpretation). This is a controversial topic.<sup>202</sup>

First, regarding the ecosystem-services-as-natural-resources interpretation, some argue that ecosystem services should be considered an intrinsic component of the natural resources that provide them<sup>203</sup> and cannot be separated from them.<sup>204</sup> According to Article 3 of the Natural Resources Act (*Ley Orgánica Para el Aprovechamiento Sostenible de los Recursos Naturales—Ley N° 28261*), natural resources are (i) every component of nature, (ii) that can be used by humans to satisfy their needs, and (iii) that has an actual or potential value in the market. Carbon sequestration and storage not only satisfy (i) and (ii), but also (iii) whenever they have a value in the market. Thus, argues Pablo Peña, they should be assumed to be a natural resource.<sup>205</sup> Similarly, José Luis Capella and Milagros Sandoval assert that, in light of the government’s constitutional control over all natural resources and considering that natural resources provide ecosystem services, the latter should also be treated as natural resources.<sup>206</sup> This is the official position of the Ministry of Environment, which considers carbon sequestration services as part of the forest patrimony of the country.<sup>207</sup>

Peña argues that although dealing with ecosystem services *as if they were natural resources* is a pragmatic interpretation to harmonize the existing legal framework, this is not perfect because current legislation does not put natural resources and ecosystem services at the same level.<sup>208</sup> Some counter that ecosystem services are enhanced by human conduct and, therefore, do not occur naturally. However, the fact that humans support the provision of ecosystem services should not alter the characterization of the services as natural.<sup>209</sup>

Consequently, according to the ecosystem-services-as-natural-resources interpretation, the provision of ecosystem services by the forests would constitute a specific right that can be granted by the government.<sup>210</sup> Nonetheless, to date, there is no legal framework that would allow the granting of rights to ecosystem services.

The second alternative is to characterize ecosystem services as a “fruit” derived from the right to access a natural resource, and hence the property of whoever is entitled to use the resource.<sup>211</sup> Under this interpretation, the right to use a natural resource (e.g., a timber concession) would also entitle its holder to benefit from the ecosystem services provided within the concession without any additional authorization from the government.<sup>212</sup>

The ecosystem-services-as-fruits interpretation is not without problems. On the one hand, except for timber concessions, there is no explicit regulation that provides that the right to exploit a natural resource *automatically* grants the ecosystem services that such resource provides.<sup>213</sup> Actually, the Natural Resource Act establishes that private parties only hold rights to the natural resource *explicitly* conferred to them by a concession. On the other hand, this interpretation treats ecosystem services as goods that can be separated from forests. As noted above, ecosystem services do not fit neatly into the category of “assets” subject to possession, use, or transfer under the 1984 Peruvian Civil Code.<sup>214</sup>

## 2. Ecosystem Services

The Peruvian Constitution does not reference ecosystem services. However, Article 10 of the Natural Resources Act stipulates that the government must identify and valorize the natural resources and the *ecosystem services they provide*.<sup>215</sup> Article 94.2 of the Environment Act recognizes the protection of watersheds, biodiversity, and GHG mitigation as examples of ecosystem services. Article 94.3 assigns responsibility to the national government to identify, valorize, reward, and maintain the provision of ecosystem ser-

196. *Id.*

197. Andaluz, *supra* note 178; BELAUNDE, *supra* note 194.

198. Andaluz, *supra* note 178.

199. See Natural Resources Act (art. 4).

200. See Natural Resources Act (art. 3).

201. “The Natural Resource Act is not attuned to the provision of ecosystem services. I acknowledge that there are some difficulties when trying to justify why ecosystem services are natural resources under this legislation. It is not going to be easy to solve this confusion” (translation by author). Interview with Elena Castro, Advisor at the Ministry of Environment (July 17, 2012).

202. Interview with Milagros Sandoval, *supra* note 186; Interview with Elena Castro, *supra* note 201.

203. Johanna Garay, Marco Legal Ambiental de los Servicios Ambientales en las Áreas Naturales Protegidas (2010).

204. Interview with Elena Castro, *supra* note 201.

205. Peña, *supra* note 191.

206. Capella & Sandoval, *supra* note 99.

207. Interview with Elena Castro, *supra* note 201.

208. Peña, *supra* note 191.

209. Interview with Milagros Sandoval, *supra* note 186.

210. Peña, *supra* note 191; Garay, *supra* note 203.

211. Garay, *supra* note 203.

212. *Id.*

213. Greiber & Salzman, *supra* note 190; Peña, *supra* note 191.

214. Peña, *supra* note 191.

215. Greiber, *supra* note 190.

**Table 1: Possible Legal Solutions to Carbon Ownership**

| Right Holder                 | Applicable Legislation  | Legal Solution  | Project Developer's Opportunistic Interpretation of Current Legislation   |
|------------------------------|---|---|---|
| Timber concessionaire        | 2000 Forest Law   | Allowed to use ecosystem services if included in the Forest Management Plan                                 | This is sufficient title  |
| NTFP concessionaire          | 2000 Forest Law   | Legal vacuum  | Should be allowed to use ecosystem services, extending the benefits for timber concessionaires  |
| NPA partial or total manager | NPA Act ( <i>Ley de Áreas Naturales Protegidas—Ley N° 26834</i> )   | NPA Management Agreement allow NGOs to develop PES schemes, but do not explicitly transfer carbon ownership | This is sufficient title  |
| Private Landowner            | Civil Code/2000 Forest Law/ Reforestation Law ( <i>Ley de Promoción de la Inversión Privada en Reforestación y Agroforestería—Ley N° 28852</i> )  | Legal vacuum  | For plantations: plantations are not natural resources; carbon is a fruit tied to landownership.<br>For natural forests: carbon included in the timber permit |
| Indigenous Peoples           | Native Peoples law ( <i>Ley de Comunidades Nativas y de Desarrollo Agrario de la Selva y de Ceja de Selva—Decreto Ley 22175</i> )/2000 Forest Law | Legal vacuum  | For plantations: plantations are not natural resources; carbon is a fruit tied to landownership.<br>For natural forests: carbon included in the timber permit |

vices through economic mechanisms. The government has failed to create such mechanisms to date.<sup>216</sup>

