

## CALIFORNIA, ACRE AND CHIAPAS

PARTNERING TO REDUCE EMISSIONS FROM TROPICAL DEFORESTATION

Recommendations to Conserve Tropical Rainforests, Protect Local Communities and Reduce State-Wide Greenhouse Gas Emissions

# THE **REDD OFFSET**WORKING GROUP (ROW)

The REDD (reduced emissions from deforestation and forest degradation) Offset Working Group was established in February 2011 as a result of a memorandum of understanding signed in November of 2010 between the Governors of California, Chiapas and Acre as part of a collaborative effort to reduce emissions from global deforestation and degradation. Deforestation and forest degradation account for approximately 15% of the world's annual greenhouse gas (GHG) emissions. Comprehensive efforts to constrain the impacts of climate change will require efforts to reduce GHG emissions from deforestation and forest degradation.

Based on direction in the MOU, a REDD Offset Working Group (ROW) was created that includes state representatives and technical experts, who serve in their personal capacities. With input from stakeholders, and through an open process, the ROW is examining three central questions: (1) what legal and institutional mechanisms are required to enable California to recognize international REDD-based emission offsets for compliance purposes; (2) what are the key policy considerations a sectoral REDD program should address to achieve the level of performance needed for California to recognize the REDD-based offsets for compliance purposes; and (3) what should be the bases for judging the performance of the states in reducing carbon removals from forests?

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The ROW recommendations are a result of the gracious voluntary efforts of the ROW participants. The ROW participants include:

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The ROW also benefits from government observers from Acre, Chiapas, and California.

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The ROW is led by the Green Technology Leadership Group, a non-profit organization focused on bridging science, policy and business concerns in developing new and innovative programs that can be utilized today. For more information visit www.greentechleadership.org.

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### SUMMARY FOR POLICYMAKERS

Tropical forests play a part in all of our lives wherever we live by providing medicines and other forest products, clean air and water, climate benefits at multiple scales, habitat for half of the world's plant and animal species, home to thousands of indigenous peoples' cultures, livelihoods to millions of people, and a vast reservoir for sequestering carbon dioxide. These forests have declined rapidly in recent decades as a result of agricultural expansion, unsustainable logging, forest fires and other activities. Deforestation now accounts for 10-15% of all global greenhouse gas (GHG) emissions—more than the entire global transportation sector and second only to the energy sector.

The international community has been trying to reduce tropical deforestation for decades, but success has so far been elusive. Since 2005, under the auspices of the United Nations Framework Convention on Climate Change (UNFCCC), a new mechanism has been under development that would compensate tropical forest countries for progress in reducing emissions from deforestation and forest degradation. Known as REDD+ ("REDD" stands for reducing emissions from deforestation and forest degradation; the "+" stands for enhancement of forest carbon stocks), this initiative has made significant progress in the last eight years on a range of important issues, but is ultimately hostage to the larger effort of establishing a new international climate treaty. Given the slow progress on that front, as evidenced by the most recent UNFCCC Conference of the Parties (COP) meeting in Doha, it seems highly unlikely that an international REDD+ mechanism will be underway before 2020 (at the earliest).

Notwithstanding this lack of progress toward an international REDD+ mechanism as part of a larger UNFCCC instrument, there has been a great deal of activity on REDD+ and climate policy generally outside of the formal UN process. Specifically, states and provinces around the world are taking the lead in developing innovative laws and programs to reduce GHG emissions and incorporate REDD+ into climate policy. One important example in this respect is the Governors' Climate and Forests Task Force (GCF), a unique subnational collaboration between 19 states and provinces from Brazil, Indonesia, Mexico, Nigeria, Peru, Spain, and the United States that has been working since 2009 to advance *jurisdictional* programs for reducing emissions from deforestation and land use and link these activities with emerging GHG compliance regimes and other pay-for-performance opportunities. More than 20% of the world's tropical forests are in GCF states and provinces, including more than 75% of Brazil's and more than half of Indonesia's. The GCF includes tropical forest states and provinces that are leading the way in building comprehensive, jurisdiction-wide approaches to reducing deforestation and to achieving the larger transition to low emissions development as well as the only jurisdiction in the world (California) that is considering provisions that would recognize REDD+ as part of its GHG compliance system under the AB 32 "Global Warming Solutions Act".

