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January 20, 2012

John Nickerson
Director of Forestry
Climate Action Reserve
523 W. Sixth Street, Suite 428
Los Angeles, CA 90014

Re: Comments on Mexico Forest Protocol, Draft for Public Review, Version 1.0

Dear Mr. Nickerson:

The Environmental Law Clinic, part of the Mills Legal Clinic at Stanford Law School, submits these comments to the Climate Action Reserve (the "Reserve") on behalf of Dr. Michael Wara, Associate Professor at Stanford Law School, regarding the Mexico Forest Protocol, Draft for Public Review, Version 1.0 (the "Protocol").

We appreciate the opportunity to share our concerns with respect to the draft Protocol, and hope our views will contribute to the development of high-quality offset protocols. We also wish to recognize and commend the significant effort the Reserve, the Governors' Climate and Forests Task Force, the Mexican Government, the California Air Resources Board, and other members of the Protocol's working group have put into the development of the draft Protocol. In particular, we applaud the working group's attention to social and economic equity issues in the details of the methodology.

Despite the work completed to date, we write to express three serious concerns about the design and completeness of the Protocol. First, we argue the basic architecture of the Protocol does not meet the Reserve's own additionality criterion. Second, the Protocol does not explain how it will interact with an existing forest conservation payment program in Mexico, afforestation protocols under the Clean Development Mechanism, and the UNFCCC's national greenhouse gas inventory system. Third, key elements of the Protocol's methodology are not included in the draft for public review, and must be disclosed if there is to be a meaningful public comment process. As a result, we strongly recommend that the Reserve revise the Protocol and offer a subsequent public comment period prior to submission to the Board for approval.

We are particularly concerned because the Protocol represents a potentially ground breaking precedent for state and international climate policy. The California Air Resources Board has authorized a significant volume of offset credits from international forestry, permitting as many

as 71 million tons by 2020.[1] Therefore, this Protocol—and any successors partnering with other countries' forest sectors—could play a central role in the overall California carbon market, the Western Climate Initiative, and a second phase of the Regional Greenhouse Gas Initiative. In addition, were California or the WCI to successfully link to other emissions trading schemes (such as the European Union Emissions Trading Scheme), this Protocol would likely have indirect effects on carbon price and domestic abatement there as well.

We believe the ultimate success of the Protocol will depend on its environmental integrity. If the Protocol does not produce high-quality offsets, buyers in the California carbon market—who are ultimately liable for offset reversals[2]—will hesitate to participate. Although the draft Protocol is clearly the product of much thought and effort, we believe it is not yet ready for Reserve Board approval. For the reasons articulated below, we strongly recommend additional work by the Reserve and the working group as well as an additional round of public comment to ensure the Protocol meets the highest standards for environmental integrity.

1. Additionality. The draft Protocol design fails to address in any way the likelihood of adverse selection of projects, raising serious programmatic concerns about project additionality.

1.1. The draft Protocol does not satisfy the Reserve's additionality criterion.

The design of the draft Protocol fails to satisfy the Reserve's additionality criterion, due to the substantial likelihood of adverse project selection under the proposed rules. The Reserve's Program Manual states that all protocols should set performance standards so that the "large majority" of qualifying projects are "unlikely" to have been implemented for reasons that exist independent of the protocol.[3] In contrast, the draft Protocol's performance test does not include any meaningful evaluation of the external drivers of landowner behavior. Under the draft Protocol, project activities are considered additional simply if they produce fewer greenhouse gas emissions than the baseline scenario;[4] however, the baseline scenario is not dependent on project-level activities or incentives.[5] Therefore, the draft Protocol never addresses the requisite additionality criterion.

Releasing a complete version of the draft Protocol, including the regional parameters for baseline scenarios and leakage risk factors that are missing from the current version, will not resolve the problem. Adverse selection arises from the architecture of the draft Protocol, which envisions the use of (1) regional baselines and (2) regional leakage risk factors, but (3) project-

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1 Sectoral offset credits, including forestry offset credits, may be used to comply with up to 2% of a covered entity's obligations during the first two compliance periods, and up to 4% in subsequent compliance periods. 17 C.C.R. § 95854. Based on the expected size of the statewide cap, this implies as many as 71 million tons from forestry credits by 2020.

2 *See generally* 17 C.C.R. § 95985.