The 2000 Forest Law, the Natural Protected Areas (NPA) Act, and other laws provide general and scattered references to the provision of and benefits from ecosystem services. Precisely, project developers are interpreting these rules to permit them to transact in carbon rights, hence structuring their REDD+ investments in reliance on ad hoc legal interpretations. Yet, in the absence of PES legislation, project developers invest time and resources, including legal counsel, to evaluate carbon tenure and to draft case-specific contracts. This is why carbon transactions in Peru remain complex, expensive, and heterogeneous. For better or worse, the nested approach that the country has adopted allows this outcome.<sup>217</sup>

This Article next addresses how project developers are framing their REDD+ investments creatively under existing Peruvian laws (see Table 1) and examines the following questions: Does the timber or NTFP concessionaire own the carbon sequestered within the boundaries of his concession? Does a nongovernmental organization (NGO) administering an NPA own the carbon stored within the park? Does the private or communal landowner own the carbon sequestered in her tract of land?<sup>218</sup>

216. *Id.*

217. Interview with Milagros Sandoval, *supra* note 186. Another problem with the nested approach is that each project developer uses his own methodology and base line, duplicating efforts and creating potential problems for future "homologations" at a regional or national scale. Sandoval, *supra* note 106. In addition, there is also a risk of double carbon accountability and insecurity. Conservation International, *supra* note 182; Interview with Tariana Pequeño, Representative of Centro de Conservación, Investigación y Manejo de Áreas Naturales (CIMA) (July 19, 2012).

218. Sandoval, *supra* note 106; Pablo Peña, *Diseñando un Marco Legal Para Promover Esquemas de Pago por Servicios Ambientales en el Perú* (2012).

#### a. Forest Law

The 2000 Forest Law gives authority to the Ministry of Agriculture and subnational governments to grant concession rights to conduct timber and non-timber activities. A forest concession awards its holder the exclusive right to access a forest resource over a specified period of time and confers property rights over the fruits and products. As mentioned earlier, Article 14 of the 2000 Forest Law explicitly recognizes that the holders of timber concessions are *also* entitled to exploit NTFP, promote ecotourism activities, and benefit from *ecosystem services* within the area of concession. The only requirement is to address these activities in the forest management plan submitted to the forest agency periodically. Hence, the forest regime has created a tacit link between forest management and the provision of ecosystem services.<sup>219</sup>

Nevertheless, this regulation does not provide full clarity over carbon ownership. First, the concession agreements do not *unequivocally* include ecosystem services as the timber concessionaire's rights or property.<sup>220</sup> This aspect is left to the discretion of the forest agency. Second, this rule is only applicable to timber concessionaires. There is no such rule for other types of forest concessions, such as NTFP. It is unclear whether this omission was intentional or whether the grounds for differentiating timber from NTFP concessions are sound. Yet, a literal interpretation of the 2000 Forest Law leads to the conclusion that an NTFP concessionaire does not explicitly have the right to the ecosystem services within her concession.

219. Capella & Sandoval, *supra* note 99; Greiber, *supra* note 190.

220. Capella & Sandoval, *supra* note 99.

The 2011 Forest Law (*Ley Forestal y de Fauna Silvestre—Ley N° 29763*)—which has not yet entered into force<sup>221</sup>—solves these issues. Article 109 establishes that “the benefits derived from ecosystem services correspond to the owner of a forest concession, authorization, or permit” (translation by author). Project developers and other stakeholders are following closely the implementation of this law, hopeful that it will confirm the allocation of carbon rights to all forest concessionaires.<sup>222</sup>

At least two timber concessionaires, Maderera Rio Acre SAC and Maderera Rio Yaverija SAC, have relied on the 2000 Forest Law rules to verify their projects in the voluntary carbon market. Greenox’s Madre de Dios Amazon REDD Project aims to reduce the pressure to use forest lands for agriculture and cattle ranching by local populations and to guarantee the sustainable forest management of both timber concessions.<sup>223</sup> Scotiabank and the Dakar Rally claim to have acquired carbon offset credits from this REDD+ project.<sup>224</sup>

Greenox’s Project Design Document (PDD) justifies its carbon rights ownership as follows.<sup>225</sup> First, the use of ecosystem services is the right of timber concessionaires, provided that they are included in the forest management plan.<sup>226</sup> Second, the timber concession contracts explicitly state that timber concessionaires benefit from the ecosystem services within the area of concession. Third, both timber concessionaires have submitted the forest management plans to the government, which include the provision of environmental services. Finally, given that there are no landowners or settlers within the area of concession, the risk of third parties claiming title to the carbon rights is low.

In sum, Greenox’s project has justified access to carbon rights by fulfilling the legal requirements established in the 2000 Forest Law. The creation of these carbon rights fit into the “ecosystem-services-as-fruits” interpretation discussed above. Although these carbon rights are subject to the filing of a forest management plan and are limited to timber concessionaires, they appear to be less contingent than carbon rights in other REDD+ projects.<sup>227</sup>

221. The 2011 Forest Law will enter in force upon the approval of the Regulations by the Ministry of Agriculture (*Reglamento de la Ley Forestal y de Fauna Silvestre*), which are currently being discussed. It will abrogate the 2000 Forest Law.

222. Interview with Jorge Torres, Technical Manager at BAM (July 17, 2012); Interview with David Asturima, President of the Federation of Madre de Dios Brazil Nuts Producers (FEPROCAMD) (July 25, 2012). “We are happy with the text of the 2011 Forest Law because it is much clearer regarding the ownership of carbon rights. It grants carbon rights more automatically and not subjectively” (translation by author).

223. Greenox, Project Design Document: Madre de Dios Amazon REDD Project (2012), <http://www.climate-standards.org/projects/> (last visited Feb. 5, 2013).

224. Dakar Rally, Environment: A Responsible Rally (2011), <http://www.dakar.com/dakar/2011/us/environment.html> (last visited Feb. 5, 2012); Scotiabank, Estudio de Caso: Estrategia Ambiental del Scotiabank en Perú (2012), available at [http://www.sciotiabank.com/ca/common/pdf/about\\_scotia/Estudio\\_de\\_Caso\\_Estrategia\\_Ambiental\\_de\\_Scotiabank\\_en\\_Peru.pdf](http://www.sciotiabank.com/ca/common/pdf/about_scotia/Estudio_de_Caso_Estrategia_Ambiental_de_Scotiabank_en_Peru.pdf).