Based on their experience in the GCF, three member states (California, the Brazilian State of Acre, and the Mexican State of Chiapas) signed a separate Memorandum of Understanding (MOU) in 2010 to cooperate more closely on the technical, legal, and institutional design issues associated with the effort to link jurisdictional REDD+ programs in states such as Acre and Chiapas with California's cap-and-trade program. Each of these three states brings an important set of experiences and capabilities to this effort.

Since 2006, California has been developing a state-wide program to reduce GHG emissions from all sectors of its economy. As part of that effort and in recognition of the fact that climate change is a global problem, California has actively pursued partnerships and linkages with other jurisdictions (foreign and domestic). Thus, in its cap-and-trade regulations, California expressly contemplates linking its cap-and-trade program with other subnational cap-and-trade programs (an effort that is proceeding through the Western Climate Initiative (WCI) and ongoing discussions with the Canadian Province of Quebec). California's cap-and-trade regulations also include provisions that allow for the possibility of international sector-based offsets as part of the broader offsets program, and specifically identify REDD+ as the first such sector for consideration.

It is important to point out in this respect that the concept of international sector-based offsets is quite different than the stand-alone project-based model that California is pursuing with its domestic offsets

program. The critical difference, which is discussed further in this report, is that sector-based offsets are tied to reductions that are achieved across an entire sector or jurisdiction. In this regard, *jurisdictional* REDD+ programs, where the state or province develops policies and frameworks to reduce emissions from deforestation across the whole jurisdiction, are similar to the effort that California is undertaking under AB 32 to reduce emissions from all sectors across its entire jurisdiction. Under this system, individual REDD+ projects, such as those that are common in the voluntary markets, would have to be incorporated in and accounted for under the state or provincial REDD+ program in order to be eligible to receive offset credits. These sorts of jurisdictional programs, which have been a key focus of the GCF since its inception, have the potential to generate emissions reductions at much larger scale and lower cost than the traditional project-based model. They also provide important pathways to and pillars of robust national-level REDD+ programs.

It is precisely this jurisdictional approach to REDD+ that the state of Acre has been developing as the capstone of its forest-based rural development strategy. This strategy includes a wall-to-wall land-use zoning system that carries the force of the law, and policies and programs designed to increase the value of sustainably harvested forest products. Beginning in 2008, the state embarked upon an extensive multistakeholder consultation process culminating in December 2009, in an innovative state-wide legal and institutional framework for creating incentives for environmental services with forest carbon as a centerpiece. Today, Acre is the most advanced REDD+ jurisdiction in the world (at any level of governance)—a pioneering jurisdiction that is poised to link its innovative program with multiple pay-for-performance opportunities.

Like Acre, Chiapas has been developing a state-wide approach to REDD+, but it is at an earlier stage than Acre. Based on its involvement in the GCF and its experience under the MOU with Acre and California, Chiapas is identifying and beginning to assimilate the substantive and procedural elements needed to build a successful jurisdictional REDD+ program that will work within the Mexican context. It also brings an important set of experiences regarding land tenure, indigenous rights, and participation, highlighting the critical importance of establishing a process that incorporates all stakeholders from the beginning in designing and building jurisdictional programs for REDD+ and low emissions development.

The GCF and, more specifically, the MOU between California, Acre, and Chiapas represent historical opportunities to strengthen jurisdictional REDD+ programs, securing and deepening the substantial progress that has already been made in lowering carbon dioxide emissions to the atmosphere associated with tropical deforestation. In Brazil alone, states of the GCF with support from the federal government have reduced deforestation to 24% of the ten-year average ending in 2005, representing a cumulative reduction in emissions to the atmosphere equivalent to 2.2 billion tons of carbon dioxide (GtCO<sub>2</sub>-e). In 2012, the decline in Amazon deforestation represented a 1.8% reduction in global carbon dioxide emissions to the atmosphere from all anthropogenic sources. This important progress is part of a larger transition to low emission economies in which state and national policies, finance institutions, civil society, farm sectors, and other private sector acrors are becoming aligned to produce more, alleviate poverty, maintain and restore natural ecosystems, and improve livelihoods while emitting fewer GHGs.