3 Climate Action Reserve, Program Manual (Oct. 26, 2011) § 2.4.1.2 (the "Program Manual").

4 Climate Action Reserve, Mexico Forest Protocol, Draft for Public Review, Version 1.0 (Nov. 11, 2011) (the "Protocol") § 4.2 ("Project activities are considered additional to the extent they produce GHG reductions and removals in excess of those that would have occurred under a 'Business As Usual' scenario"). This standard includes a consideration of leakage. *Id.* § 10.

5 *Id.* § 9.1 (establishing the baseline scenario on the basis of a linear extrapolation of the current carbon stock trends in each of 192 Forestry Management Units [UMAFORs]). The Reserve has not yet released these trend data, but has specified that each Forestry Management Unit will have a single baseline trend. Therefore, they contain no consideration of project-level activities or incentives.

level performance evaluation.[6] These mismatched geographic scales create the opportunity for adverse selection, whereby projects on lands that would not have experienced carbon stock degradation in the absence of the offset program preferentially opt-in to the protocol.[7] Absent a consideration of project-level incentives, it is impossible to tell which landowners have elected to participate in the protocol because their existing aspirations for land use exceed the regional baseline, versus those who are motivated by the offset incentive to undertake real and additional mitigation. This result directly contradicts the Reserve's affirmative requirement that protocol standards produces a "large majority" of participating projects that are motivated only in the presence of the offset's financial incentive.

Because of these concerns, we urge the Reserve to revise its basic approach to the Mexico Forest Protocol. In adopting its standard offsetting credit approach to protocol development, the Reserve has already acknowledged that it will either (1) incorporate "project-specific methods or variables as appropriate" or (2) limit the scope of protocols to activities "for which standardized approaches are feasible."[8] As it currently stands, however, the standardized approach in the draft Protocol creates significant loopholes that permit adverse project selection to dominate participation. Because the Protocol does not satisfy the Reserve's additionality critierion, the Reserve should amend the draft Protocol to address the problem of adverse selection.

1.2. Adverse selection is most problematic in a developing country context.

The risk of adverse selection is greater in a developing country context, requiring additional scrutiny in offset protocol design. We recognize that the Reserve's policy is to minimize transaction costs by designing standardized methodologies that avoid project-level evaluation.[9] We are also aware that the California Air Resources Board has approved Reserve methodologies containing some of the features we criticize here. For example, the ARB-approved U.S. Forest Protocol includes standardized leakage risk factors, which are calculated without making an individualized assessment of project-level motivations.[10] Nevertheless, differences between land use drivers in the United States and Mexico (or other developing countries) justify a separate analysis of protocol design elements for two reasons.

First, forestry sectors in the two countries face radically different economic and social drivers. In the United States, land use patterns are well established. The American economy has grown slowly in recent years, and most U.S. forests are either managed as natural habitat or as commercial plantations producing paper and pulp for commodities markets. In contrast, Mexican land use patterns are significantly more dynamic, and subject to additional pressures. The Mexican economy is growing much faster and exhibits greater growth rate volatility than the U.S. economy, placing pressure on forests for agriculture, forest products, and other uses. Forest

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6 *Id.*; *Id.* § 10.1 (describing four leakage risk factors determined for each Forestry Management Unit); *Id.* § 7.1 (calculating net greenhouse gas reductions on the basis of project-level onsite carbon).

7 Under the draft Protocol, any landowner whose existing land use plans would result in fewer emissions than the baseline scenario in his or her region would qualify for the credit, assuming the landowner either has or prepares a forest management plan for the Mexican Ministry of Environment and Natural Resources (SEMARNAT). *Id.* § 3.5 (requiring a forest management plan as a condition of eligibility). The draft Protocol does not discuss how commonplace or effective these plans are; the adverse selection concerns are greatest when plans are absent or in places where plans do not modify landowner behavior.

8 Program Manual § 2.1.1.

9 *Id.*

10 California Environmental Protection Agency, Air Resources Board, Compliance Offset Protocol for U.S. Forest Projects (adopted Oct. 20, 2011) § 6.1.5 (establishing standardized leakage risk factors).

ownership in Mexico is more diverse, and includes a variety of communal land ownership systems. As a result, the social and economic pressures on forests are far more complex and arguably greater in Mexico, where forests are experiencing a more rapid and variable rate of change than in the United States.