225. Greenox, *supra* note 223.

226. See Article 86b of the Forestry Regulations (*Reglamento de la Ley Forestal y de Fauna Silvestre*, approved by Supreme Decree No. 014-2001-AG).

227. Interview with Milagros Sandoval, *supra* note 186.

## b. NPA

At least 16% of Peru’s territory has been designated as an NPA.<sup>228</sup> One objective of the NPA Act is to guarantee the provision of ecosystem services. Precisely, one of the functions of the NPA Agency (*Servicio Nacional de Áreas Naturales Protegidas—SERNANP*) is to promote, grant, and regulate rights to ecosystem services within national parks.<sup>229</sup> Yet, there are no regulations that support the creation of such rights.

NPA face financial, governance, capacity, and enforcement problems. To enhance the administration of NPA, SERNANP has authority to sign partial or total management agreements by which it transfers the administration of a specific NPA to a public interest organization (e.g., NGOs, universities, or associations) for a period of up to 20 years.<sup>230</sup> Examples of management agreements are *Parque Nacional Bahuaja Sonene* and *Reserva Nacional Tambopata* (awarded to NGO *Asociación Para la Investigación y Desarrollo Integral—AIDER*); *Parque Nacional Cordillera Azul* (awarded to NGO *Centro de Conservación, Investigación y Manejo de Áreas Naturales—CIMA*); and *Bosque de Protección Alto Mayo* (awarded to NGO Conservation International). These NGOs are currently undertaking REDD+ initiatives within the NPA they administer.

### i. AIDER’s REDD+ Project

After winning a public auction, AIDER signed a Partial Management Agreement with SERNANP for 20 years (2008-2028).<sup>231</sup> As part of its technical proposal, AIDER included the use of ecosystem services as a financial tool to fund conservation strategies within the park.<sup>232</sup> The purpose of the REDD+ project is to promote sustainable activities and conservation agreements to reduce the pressure from productive lands into the buffer zone of the park. The project includes reinforcing community policing and strengthening the management capabilities of the park.<sup>233</sup> Pacífico Insurance claims to have offset its carbon footprint by investing in this REDD+ initiative.<sup>234</sup>

Carlos Sánchez from AIDER has stated that if there had been a PES law, it would have been easier to negotiate carbon rights from the NPA.<sup>235</sup> The PDD justifies AIDER’s title to carbon by citing an agreement (*convenio*) entered into by SERNANP, Bosques Amazónicos SAC (BAM), and AIDER, in which BAM commits to commercialize

228. SERNANP, *Sistema Nacional de Áreas Naturales Protegidas por el Estado—SINANPE* (2010), available at <http://www.sernanp.gob.pe/sernanp/archivos/biblioteca/mapas/ListaAnps.pdf>.

229. See SERNANP’s Organization Rulings (*Reglamento de Organización y Funciones—ROF*), art. 3.

230. Andaluz, *supra* note 178.

231. The Agreement was ratified by *Resolución de Intendencia No. 53-2008 INRENA-IANP*.

232. Interview with Carlos Sánchez, Representative of NGO Asociación Para la Investigación y el Desarrollo Integral—AIDER (July 24, 2012).

233. *Id.*

234. Pacífico, *Nuestro Proyecto* (2012), <http://site.pacificoseguros.com/carbononeutral/nuestroproyecto.html> (last visited Feb. 5, 2013).

235. Interview with Carlos Sánchez, *supra* note 232.

the carbon offset credits.<sup>236</sup> The *convenio* authorizes BAM to commercialize the carbon offset credits once PES legislation is passed. However, AIDER's carbon rights do not derive from the management agreement itself, but from a different contract, the *convenio*. Access to the agreement was not available; however, it is reported to have been terminated by SERNANP.<sup>237</sup>

AIDER's management agreement is ambiguous with regard to carbon rights. On the one hand, Clause 3 states that the contract does not grant the property to the park area or any other additional right to AIDER. It also acknowledges the government's sovereignty to grant title to the natural resources or the "provision of economic services within the park area (sic)" (translation by author). Clause 6.1.2.5 sets forth SERNANP's right "to determine the mechanism to commercialize the ecosystem services" (translation by author), pursuant to the applicable legal framework for NPA. These clauses are consistent with the ecosystem-services-as-natural-resource interpretation discussed above as it implies that additional rights to ecosystem services are needed.

Clause 6.2.1.6 also establishes AIDER's right to conduct any project to augment the park's income. Further, it stipulates that if AIDER develops any project that generates rents for the compensation of ecosystem services, such income should be invested in the park. In contrast to the clauses discussed above, this clause is consistent with the ecosystem-as-fruits interpretation as it implies that AIDER is entitled to undertake any PES mechanism. In any case, it is difficult to justify a transfer of carbon rights from SERNANP to AIDER based on this clause.

## ii. Conservation International's REDD+ Project

Conservation International (CI) recently won a public auction to administer *Bosque de Protección Alto Mayo*.<sup>238</sup> The management agreement is currently being negotiated with SERNANP. As AIDER, CI included in the technical proposal the possibility of using PES schemes. CI's REDD+ project aims to promote sustainable livelihoods within the park, which faces increasing squatting driven by the construction of the IIRSA highway. In 2009, Disney Corporation offered \$4 million to develop large-scale REDD+ forest carbon projects, including Peru's *Bosque de Protección Alto Mayo*.<sup>239</sup>

CI is seeking an explicit clause in the management agreement in which SERNANP clearly transfers all carbon

rights.<sup>240</sup> It has been reported that SERNANP has agreed to such a clause; however, not having a specific legal framework has increased the transaction costs for CI's project.<sup>241</sup>

## iii. Discussion

It is debatable whether the management agreements grant the right to ecosystem services. First, AIDER's experience may show that the parties felt that a contract was required because the management agreement was not dispositive regarding carbon rights. This ad hoc *convenio*, however, is conditional upon the eventual approval of PES legislation<sup>242</sup>; thus, it does not bestow the rights to trade carbon rights. Second, other parties entitled to use the NPA may challenge AIDER's carbon ownership in the future. For instance, within the park, there are 99 Brazil nuts concessionaires, several licensed tourism operators, and families holding possession or property titles to agricultural plots. All of them may claim title to carbon at some point based on their own opportunistic interpretations of the existing legal framework.