California's cap-and-trade program, adopted pursuant to the Global Warming Solutions Act of 2006 (AB 32), is the only GHG compliance program today that could provide positive incentives to these nascent jurisdictional REDD+ programs through its international sector-based offsets provisions. Although such provisions, if adopted, would represent, at most, 2% (first compliance period) to 4% (second and third compliance periods) of total compliance obligations under the cap-and-trade program, their successful implementation could greatly multiply the global impact of AB 32 by sending a signal to GCF states that their hard work and political leadership in mitigating climate change will be recognized and rewarded and by providing a critical learning opportunity for other emerging cap-and-trade programs as they consider whether to adopt similar provisions for REDD+. Given the significant fragmentation of climate policy, this sort of innovative, bottom-up approach that endeavors to link emerging GHG mitigation efforts throughout the world represents an important path forward in the effort to achieve a truly global approach to the problem of climate change. In the absence of such leadership, the progress made in slowing tropical deforestation could be lost as the viability of an international mechanism for REDD+ recedes further into the future and political support within tropical states dissipates.

In 2011, the three MOU states (Acre, California, and Chiapas) asked a group of experts, constituted as the REDD Offsets Working Group (ROW), to develop a set of recommendations regarding the design of compliance-grade jurisdictional REDD+ programs and options for linking these programs with the California system. This draft report is the result of the ROW's efforts over the last two years. It discusses a broad range of issues, including

- design elements of compliance-grade REDD+ programs such as the scope of eligible REDD+ activities, reference levels and additionality, crediting pathways, registry infrastructure, statelevel accounting, and systems for measurement monitoring, reporting, and verification;
- legal and institutional issues associated with efforts to link GHG reduction efforts in subnational jurisdictions in foreign countries; and
- · social and environmental safeguards.

Each of the three MOU states will have to decide whether and how they want to use these recommendations if they decide to move forward with this initiative. It is important to point out, moreover, that although these recommendations were developed in part based on the specific experiences of these three MOU states, they are not intended to be exclusive to these jurisdictions.

The release of this draft report is intended to initiate an open dialogue with all interested stakeholders on the options for linking jurisdictional REDD+ programs with the California cap-and-trade system. To that effect, the ROW will host a series of public workshops through April 2013 to address the issues and recommendations elaborated in this draft report and welcomes any comments or suggestions. Details on these workshops as well as instructions for filing comments on the ROW report can be found at www.stateredd.org. Based on feedback received, the ROW intends to publish a final, revised report for submission to the Governments of Acre, California, and Chiapas by Summer 2013.

#### KEY ISSUES AND DRAFT RECOMMENDATIONS

The issues and recommendations elaborated in this report are focused on (a) the key elements of compliance-grade jurisdictional REDD+ programs; (b) the corresponding requirements that California (or some other cap-and-trade program) would need to adopt in its regulations in order to accept offsets from jurisdictional REDD+ programs; and (c) the legal frameworks and linkage options for connecting jurisdictional REDD+ programs with a cap-and-trade program such as that being developed in California.

What does it mean to focus on sector-wide, jurisdictional REDD+? California's decision to leave open the possibility for sector-wide REDD+ offsets within its cap-and-trade program has important implications for all of the recommendations described in this report. Sector-wide REDD+ programs, referred to in this report as Jurisdictional REDD+, are designed to operate across entire nations, states or provinces. These programs therefore differ from the stand-alone forest carbon projects that have been the focus of California's domestic forest carbon program and that have proliferated internationally in response to voluntary forest carbon markets. These projects have been important laboratories of innovation with real GHG reductions, but have not provided emissions reductions at the scale needed. They are often designed to operate independently of government policies and institutions, making them more agile but missing important opportunities to strengthen governments as they develop, align, implement, and enforce public policies that shape their main rural sectors. These sectors range from often powerful agricultural, timber, and livestock industries to more economically and politically marginalized indigenous and smallholder groups.