Second, evidence from forest conservation efforts in developing countries highlights the difficulty of achieving programmatic additionality.[11] A study reviewing Costa Rica's forest conservation program found that only 0.4% of protected land would have been deforested per year in the absence of conservation payments, largely due to the fact that lands not economically or geographically suitable for alternate uses dominated program enrollment.[12] A different research group found that, of the lands protected in Costa Rica between 1960 and 1997, about 10% would have been deforested in the absence of land use protections.[13] These results would not satisfy the Reserve's "large majority" of projects additionality standard.[14]

A handful of studies address adverse selection and additionality concerns specifically for Mexican forestry programs. One study examining forest conservation incentives in Mexico found that 40% of *ejidos* did not experience any deforestation during a seven-year study period,[15] demonstrating a necessary condition for adverse selection. Thus, a significant number of *ejidos* do not experience deforestation as a baseline matter, but may be located in Forest Management Units that have baselines with deforestation. A study of Mexico's forest conservation incentive program, *Pago por Servicios Ambientales Hidrológico* ("PSAH"), found that participation reduced the rate of deforestation by 1.2% of forested land per year, compared to control groups where deforestation occurred at 2.4% per year.[16] While Mexico's forestry conservation program balances multiple objectives—and may ultimately be judged successful on several fronts—these numbers fall well short of the Reserve's additionality standards for protocol development. They also present a challenge to the Protocol, as regional baselines in the Protocol will mix PSAH-protected lands with other lands subject to far greater deforestation pressure.

In responding to our concerns about programmatic additionality, we ask the Reserve to address the available academic research on forest conservation program effectiveness in Mexico, and ideally, the lessons drawn from experience throughout the developing world.

1.3. Potential solutions.

We ask the Reserve to revise the draft Protocol and adopt one or more of the following methodologies: (1) project-level leakage risk factors, (2) project-level baselines, or (3) regional performance evaluation (*i.e.*, crediting the entire region on its aggregate performance, rather than

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[11] For a recent overview, *see* Allen Blackman, *Will REDD Really Be Cheap?* (Resources for the Future Policy Commentary, Feb. 5, 2010), available at: http://www.rff.org/Publications/WPC/Pages/Will-REDD-Really-Be-Cheap.aspx.

[12] Juan Robalino et al., *Deforestation Impacts of Ecosystem Services Payments* 12 (Environment for Development and Resources for the Future working paper EfD DP 08-24, Aug. 2008), available at: http://www.rff.org/rff/documents/efd-dp-08-24.pdf.

[13] Kwaw S. Andam et al., *Measuring the effectiveness of protected area networks in reducing deforestation*, 105 PROC. NAT'L ACAD. SCI. 16089, 16089 (2008).

[14] Program Manual § 2.4.1.2.

[15] Jennifer Alix-Garcia et al., *The role of deforestation risk and calibrated compensation in designing payments for environmental services*, 13 ENV'T & DEV. ECON. 375, 382 (2008).

[16] Jennifer Alix-Garcia et al., *Forest Conservation and Slippage: Evidence from Mexico's National Payments for Ecosystem Services Program* 5 (working paper dated Nov. 23, 2011), available at: https://www.amherst.edu/people/facstaff/ksims/research.

only those landowners who opt-in). Alternatively, amending eligibility requirements may achieve similar ends.

The first option would require evaluating how the decision to protect an individual parcel of land would affect deforestation and degradation activities on nearby lands. Similarly, the second option would entail estimating a baseline for each project. Either of these options would require significantly more attention to the incentives facing individual landowners, raising transaction costs. If properly implemented, however, these options would address adverse selection, satisfying the Reserve's additionality criterion.

The third option would take a different approach, considering each Forestry Management Unit (UMAFOR) in aggregate, and crediting the entire region's performance against its regional baseline. This design would reduce the adverse selection problem by moving the level of analysis away from individual projects, where additionality concerns dominate, and towards the regional level, reducing leakage and adverse selection concerns. Although this approach avoids transaction costs associated with project-level analysis, the Reserve, no doubt in collaboration with the Mexican federal and state governments and CONAFOR, would have to develop (1) a method to distribute payments to landowners within the region who undertake mitigation or conservation activities, and (2) a method to monitor forest cover in non-participating lands. Despite the challenge, it may be possible to identify a few candidate Forestry Management Units where expected Protocol participation is high to serve as pilot models for a regional approach. We recognize that a truly sectoral approach raises its own difficulties, but these difficulties may be overcome by starting small and building confidence through repeated success.

Alternatively, the Reserve could amend the Protocol's eligibility requirements. Were the Protocol available only to those parcels of land with preexisting forest management plans—and not to those which create one in anticipation of satisfying the Protocol—this would go some way towards addressing the adverse selection problem. Such landowners have already established their own baselines, and their eligibility would be contingent on a prior decision; this would resolve the adverse selection and additionality problems, presuming the Protocol properly accounted for leakage.