In interviews with representatives from AIDER, CI, and CIMA, they all emphasized that having government authorization to use the ecosystem services within the NPA they administer—even if the contractual wording is ambivalent—renders their carbon rights less contingent *vis-à-vis* a future PES law.<sup>243</sup> "We are not really concerned about a future PES law. This is the advantage of working inside an NPA. The carbon is state-owned and the money will be reinvested in the park" (translation by author), stated CIMA's representative.<sup>244</sup> Certainly, the fact that carbon rights are transferred to not-for-profit entities, which must reinvest the money in conservation strategies, renders them less troublesome than awarding them to private companies for their profit.

In summary, the creation of carbon rights in NPA is debatable as the management agreements do not explicitly authorize or transfer title to carbon rights from SERNANP to the NGOs involved. If successful in its current negotiations, CI would be the first NGO to have explicitly secured these rights contractually.

## c. Private Lands

In general, forested lands are state-owned natural resources; however, some forests are located within private lands.<sup>245</sup> Landowners do not have title to the *natural resources* located

236. AIDER, *PDD: Reducción de la Deforestación y Degradación en la Reserva Nacional Tambopata y en el Parque Nacional Bahuaja-Sonene del Ámbito de la Región Madre de Dios—Perú, Bajo los Estándares de la Alianza Para el Clima, Comunidad y Biodiversidad—CCBA* (2010), <http://www.climate-standards.org/projects/> (last visited Feb. 5, 2013).

237. Interview with a confidential informant from an NGO.

238. Interview with Milagros Sandoval, *supra* note 186.

239. Andrea Wolfson, *The Walt Disney Company Makes the Single Largest Corporate Commitment to Date in REDD Demonstration Activities*, Conservation International (2009), [http://www.conservation.org/global/celb/fmg/articulos/Pages/110309\\_disney\\_redd.aspx](http://www.conservation.org/global/celb/fmg/articulos/Pages/110309_disney_redd.aspx) (last visited Feb. 5, 2013).

240. Interview with Milagros Sandoval, *supra* note 186.

241. "We needed more lawyers and to spend more time trying to make things clear." *Id.* In addition, she mentioned that not having lawyers or public servants in Peru who are familiarized with carbon transactions added to the time and cost.

242. AIDER, *supra* note 236.

243. Interview with Milagros Sandoval, *supra* note 186; Interview with Tatiana Pequeño, *supra* note 217; Interview with Carlos Sánchez, *supra* note 232.

244. Interview with Tatiana Pequeño, *supra* note 217.

245. Andaluz, *supra* note 178; José Luis Capella, *Contexto Legal, Vacíos y Propuestas en REDD en el Perú*, Sociedad Peruana de Derecho Ambiental (2009).

within their lands (e.g., timber).<sup>246</sup> In order to exploit the timber on her land, the landowner must apply for a permit.

Timber grown in reforestation projects (plantations) is not considered a natural resource because it is the result of human action. Hence, carbon rights should belong to the landowner,<sup>247</sup> although there is no specific law on point. As discussed above, existing reforestation and afforestation CDM projects only require “control over the forest management” to control carbon credits.

The 2011 Forest Law seeks to fill this legal vacuum. For natural forests, Articles 51 and 60 stipulate that the holder of a permit to use timber is also entitled to benefit from the ecosystem services. For plantations, Article 109 stipulates that access to ecosystem services in private or communal plantations requires no permit.

#### d. Communal Lands

In Peru, indigenous peoples do not own lands with forest cover or forest capacity<sup>248</sup>; they are allowed to *use* the forest through usufruct rights.<sup>249</sup> A special authorization is necessary to commercialize timber or NTFP. The 2000 Forest Law does not recognize that indigenous peoples hold title to carbon within their lands. Indigenous peoples, not surprisingly, believe this law is unfair as it only grants rights to ecosystem services to timber concessionaires.<sup>250</sup> The federation of indigenous peoples (*Asociación Interétnica de Desarrollo de la Selva Peruana*—AIDSESP) is working on *REDD+ Indígena*, a counterproposal to REDD+,<sup>251</sup> though still not fully phrased out.

In the past years, there have been a number of reports about “carbon cowboys” negotiating carbon rights with indigenous groups with unfair terms.<sup>252</sup> Congresswoman Veronika Mendoza acknowledges that Congress has received formal claims from indigenous peoples and stresses the need to strengthen indigenous institutions.<sup>253</sup> The Ministry of Environment challenges the validity of such contracts: “We believe that communities cannot sell carbon if they do not have the authorization of the government awarding them the title to carbon rights. Therefore, such contracts are void” (translation by author).<sup>254</sup>

246. Civil Code, art. 954.

247. Interview with Milagros Sandoval, *supra* note 186.

248. Ramos, *supra* note 165.

249. See *Ley de Comunidades Nativas y de Desarrollo Agrario de la Selva y de Ceja de Selva*.

250. “We believe that the indigenous peoples own the forest and, consequently, the carbon. It is malicious to aim to disaggregate ecosystems from land-ownership to create benefits for private companies” (translation by author). Interview with an advisor to the *Asociación Interétnica de Desarrollo de la Selva Peruana* (AIDSESP) (July 17, 2012).

251. AIDSESP, *Acuerdo Sobre Territorio, Bosques y REDD+ Indígena en la Región Loreto* (2012).

252. *Id.* “The lack of transparent transactions explains why we are having carbon cowboys. Contracts are confidential; communities are penalized if they disclose the contracts. These contracts are done in English to communities that not even speak Spanish.” (translation by author). Interview with an advisor to AIDSESP, *supra* note 250.

253. Interview with Veronika Espinoza, Peruvian Congresswoman, former member of Gana Peru Political Party (Aug. 13, 2012).

254. Interview with Elena Castro, *supra* note 201.

Article 65 of the 2011 Forest Law addresses the issue of carbon ownership within communal lands by recognizing the exclusive right of indigenous peoples to use the ecosystem services within their lands.