In contrast, jurisdictional REDD+ programs seek large-scale changes in the rural development model through policy alignment, institutional innovation, and through mechanisms for attracting private sector investors and project developers. In moving from project- to jurisdiction-level programs, the pathway to low-emission rural development is potentially facilitated through integrated, state-wide forest carbon monitoring systems, state-wide land-use planning and zoning, improved consultation processes across

sectors, and performance-based incentive systems across sectors, municipalities, or *ejidos*. In practice, most states and provinces will require several years to develop the monitoring systems, legal frameworks, registries, and sector-specific programs for supporting the transition to low-emission land-use systems that will eventually be required to operate Jurisdictional REDD+ programs. As they are developing these program elements, the more agile projects can play an important role in reducing emissions and as serving as laboratories of innovation. It is critical, however, that projects be brought under the broader umbrella of the jurisdictional REDD+ program development process and accounting frameworks.

Jurisdictional approaches to REDD+ have important advantages over project-level approaches in ensuring the environmental integrity of offsets that might enter California's cap-and-trade system. By defining performance across the entire jurisdiction for the two main types of emissions (forest conversion to crops and pasture, and forest degradation through forest fire and logging), risks of performance reversal and leakage at the project level can be absorbed into state-wide performance and accounting, appropriately directing attention to the large-scale changes in the rural development model that are the essential foundation of permanent emissions reductions. Many tropical states are already demonstrating that it is possible to greatly reduce emissions from deforestation and forest degradation while increasing production of crops, livestock and timber through effective alignment of policies, law enforcement, and infrastructure. In other words, jurisdictional REDD+ is closely analogous to cap-and-trade programs aimed at reducing emissions from fossil fuels in that they are achieving permanent changes in land-use systems that greatly reduce deforestation, forest degradation, and associated emissions.

1. Determining the Scope of REDD+: Policy makers must consider the types of forest carbon emissions and atmospheric removals that will be required and/or allowed as offsets, and the timing by which each type of emission/removal should be included, and ultimately credited, in a cap-and-trade program. Forest carbon programs can reduce atmospheric carbon by lowering emissions from deforestation and/or forest degradation, or by removing carbon from the atmosphere through the enhancement of carbon stocks (e.g., through tree planting) in degraded forests or previously forested areas

**Recommendations:** Partner Jurisdictions should account for emissions from deforestation and forest degradation (REDD) in their jurisdictional REDD+ programs, adding removals through carbon stock enhancement when appropriate. Comprehensively accounting for both deforestation and degradation at the outset increases the atmospheric integrity of the system. For its part, California should initially focus its sector-wide international offset system on emissions reductions from deforestation and forest degradation and be ready to include carbon stock enhancement as Partner Jurisdictions develop robust monitoring.

**2.** Reference Levels, Additionality and Own Effort: The integrity of REDD+ as an international offset within California will depend upon jurisdiction-wide accounting of emissions and on the additionality of the reductions and removals that are achieved by the jurisdictional REDD+ program. The reduction of emissions or the increase of removals achieved by a Partner Jurisdiction are additional if they would not have occurred in the absence of the REDD+ program. The key instrument for assessing additionality is the emissions Reference Level (RL), which is the best estimate of future forest carbon emissions and removals of a Partner Jurisdiction in the absence of the REDD+ program. Measured emissions that fall below the RL, and measured removals that fall above the RL, are considered additional. Partner Jurisdictions should also demonstrate their "own effort" in achieving part of these reductions to increase the contribution of the offset program to climate change mitigation.

**Recommendations:** Partner Jurisdictions should base their RLs on a ten-year average of annual emissions during 1995–2010, using the best available data. Under certain circumstances, the RL may be adjusted from the historical average to account for rigorously-justified state-specific circumstances. In addition, jurisdictions should demonstrate their own effort at reducing emissions by reducing GHGs beyond what is credited within California's cap-and-trade program. Alternatively, a Partner Jurisdiction may demonstrate its own effort at reducing emissions through progress already made in achieved emissions reductions that is not compensated through a pay-for-performance mechanism.

- **3.** *REDD+ Architecture:* Architecture refers to the key elements any Partner Jurisdiction should address in designing a compliance-grade REDD+ program that could generate emissions reductions capable of being recognized in a cap-and-trade program such as the one being developed in California.
  - a. Crediting Pathways and Nested Crediting: Crediting for REDD+ offsets will require a clearly defined pathway and set of responsibilities to navigate the legal and quality control issues that surround such offsets. REDD+ regulations will need to specify who will issue REDD+ credits or allowances, to whom, and how those credits will be issued, registered, and tracked. Clarifying the crediting pathway is important because it can affect the design of REDD+ programs and any provisions in a cap-and-trade program that would allow offsets for emissions reductions achieved under such a program.