2. Additionality. The draft Protocol fails to consider "stacking" complications arising from interaction with existing Mexican forest conservation payment schemes and approved afforestation protocols under the Clean Development Mechanism.

The draft Protocol raises significant additionality concerns because it does not explicitly discuss or evaluate how a REDD-based carbon offsets regime would interact with existing offset and conservation payment schemes.[17] Mexico has a program known as *Pago por Servicios Ambientales Hidrológico* ("PSAH"), which sets a fixed payment scheme for forest conservation lands. By the end of 2009, PSAH had over 2.27 million hectares enrolled in Mexico; participating landowners sign renewable, five-year contracts.[18] Although we have not reviewed the PSAH program in detail, we understand it to be a fixed payment scheme, with incentives set at the expected average opportunity cost of land conversion on a flat, per-hectare basis.[19] As a

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[17] This is in contrast to the recently adopted Rice Management Protocol, which explicitly considered stacking and allowed for it on a limited basis, and to plans for the Nutrient Management Protocol, in which stacking will be explicitly addressed in the protocol.

[18] Jennifer Alix-Garcia et al., *supra* note 16, at 4.

[19] *Id.*

result, it is not clear that land parcels participating in the PSAH program are precluded from enrolling in the Protocol.

If PSAH requires participating land to conserve forests in a legally binding way, then presumably PSAH obligations would be included in Protocol project baselines per the legal requirements test.[20] This interaction would be much more complicated, however, if PSAH only bound landowners to conserve existing forest stock. In this case, could landowners also apply under the Protocol for afforestation? Moreover, PSAH operates on a renewable five-year contract, whereas the Protocol envisions a 20-year crediting period followed by a 100-year monitoring period,[21] with the added complication that *ejido* and communal lands may not contract for more than 30-year periods.[22] If landowners are eligible for both programs, are there any complications from the different timescales of legal commitments? We are aware of similar issues of temporal stacking arising in the Reserve's Rice Management Protocol and Nutrient Management Protocol development, and are concerned that they have not been addressed here.

If landowners participating in the PSAH program (or others like it) may also participate in the Protocol, the Reserve should review all applicable conservation incentive programs operating in Mexico and analyze how "stacking" the Protocol on top of these programs would affect additionality.[23] If not, the Reserve should explicitly clarify as much in the Protocol.

In addition to the PSAH program, landowners in Mexico are eligible for afforestation credits under the Clean Development Mechanism.[24] As with the PSAH program, we ask the Reserve to either perform a temporal stacking analysis or disclaim the option for landowners to apply for credits under both the CDM and Reserve Protocol.

3. General. The draft Protocol is incomplete and does not permit a thorough review of its data and methods, contradicting the Climate Action Reserve's governance principles as stated in the CAR Program Manual.

A thorough review of Version 1.0 of the Mexico Forest Protocol is impossible at this time, because the Protocol is incomplete in key sections, contradicting the Reserve's internal policies. The Reserve has committed itself to a "rigorous, open, and comprehensive process" for protocol development.[25] Once completed, all Reserve protocols must adhere to general project accounting principles, including transparency.[26] Crucially, approved protocols should provide "[s]ufficient information . . . to allow reviewers and stakeholders to make decisions about the credibility and reliability of GHG claims with reasonable confidence."[27] As discussed below, however, the draft Protocol does not disclose any of the parameters used to generate baseline scenarios, nor any of the parameters that establish leakage risk factors, among other matters. Because these data are

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20 Protocol § 4.1.
21 *Id.* § 3.10.
22 *Id.* § 3.11.
23 For an overview of "stacking" analysis, *see* Nicholas Bianco, *Stacking Payments for Ecosystem Services* (World Resources Institute Fact Sheet, Nov. 2009), available at: http://pdf.wri.org/factsheets/factsheet_stacking_payments_for_ecosystem_services.pdf.
24 *See* United Nations Framework Convention on Climate Change, Clean Development Mechanism, Approved Large Scale A/R Methodologies, available at: http://cdm.unfccc.int/methodologies/ARmethodologies/approved.
25 Program Manual § 1.1.
26 *Id.* § 2.
27 *Id.* § 2.2 (defining the "Transparency" accounting principle).

crucial to evaluating the credibility of the draft Protocol's methodology, the draft Protocol is incomplete and requires further work followed by a second round of public comments.

Substantial portions of the draft Protocol are incomplete, including but not limited to the following provisions:

3.1. Regional Baseline Data. The draft Protocol lacks regional baseline data.[28] These data are essential to evaluating the environmental credibility of the draft Protocol.