### B. The Case of the Brazil Nuts Concessionaires in Madre de Dios

This section describes one of the first REDD+ projects implemented in Peru: The Case of the Brazil Nuts Concessionaires in Madre de Dios conducted by BAM, a Peruvian company incorporated in 2004. The section is based, in part, on interviews with representatives from BAM, the Federation of Brazil Nuts Producers of Madre de Dios (*Federación de Productores de Castaña de Madre de Dios*—FEPROCAMD), and the Regional Government of Madre de Dios, as well as a site visit to the project area (PA) conducted in July 2012. Additionally, it is based on the information available on BAM’s web page<sup>255</sup> and the corresponding PDD.<sup>256</sup> This case study is presented to illustrate how project developers are proceeding in the absence of PES legislation and how carbon rights are being created by legal interpretation.

#### I. Project Description

Since 2009, BAM has worked with 460-500 Brazil nuts concessionaires (*castañeros*) associated under FEPROCAMD to prevent deforestation and protect biodiversity in 291,566 hectares of forest in Madre de Dios.<sup>257</sup> *Castañeros* are generally low-income individuals or families dependent on subsistence activities and occasionally on timber extraction. Deforestation in the PA is driven by more profitable alternative land uses, such as agriculture, logging, and artisanal mining, in a context of increasing migration attributed to the construction of the IIRSA highway.

The objective of BAM’s project is to empower *castañeros* by enhancing the value of the forest and increasing their revenues from sustainable harvesting of Brazil nuts. Its objective is to deter squatting by putting in place a system of surveillance and patrolling, as well as providing legal counsel to *castañeros*, which will allow them to oppose the threat of deforestation. Without such incentives, it is projected that 34% of the PA would be lost to deforestation in a 31-year period, representing an approximate 64 million avoided tons of CO<sub>2</sub> equivalent (t/CO<sub>2</sub>e).<sup>258</sup>

255. Bosques Amazónicos, *REDD in Concessions of Brazil Nuts in Madre de Dios, Peru* (2012), <http://www.bosques-amazonicos.com/en/our-projects/redd-in-concessions-of-brazil-nuts-in-madre-de-dios-peru> (last visited Feb. 6, 2013).

256. Bosques Amazónicos, *Project Design Document (PDD): REDD Project in Brazil Nut Concessions in Madre de Dios*, Bosques Amazónicos SAC (2012), <https://vcsprojectdatabase2.apx.com/myModule/Interactive.asp?Tab=Projects&a=2&i=868&lat=-11%2E732003&lon=-69%2E541256&tp=1> (last visited Feb. 6, 2013).

257. BAM’s objective is for many more *castañeros* to join the project. Interview with César Huisa, Director of the Natural Resources Programme at the Regional Government of Madre de Dios (July 24, 2012).

258. Bosques Amazónicos, *supra* note 256.

The proposed activities, which are a mixture of economic incentives and governance,<sup>259</sup> have been organized in climate, community, and diversity categories. Among other activities, BAM will implement a Forest Monitoring and Surveillance System, consisting of preventive patrolling of the PA, construction of checkpoints, control of access roads, and the provision of communication equipment destined to protect the forest. Also, an Early Alert System will be put in place to improve the reaction capacity of law enforcement agencies in case of unlawful activities within the PA, such as squatting or fires.<sup>260</sup> The project will also establish a tree nursery to produce 100,000 seedlings per year, which will help to reforest parts of the PA.

Finally, the construction of a new processing facility will create jobs and increase the market value of Brazil nuts, enabling the use of byproducts from the peeling and selection processes to produce high-value marketable commodities. The processing plant will provide more independence to *castañeros*<sup>261</sup> who currently use intermediaries to sell their products and have no direct access to international markets.<sup>262</sup>

## 2. Challenges

BAM's project faces multiple legal challenges. First, *castañeros* were unfamiliar with the concept of ecosystem services or carbon rights prior to the startup of the project.<sup>263</sup> At first *castañeros* thought BAM was trying to take away their concession rights from them.<sup>264</sup> This underscored the need for communication strategies, as trustworthiness is key to the delivery of a project that can last for years.<sup>265</sup> In order to promote the project, both BAM and FEPRO-CAMD visited almost every *castañero* in the area, and used images and charts to explain the nature of ecosystem services in a simple manner.<sup>266</sup>

Second, the boundaries of Brazil nuts concessions were not well-defined prior to the project. The overlapping of concessions has been a frequent source of conflict between neighboring *castañeros*.<sup>267</sup> BAM's legal counselors devote time and resources to help *castañeros* establish more precise boundaries of their concessions and promote the amicable solution of potential conflicts.

Third, while *castañeros* say they stand against mining, deforestation, and agriculture within their concessions,<sup>268</sup> they are sometimes forced economically into logging, especially when prices of Brazil nuts decline.<sup>269</sup> Indeed, the fil-

ing of logging permits to the government is increasing.<sup>270</sup> If uncontrolled, this could threaten the sustainability of the project, particularly given the high levels of corruption and poor law enforcement in Peru.<sup>271</sup>

Finally, many *castañeros* expected immediate cash flows from BAM through the sale of carbon offset credits. This has created some anxiety and fueled opposition to the project<sup>272</sup> although overall *castañeros* are optimistic about the REDD+ project.<sup>273</sup>

## 3. Who Owns Carbon?

An NTFP concession awards *castañeros* the exclusive right to harvest Brazil nuts within a specific geographic area, generally located in state-owned forestlands, for a 40-year period. Most of these concessions are granted to individuals, rather than groups or cooperatives.<sup>274</sup> As noted earlier, the 2000 Forest Law does not expressly grant NTFP concessions title to ecosystem services. The concession contracts stipulate: "In case the concessionaire decides to exploit another forest product, besides Brazil nuts, it must submit to the former Natural Resources Agency (*Instituto Nacional de Recursos Naturales*—INRENA) a Complementary Management Plan" (translation by author). It also states that "the concessionaire acknowledges that the ownership of the area under concession and the natural resources therein correspond to the government" (translation by author). So, how did BAM access title to carbon?

According to BAM's representative, "the Brazil nuts concession agreement says that *castañeros* have title to the fruits within the concession area. And carbon is a fruit"<sup>275</sup> (translation by author). Consistent with this, the PDD establishes that "from the Civil Code and the Natural Resources Act, it can be assumed that the Brazil nuts concessionaires have the right over carbon ownership"<sup>276</sup> (translation by author). Yet, this interpretation is contentious because there is no consensus in Peru on whether ecosystem services are natural resources or the fruits thereof, as stated earlier.