**Recommendations:** California should recognize credits issued by Partner Jurisdictions or approved third-party programs that meet California's requirements. Such recognized credits would then be eligible for conversion into California compliance instruments. Jurisdictions should decide what will be eligible for crediting (state-wide efforts only, nested projects only, or both scales of policies and measures). Where nested projects may be credited, the REDD+ program should clearly specify how atmospheric integrity will be maintained if projects achieve emissions reductions but the jurisdiction does not, since performance and credit issuance in the REDD+ program, in these recommendations, are ultimately assessed at the jurisdictional level.

b. Registry Infrastructure: Registries are an important part of the infrastructure necessary to support any trading system for reducing GHG emissions. A registry is essentially a database used to track information necessary to ensure that regulated entities comply with the requirements of a capand-trade system. The basic function of an emissions trading registry is to track the allocation and transfer of tradable compliance units (i.e., allowances, credits, or permits) among regulated entities. Regarding offsets, a database must be maintained containing information on specific offset policies and measures, including descriptive details (project type, location, name, size, etc.) as well as monitoring data and verification reports. Systems are also needed to issue and track the transfer of offset credits (equivalent to allowance tracking systems).

**Recommendations:** Partner jurisdictions should be responsible for designing and establishing their own carbon accounting and registry systems that meet these criteria. The Administrator should work with Partner Jurisdictions to establish minimum operating standards and security procedures for REDD+ registries in order to ensure the integrity of the Administrator's offset market. These standards and security procedures should be periodically reviewed and evaluated, and registry administrators should be regularly audited to ensure that standards and procedures are consistently and effectively applied.

- c. State-level accounting: Emissions reductions and increased removals that are credited within a REDD+ program must be above and beyond what would have happened in the absence of the REDD+ program to ensure the atmospheric integrity of any cap-and-trade program that uses offsets. Transparent state-level accounting systems must be established to ensure the overall integrity of these reductions and removals and, where relevant, to control for leakage, reversals, and double-counting. For nested projects, accounting will also need to occur at the project level to ensure environmental integrity and for purposes of reconciling project level performance with jurisdictional performance.
  - i. Leakage: Leakage refers to any net increase in GHG emissions (or reductions in atmospheric removals) occurring outside of the REDD+ program or nested projects as a result of the REDD+ policies and measures that are implemented. The risk of leakage is lowest for REDD+ programs that reduce deforestation while increasing production on already-cleared land of the crops and livestock that drive deforestation; similarly the risk of leakage is lowest for programs that reduce forest degradation while increasing production of timber through reduced impact forest management or tree planting.

**Recommendations:** California should recommend that Partner Jurisdictions reduce the risk of leakage by demonstrating production of crops, livestock, and timber at a business-as-usual rate as they lower deforestation and forest degradation. Jurisdictions should also establish robust frameworks and mechanisms for managing and mitigating potential displacements and for detecting and accounting for any residual leakage beyond state borders.

*ii.* Reversals: California's decision to focus its REDD+ offset provisions on sector-wide systems brings with it many advantages for achieving robust emissions reductions with a low likelihood of performance reversals, which could occur if future emissions rose above state-wide reference levels. First, on the scale front, increases in emissions in one location may be made up by greater emissions reductions achieved elsewhere in the state. Second, crediting to Partner Jurisdictions is based on state-wide emissions reductions that require policy reform, law enforcement, and changes in the rural development model that address the underlying causes of both deforestation and degradation (incl. logging and fire). These advantages greatly reduce the reversal risk associated with jurisdictional REDD+ programs compared to project-only approaches. From time to time, forests may be affected by major natural disturbances (e.g., droughts or hurricanes) that affect wide areas and would have taken place regardless of the existence of a REDD+ program. Carbon accounting for these kinds of disturbances may be managed in different ways including through reference level adjustments under certain circumstances and/or using buffer pools to compensate for losses.

**Recommendations:** Partner Jurisdictions should develop and adopt mechanisms for robustly and fairly managing performance reversal risk. Emissions from major natural disturbances should be addressed in ways that ensure atmospheric integrity without unfairly penalizing Partner Jurisdictions or affected projects.