3.2. Regional Leakage Risk Factors. The draft Protocol lacks regional leakage risk factors.[29] In addition, leakage mitigation options and requirements for earning leakage mitigation adjustments are left undefined. These data are essential to evaluating the additionality of projects submitted under the Protocol.

3.3. Management Risk Factors. The draft Protocol includes an assessment of "management risk," which would be provided by a model developed by the Mexican Institute of National Ecology,[30] but does not provide any numbers or an explanation of what they represent above and beyond the regional leakage risk factors.

3.4. Project Implementation Agreement. The draft Protocol does not include a model contract landowners would sign with the Reserve.[31] A model contract is extremely important for evaluating the enforceability of the contract with various landowner categories, especially *ejidos*, which do not have the legal capacity to contract for more than 30 years at a time, and for which contracts may not attach to land titles.[32] The title and contracting issues for *ejidos* necessitate a thorough review of the project's legal instrument because *ejidos* contain 80% of Mexican forests.[33]

3.5. Interaction with International Accounting Regimes. The draft Protocol does not evaluate or discuss its implications for international carbon accounting systems. Under the UNFCCC accounting framework, which country would get credit for changes to land use emissions arising from forest sector projects implemented under the Protocol? How might projects be affected if Mexico were to accept a binding emissions limit under a future international agreement?

3.6. Default Carbon Estimates for Certain Strata. The Protocol will assign certain strata default carbon estimates from a reference file.[34] This file is not included in the draft Protocol. Because these default estimates are not evaluated at the programmatic level for statistical accuracy across projects,[35] it is especially important that they be disclosed for public review and comment prior to Protocol approval.

3.7. Tree Inventory Methods. The draft Protocol does not include the methods for calculating the volume of each tree, or the biomass contents of trees.[36] Similarly, the

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28 Protocol § 9.1.1; *Id.* at Appendix B.
29 *Id.* § 10.1; *see* Worksheet 10.1.
30 *Id.* § 11.2.4.1.2.
31 *Id.* § 3.11.
32 *Id.* § 11.2.4.1.1; *see* Table 11.1 (evaluating when project contracts may attach to land title).
33 Jennifer Alix-Garcia et al., *supra* note 15, at 376.
34 Protocol § 8.2.
35 *Id.* § 8.2.2.
36 *Id.*; *see* Table 8.10, Steps 1-2.

draft Protocol lacks a method for calculating the project-level inventory sampling error.[37] These calculations form the basis for each project's carbon inventory and are an essential part of the methodology.

3.8. Buffer Pool Contributions. The draft Protocol does not include risk parameters for natural disturbances. These parameters determine the size and sufficiency of the buffer pool,[38] and are therefore an important part of evaluating the overall quality of the Protocol.

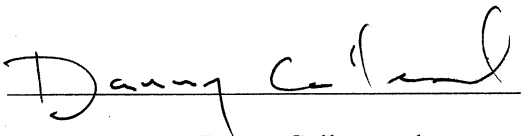
3.9. Verification Processes. The draft Protocol does not explain who will verify projects, how desk audits and other automatic verification procedures will proceed, or what verification activities will be necessary.[39]

Although we recognize the complexity of the Protocol, as well as the effort already expended in its development, the lack of detail at this stage is troubling in light of the target timeline for seeking board approval. According to your website, the Reserve intends to finalize the Protocol by May 2012.[40] This timeframe is incompatible with a public review of a complete version of the draft Protocol. Therefore, we respectfully ask the Reserve to (1) revise the draft Protocol to address the additionality concerns raised above, (2) incorporate all of the missing information detailed above, including any relevant stacking analysis, and (3) offer a second opportunity for public comments on the complete draft Protocol, prior to seeking Reserve Board approval.

We appreciate the opportunity to comment on the Protocol and look forward to working with the Reserve to strengthen the Protocol in subsequent iterations.

Sincerely,

ENVIRONMENTAL LAW CLINIC
Mills Legal Clinic at Stanford Law School



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37 *Id.*; *see* Table 8.11, Step 9.
38 *Id.* § 11.2.5.1.1; *see* Table 11.8.
39 *Id.* § 14.
40 Climate Action Reserve, Draft Mexico Forest Protocol: Protocol Overview (Nov. 28, 2011), available at http://www.climateactionreserve.org/wp-content/uploads/2011/11/Draft_Mexico_Forest_Protocol_One-Page_Summary.pdf