BAM is treating NTFP concessions *as if they were timber concessions*. The argument goes as follows: if timber concessionaires are allowed to use the ecosystem services by amending the Forest Management Plan, why not apply the same rule to NTFP? The PDD states: "Everything related to the carbon market is new in the country, so the concession contracts so far made no mention of carbon as a resource. However, because of the new projects being developed, with BAM's help, concessionaires are presenting supplementary plans to Forest Management Plan" (translation by author). This interpretation is problematic, as the 2000 Forest Law does not confer this right to NTFP

259. Interview with Jorge Torres, *supra* note 222.

260. *Id.*

261. *Id.*

262. Interview with David Asturima, *supra* note 222.

263. Interview with Jorge Torres, *supra* note 222; Interview with David Asturima, *supra* note 222.

264. Interview with César Badillo, BAM's employee (July 24, 2012).

265. Davide Pettenella & Lucio Brotto, *Governance Features for Successful REDD+ Projects Organization*, FOREST POL'Y & ECON. (2012).

266. Interview with David Asturima, *supra* note 222.

267. Interview with Jorge Torres, *supra* note 222.

268. Interview with David Asturima, *supra* note 222.

269. Interview with César Badillo, *supra* note 264.

270. *Id.*

271. Peru ranks 78 in the Corruption Perceptions Index 2010 prepared by Transparency International (2012).

272. Interview with César Badillo, *supra* note 264.

273. Interview with David Asturima, *supra* note 222.

274. Interview with César Badillo, *supra* note 264.

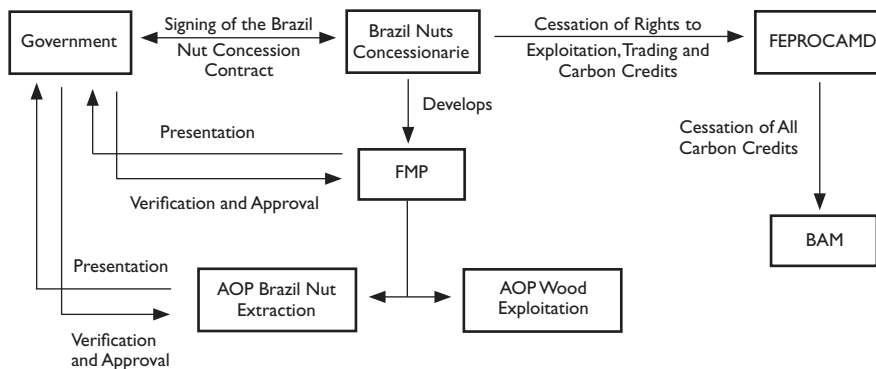
275. Interview with Jorge Torres, *supra* note 222.

276. Bosques Amazónicos, *supra* note 255.

concessionaires. Although one could question the reasonability of the law, BAM's interpretation purports to add a right that the 2000 Forest Law does not grant to NTFP concessionaires. Nonetheless, the 2011 Forest Law will fix this problem once it enters into force.

BAM's carbon transaction is structured as follows: (i) a NTFP Concession Contract between *castañeros* and the government to use Brazil Nuts grants access to carbon; (ii) an Assignment of Rights Contract by which each *castañero* transfers her individual carbon ownership to FEPROCAMD; and (iii) an Investment Agreement between BAM and FEPROCAMD, by which the latter transfers all carbon ownership to BAM for commercialization (see Figure 1).<sup>277</sup> This scheme allows BAM to negotiate with an authorized intermediate rather than having to deal individually with hundreds of *castañeros*.<sup>278</sup>

**Figure 1: Flowchart of Carbon Transactions**



These agreements are not included in the PDD.<sup>279</sup> According to Peña, who was granted access to them, in the Assignment Contract, the parties recognize different legal scenarios for the transfer of carbon rights, one of them being the eventual passing of a PES law by the government.<sup>280</sup> This lack of clarity illustrates the fragility of such carbon rights: BAM negotiated over rights that have no legal recognition in Peru.

In conclusion, BAM's title to carbon is contingent. Although the project has been validated by the Climate, Community, and Biodiversity Alliance (CCBA), BAM expects that once the new 2011 Forest Law enters into force, there will not be any doubts as regards her right to carbon.<sup>286</sup>

### III. Discussion: Building Carbon Rights Infrastructure in Peru

#### A. The Emergence of Carbon Rights

Contrary to what one may expect, the absence of PES legislation in Peru has not deterred the emergence and development of REDD+ projects. On the contrary, REDD+ projects are booming, as shown by the 40 early initiatives currently under development and the expectation that many others will materialize soon. Yet, virtually all persons interviewed for this Article agree that the absence of a clear legal framework has increased the transaction costs, risks, and timing of their endeavors.<sup>281</sup> As BAM's representative commented: "A PES law would have avoided having to demonstrate who owns carbon rights; it would have facilitated our transactions"<sup>282</sup> (translation by author). Without a PES law, REDD+ project developers are acting on a case-by-case basis, based on ad hoc legal advice to adapt the existing rules and fill the existing legal vacuums.<sup>283</sup> The outcome of this approach has been heterogeneous and disordered transactions.<sup>284</sup>

Project developers in Peru hold weak or contingent title to carbon. Such carbon rights are based on opportunistic interpretations of current laws. Even if voluntary certification companies such as CCBA and the Verified Carbon Standard (VCS) have certified certain REDD+ projects located in Peru, this does not mean that Peruvian authorities have endorsed the legal interpretations used therein. Although voluntary certification plays a critical role, the confirmation of existing carbon transactions would have to occur either through more explicit contracts, such as the one CI claims to be negotiating with SERNANP, or by legislation that validates previous REDD+ carbon transactions.

To be sure, there are some cases in which carbon rights are clearer and confirmation from the government could be reasonably expected, as evidenced by the new 2011 Forest Law regulations. Timber concessionaires, for instance, can anticipate the validation of their carbon rights as the 2000 Forest Law provides a special solution for them. Also, ratification of carbon rights stemming from NPA under the administration of NGOs seems less contentious because NGOs are not permitted to make a profit from carbon

277. The Investment Commitment Agreement creates a new legal vehicle (*newco*) in order to commercialize the carbon offset credits from the project, in which FEPROCAMD would have 70% interest and BAM 30%. Peña, *supra* note 218.