*iii.* Double Counting: Double counting of GHG emission reductions occurs when credits are given more than once for the same reduction. There are three types of double counting that may be a concern for sub-national REDD+ programs: Crediting REDD+ emission reductions that are also being credited under separate voluntary or regulatory offset programs; crediting sub-national REDD+ emission reductions that are also being credited under a national REDD+ program or initiative; and issuing credits to more than one entity for the same emission reductions within a sub-national REDD+ program, e.g., to both the jurisdiction and a nested project.

**Recommendations:** Partner jurisdictions should clarify, through laws or regulations, which entities may legally claim ownership of REDD+ emission reductions or removals and work closely with national government agencies to ensure that their programs are recognized and properly integrated with national efforts. Furthermore, Partner Jurisdictions allowing the crediting of nested projects must establish integrated accounting frameworks to ensure there is no double counting.

d. Measurement, Monitoring, Reporting and Verification (MMRV): An important element in any strategy to reduce GHG emissions is a MMRV system that ensures all parties involved are only credited for the actual emissions reductions they achieve. MMRV systems include collecting necessary data for quantifying and tracking changes in GHG emissions; providing accurate, regular, and reliable assessments of GHG emissions and relevant policies and measures; and verifying reports as accurate and comprehensive.

**Recommendations:** Partner jurisdictions should ensure rigorous measuring and monitoring by establishing a measurement uncertainty threshold, and encouraging improvements in emission measurement accuracy over time. California should establish a threshold level of uncertainty in measuring and monitoring forest carbon stocks above which a state's program would be ineligible, and include incentives to further decrease uncertainty over time, e.g. a sliding scale discount. Validation of each jurisdiction's methodology for measuring and reporting should occur at the outset of the program, and periodically thereafter. As part of the jurisdiction's methodology for measuring and reporting, independent, third-party verification of GHG reductions should occur

as a precondition of crediting and at intervals of no more than five years thereafter. Verification would be conducted according to the methodology outlined in the validation at the start of the program. MMRV for nested projects should be comparable with jurisdiction-wide MMRV.

e. Development and Recognition of Safeguards: Environmental and social safeguards have moved in recent years from the periphery to the center of the debate on REDD+. The enhanced attention to safeguards stems from the strengthening empirical case that clear land rights and secure resource tenure, effective consultation processes, and the development of progress indicators relevant to local needs are necessary pre-conditions for the ultimate success of REDD+ programs.

**Recommendations:** California should condition the acceptance of any REDD+ offsets on demonstration by partner jurisdictions that their respective REDD+ programs include strong social and environmental safeguards that meet best-practice global standards. REDD+ programs should establish and implement social and environmental safeguards to ensure that carbon emissions reductions are achieved in a manner that protects and enhances the rights and interests of local, forest-dependent communities (including indigenous peoples), supports rural livelihoods, and does not damage ecological systems. A basic premise is that Partner Jurisdictions should work to achieve high social and environmental integrity and performance by meeting the safeguards found in Annex 1 of the UNFCCC Cancun Agreement and emerging best-practice standards, in particular the REDD+ Social & Environmental Standards (SES). States should define their own benchmarks and performance indicators for implementing the REDD+ SES—including a transparent, public process for developing REDD+ policy measures—and monitor and publicly report on them. Jurisdictions should also recognize and respect indigenous peoples' rights in any REDD+ programs.

#### Legal Frameworks and Linkage Options

Establishing provisions within the California cap-and-trade regulations to govern the acceptance of REDD+ offsets from foreign jurisdictions implicates a host of legal issues for California as well as for any foreign jurisdictions that might decide to link with the California system. In California, for example, new legislation requires the Governor to make certain "linkage findings" regarding program stringency and enforceability in any partner jurisdictions before any such linkage can proceed. Moreover, because Acre, California, and Chiapas all operate within larger federal systems of government, careful attention must be paid to federal statutory and constitutional constraints on any effort by these states to link their emerging GHG mitigation efforts. Thus, any linkage arrangement that operates as a binding agreement or resembles a treaty as understood under public international law would run afoul of constitutional provisions in Brazil, Mexico, and the United States that prohibit states from entering into such agreements. Any such linkage would also need to be constituted so as not to impinge upon exclusive federal authority over foreign affairs and international commerce in these countries. Because this is a relatively novel and dynamic area of the law, this document will need to be updated pending new legal developments. In Brazil, for example, the REDD+ Federal Program is currently under active debate. Likewise, California and Quebec are actively pursuing linkage of their cap-and-trade programs through the WCI. The outcome of these two processes (Brazil and California/Quebec) will likely have considerable relevance for linkage in the context of REDD+.