278. Peña, *supra* note 191.

279. Bosques Amazónicos, Project Design Document (PDD): REDD Project in Brazil Nut Concessions in Madre de Dios (2012).

280. Peña, *supra* note 191.

281. Interview with Milagros Sandoval, *supra* note 186; Interview with Tatiana Pequeño, *supra* note 217; Interview with Jorge Torres, *supra* note 222; Interview with Carlos Sánchez, *supra* note 232; Interview with Javier Perla, representative of Libelula, an environmental consultancy (July 9, 2012).

282. Interview with Jorge Torres, *supra* note 222.

283. Sandoval, *supra* note 106.

284. Interview with Daniela Diez-Canseco, Employee at Fondo Nacional del Ambiente (FONAM) (July 20, 2012).



transactions and must reinvest REDD+ money back into the park. This is critical when dealing with the transfer of state-owned assets because constituents are sensitive to cases of “givings.”<sup>285</sup> For other REDD+ players, the clarity of their title to carbon is debatable. Even though the project developer’s creativity is worth underscoring, carbon rights in Peru are still not well-defined, transferable, and enforceable property rights.

Despite these flaws, some national companies with strong social responsibility programs claim to have acquired carbon offset credits from REDD+ initiatives.<sup>286</sup> In this regard, Daniela Diez Canseco from the National Environmental Fund (Fondo Nacional del Ambiente—FONAM) explains that these operations are taking place because “national buyers have less stringent standards over the clarity or strength of the carbon offset credits they buy”<sup>287</sup> (translation by author). Yet, she asserts that as soon as national companies become more demanding or project developers begin placing their credits in the international market, they will require “stronger” carbon rights.<sup>288</sup> Differently put, international demand for REDD+ will push for the creation of well-defined, transferable, and enforceable carbon rights in Peru. As international demand for REDD+ grows, carbon sinks will become more valuable and thus project developers will push for more-defined carbon rights, following the “evolutionist” impulse of property rights described earlier.

Nonetheless, the creation of EPRs is expensive and politically costly. At least theoretically, the emergence of carbon rights in Peru may be delayed due to the lack of modernist rights throughout the country.<sup>289</sup> Indeed, property rights in rural areas are not adequately recorded in land registration systems,<sup>290</sup> suggesting the necessity of easy, safe, and cheap formalization processes.<sup>291</sup>

Additionally, there is little coordination among different government entities in charge of granting rights to natural resources, leading to overlapping land uses. As a result, in the same tract of land, the government could create an NPA and award title to land to peasant families, forest concessions, oil and gas contracts, and mining rights. Even though REDD+ money is important, the potential it has to solve these land tenure issues should not be overestimated.<sup>292</sup> Resolving awaiting land claims and formalizing unrecorded land rights hinder investment projects in such areas, including REDD+.

Although the passing of explicit legislation would not solve all outstanding problems, it is critical to clearly

define and allocate carbon rights. Opportunistic interpretations of existing laws have so far led to disorder and inconsistency in REDD+ initiatives. Clarity over carbon ownership would offer more security to investors by creating uncontested rights that can be traded widely, therefore reducing investment risks. Such legislation needs to be accompanied with a policy that sets out the goals and tools to achieve REDD+.<sup>293</sup>

## B. PES Draft Legislation

Since 2007, there have been numerous attempts to pass the first PES legislation in Peru. The most recent attempt was *Proyecto de Ley 786-2011/CR*, prepared and approved by the Commission of Indigenous, Native, and Afro-Peruvian Peoples, Environment and Ecology Affairs of the Peruvian Congress. This draft legislation was submitted during the legislative period August 2011-July 2012, but it has not been voted by Congress yet. Congresswoman Mendoza attributes this to two factors. First, the debate in the Commission was very narrow and did not embrace indigenous peoples, who should have a say in the activities that are undertaken within their forestlands. Second, the *Proyecto de Ley* is not very clear as to the mechanisms to promote PES.<sup>294</sup>

The Ministry of Environment acknowledges that the *Proyecto de Ley* needs more public discussion and precision.<sup>295</sup> Indigenous leaders have reacted fiercely to it, so more time to consult regarding the law is necessary.<sup>296</sup> Congressional-level discussions are currently stalled. According to Congresswoman Espinoza, the passing of this legislation is a priority and will likely occur during the 2012-2013 period.<sup>297</sup> In parallel, the Ministry of Environment is currently preparing a new draft legislation to be submitted to Congress.<sup>298</sup>

The *Proyecto de Ley* does provide an explicit answer to the question of who owns carbon in Peru and would at least implicitly confirm the manner in which project developers have been transacting carbon so far. Next, I discuss its most relevant features.

First, unlike previous legislative initiatives, the *Proyecto de Ley* does not directly regulate ecosystem services, but focuses on *mechanisms* to promote and finance PES schemes. According to the Ministry of Environment, this was done purposefully to avoid further complications.<sup>299</sup> The problem with this approach is that the *Proyecto de Ley* does not aim to solve the existing ambiguity regarding the ownership, nature, and extent of ecosystem ser-

285. Physical “givings” entail the granting of a property interest (i.e., cattle grazing, or mineral or logging rights on public lands) to a private person. They are problematic because the recipients are not charged or taxed, raising issues of justice and efficiency. Abraham Bell & Gideon Parchomovsky, *Givings*, 111 *YALE L.J.* 549-50 (2001-2002).

286. Interview with Javier Perla, *supra* note 281; Interview with Daniela Diez-Canseco, *supra* note 284.

287. Interview with Daniela Diez-Canseco, *supra* note 284.

288. *Id.*

289. Che Piu & García, *supra* note 179.

290. DE SOTO, *supra* note 28.

291. *Id.*

292. Che Piu & García, *supra* note 179.

293. Interview with Gustavo Zambrano, Director of the Indigenous National Institute (*Instituto Nacional de Desarrollo de Pueblos Andinos, Amazónicos y Afroperuanos—INDEPA*), at the time of the interview, Ministry of Culture (July 16, 2012).

294. Interview with Veronika Espinoza, *supra* note 253.

295. Interview with Elena Castro, *supra* note 201.

296. *Id.*

297. Interview with Veronika Espinoza, *supra* note 253.

298. Interview with Milagros Sandoval, *supra* note 186.

299. Interview with Elena Castro, *supra* note 201.

vices.<sup>300</sup> What is more, it does not purport to harmonize the existing framework, which is as important as passing this new legislation.<sup>301</sup>

Second, the *Proyecto de Ley* treats ecosystem services as natural resources, requiring an authorization to access them, as well as payment of royalties. Title to carbon is awarded to whoever holds a right to use a forest product or forest parcel.<sup>302</sup> Other than with respect to indigenous peoples, this system does not consider informal users of forests. Moreover, the draft legislation does not address cases of overlapping rights. For instance, who owns carbon within an NPA where there are also NTFP concessionaires?

Third, the *Proyecto de Ley* lacks an interim regime. Lawmakers should pay close attention to transitory or interim regimes, honoring carbon transactions and contracts previously executed.<sup>303</sup> Some authors recommend allowing a preliminary trial phase to learn from pilot projects and refine the national legislation accordingly.<sup>304</sup> This is not the approach that the *Proyecto de Ley* adopts. According to the Ministry of Environment, the future PES law would not ignore previous carbon transactions: “If anything, it would build from such experiences”<sup>305</sup> (translation by author). For most interviewees, the risk of carbon nationalization, as occurred in New Zealand, is nonexistent.<sup>306</sup> The nationalization of carbon would be in conflict with the scale that Peru has chosen for REDD+, the nested approach. However, it is still uncertain in which cases or under what circumstances the government would validate legal interpretations that have been used to transact carbon.

Fourth, the draft legislation does not provide any tax benefits for those putting forward PES schemes. Patricia Iturregui, a climate change expert, recommends exempting the first 10 REDD+ initiatives from paying taxes in order to start a positive domino effect.<sup>307</sup> Although some reforestation activities already receive tax benefits, a good PES policy would aim to harmonize tax benefits across different forest conservation projects.

Fifth, there is some controversy among local actors regarding the roles of the Ministry of Environment (the climate change authority) and the Ministry of Agriculture (the forest authority). Further, the *Proyecto de Ley* does not articulate the role of regional governments, even though they play a key role in land organization<sup>308</sup> and the promotion of investments within their jurisdictions.<sup>309</sup> Regional governments face budget problems to tackle deforestation,

so REDD+ is perceived as a good way to obtain funding for forest conservation programs.<sup>310</sup>

Sixth, the *Proyecto de Ley* stipulates that the Ministry of Environment can only register projects that are “additional,” that is to say, that are beyond mere compliance of legal obligations. This restriction is challenging because it sets the threshold too high. For instance, BAM’s project requires that Brazil nuts concessionaires not to change the use of their forests to agriculture, grazing, or mining; in short, it compensates them to comply with the law.<sup>311</sup>

Finally, the *Proyecto de Ley* creates a registry of REDD+ initiatives in order to give more transparency to the process.<sup>312</sup> To date, projects are conducted without an official record of the parties and location of the initiatives. The Ministry of Environment is currently working on the creation of such a registry, working ahead of Congress.<sup>313</sup> One positive example that could be built on by the government is *Grupo REDD+*, a panel of public and private organizations involved in REDD+ mechanisms in Peru. *Grupo REDD+* is the first attempt to provide transparency to REDD+ early initiatives.<sup>314</sup> Members meet regularly to share their experiences, debate new developments, and provide details about their projects.<sup>315</sup>

Overall, the *Proyecto de Ley* is a positive step toward the approval of the first ever PES legislation in Peru. More public debate is needed to provide this draft legislation with the necessary legitimacy to be effective and to address shortcomings of the proposal, including those noted above.

#### IV. Conclusions

As with many other Latin American countries, Peru lacks specific regulation that clarifies who owns carbon rights. Even though this has not prevented REDD+ early initiatives, project developers invest numerous time and resources to figure out carbon ownership, all of which render carbon transactions complex, onerous, and inconsistent. Carbon rights emerge through opportunistic legal interpretations of existing laws that have not been validated by the official authorities. Although confirmation of carbon rights could be reasonably expected in some projects, especially in light of the future 2011 Forest Law, overall carbon ownership is not obvious.

To date, Congress has not been successful in passing PES legislation. The debate has not received enough attention or discussion. Project developers must recognize the potential of REDD+ to impinge on the livelihoods of forest communities and indigenous peoples and therefore foster

300. Interview with Milagros Sandoval, *supra* note 186.

301. Casas, *supra* note 167; Sandoval, *supra* note 186.

302. Interview with Elena Castro, *supra* note 201.

303. TAKACS, *supra* note 99.

304. Costenbender, *supra* note 87.

305. Interview with Elena Castro, *supra* note 201.

306. “We see very unlikely a scenario of carbon rights nationalization. To say that the forest users do not own carbon challenges the logic and changes incentives.” (translation by author). Interview with Jorge Torres, *supra* note 222.

307. Interview with Patricia Iturregui, Climate Change Specialist at the British Embassy in Lima (July 17, 2012).

308. Interview with Elena Castro, *supra* note 201; Interview with Veronika Espinoza, *supra* note 253.

309. Interview with Daniela Diez-Canseco, *supra* note 284.

310. Interview with César Huisa, Director of the Natural Resources Programme at the Regional Government of Madre de Dios (July 24, 2012).

311. “There is nothing *extra-legal* we are demanding. Our project facilitates the fulfillment of legal obligations and the sustainable use of forests.” (translation by author). Interview with Jorge Torres, *supra* note 222.

312. Interview with Elena Castro, *supra* note 201.

313. *Id.*

314. Galmez & Kometter, *supra* note 182; Interview with Tatiana Pequeño, *supra* note 217.

315. Interview with Tatiana Pequeño, *supra* note 217. See also <http://www.gruporeddperu.net/>.

a serious and broad debate of the issues. As a first step, the Ministry of Environment should implement a registry of REDD+ projects to prevent cases of carbon cowboys; promote the creation of regional REDD+ panels, building on the positive experience of *Grupo REDD+*; and campaign for the adoption of social safeguards. These efforts would provide the transparency and accountability that forest and indigenous communities are asking for.

Finally, although REDD+ cannot resolve all historical land use and property rights conflicts, it has illustrated the necessity to solve pending indigenous claims, formalize unrecognized property rights, and revise land use policies that foster overlapping and conflicting land uses. In other words, REDD+ has awakened the need to build “modernist” property infrastructure in the country. This is a precondition not only for the success of REDD+, but also for any natural resource project in the Peruvian Amazon.