1. Linkage Options: Given the various legal constraints and pending new legal developments, the simplest path forward regarding linkage is a non-binding Memorandum-of-Understanding (MOU) between the relevant jurisdictions that provides for mutual recognition of the substantive elements, procedural requirements, and institutional design of REDD+ programs in Acre, Chiapas, and/or other partner jurisdictions on the one hand and the relevant California regulations regarding international sector-based REDD+ offsets on the other. The MOU would provide that the individual states (the parties to the MOU) would proceed with rulemakings in their respective jurisdictions to adopt the relevant regulations necessary to implement the various provisions identified in the MOU. Upon entry into force of the relevant regulations in each jurisdiction and appropriate verification, credits issued for verified

emissions reductions under the relevant jurisdiction's REDD+ program (i.e., Acre's program) would be deemed eligible for conversion into California compliance instruments (offsets) for use by regulated entities in California. An alternative to this approach would involve "indirect" linkage through a third-party offsets provider or standards organization such as American Carbon Registry (ACR), Climate Action Reserve (CAR) or Voluntary Carbon Standard (VCS) or through an independent organization formed to facilitate such linkage such as WCI, Inc. This approach would likely also require some form of overarching MOU between the relevant jurisdictions to specify the conditions and requirements for eligibility, but each jurisdiction (e.g., California and Acre) would also engage directly with the relevant third-party organization.

**Recommendations:** California and its partner jurisdictions should avoid any sort of linkage arrangement that purports to operate as a "binding," treaty-like agreement as understood under public international law. To the extent possible, California and its partner jurisdictions should pursue linkage arrangements that are consistent with those that are being developed in the context of the WCI. California and its partner jurisdictions should consider adopting a non-binding MOU that provides for mutual recognition of the substantive elements, procedural requirements, and institutional design of REDD+ programs in partner jurisdictions on the one hand and the corresponding requirements for sector-based REDD+ offsets in California. The MOU should provide that the individual states (the parties to the MOU) would proceed with rulemakings in their respective jurisdictions to adopt the relevant regulations necessary to implement the various provisions identified in the MOU. The adoption and implementation of such regulations should be verified by independent third parties.

2. Enforceability: All offsets accepted into the California compliance market are required by AB 32 to be "enforceable." The "linkage findings" that the Governor must make before any linkage can proceed also require specific findings regarding enforceability in any linked program. Any partner jurisdiction that is interested in linking its program with the California cap-and-trade system will therefore need to demonstrate the requisite level of enforceability under its program. Under its own domestic offsets program, California has also adopted certain liability provisions for invalidated offsets, some of which are problematic in the context of international offsets. Specifically, the current provisions regarding forest owner liability for invalidated offsets generated from domestic forest offset projects will not work in the international context, as California will be unable to enforce against foreign owners of forest land in foreign jurisdictions. But the general background liability rule for the California offsets program (what is sometimes referred to as buyer liability), under which regulated entities are liable for invalidated offsets that they have tendered for compliance, could serve, with some modifications and perhaps with the use of buffers as a first line of defense, to ensure the enforceability of international offsets from jurisdictional REDD+ programs. Under such a system, regulated entities will almost certainly need to find means to transfer such liability through contractual arrangements with the relevant REDD+ program (such as through an arrangement with the public/private company that will manage Acre's REDD+ program) or through insurance or other means.

**Recommendations:** Partner jurisdictions interested in linking with California should enact relevant laws necessary to ensure that the domestic requirements of their jurisdictional REDD+ programs are enforceable in a manner sufficient to satisfy the enforceability requirements that are included in the "linkage findings" that must be made by the Governor of California before linkage can proceed. California should use its general buyer liability provision for offsets to further ensure enforceability of sector-based REDD+ offsets. Partner jurisdictions should consider innovative public and private institutions such as Acre's Company that are capable of entering into public and private commercial relations with credit buyers and assuming relevant liabilities.